### Academic Calendars

#### Fall Quarter 2008
- Quarter begins: September 22
- Instruction begins: September 25
- Veterans Day holiday: November 11
- Thanksgiving holiday: November 27-28
- Instruction ends: December 5
- Common final examinations: December 6-7
- Final examinations: December 8-12
- Quarter ends: December 12
- Christmas holiday: December 24-25
- New Year's holiday: December 31-January 1

#### Winter Quarter 2009
- Quarter begins: January 5
- Instruction begins: January 5
- 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
- César Chávez holiday: March 27

#### Spring Quarter 2009
- Quarter begins: March 30
- 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

#### Fall Quarter 2009
- Quarter begins: September 21
- Instruction begins: September 24
- Veterans Day holiday: November 11
- Thanksgiving holiday: November 26-27
- Instruction ends: December 4
- Common final examinations: December 5-6
- Final examinations: December 7-11
- Quarter ends: December 11
- Christmas holiday: December 24-25
- New Year's holiday: December 31-January 1

#### Winter Quarter 2010
- Quarter begins: January 4
- Instruction begins: January 4
- Martin Luther King, Jr. holiday: January 18
- Presidents' Day holiday: February 15
- Instruction ends: March 12
- Common final examinations: March 13-14
- Final examinations: March 15-19
- Quarter ends: March 19
- César Chávez holiday: March 26

#### Spring Quarter 2010
- Quarter begins: March 29
- Instruction begins: March 29
- Memorial Day holiday: May 31
- Instruction ends: June 4
- Common final examinations: June 5-6
- Final examinations: June 7-11
- Quarter ends: June 11
- Commencement ceremonies: June 11-13

---

### 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)
FROM THE CHANCELLOR OF UCLA

The UCLA General Catalog for 2008-2009 presents the myriad academic opportunities available at one of America’s most comprehensive universities.

UCLA is a premier center for education, research, and service. We consistently strive for excellence, and our academic programs are ranked among the world’s best.

As a research university committed to bringing the creation of knowledge into the classroom and across the disciplines, we are especially proud of the extraordinary richness and diversity of our teaching program. Through 191 majors and more than 14,000 courses, we link research with instruction in the UCLA College of Letters and Science and 11 professional schools.

This catalog includes opportunities for graduate and undergraduate students, including those that offer priority enrollment for lower division students. Among these are the Fiat Lux Seminars (small classes that explore a broad array of subjects), Freshman Clusters (year-long, team-taught interdisciplinary examinations of an array of timely topics), and opportunities for student research.

On our campus, we nurture a vibrant academic community of UCLA faculty and student scholars, who advance knowledge, pursue intellectual achievement, address social challenges, and engage with the surrounding region in many ways.

I encourage you to continue your exploration of UCLA beyond this catalog. Please visit us on campus, or online at http://www.ucla.edu.

Gene D. Block
Chancellor
# Table of Contents

## UCLA Majors and Degrees
- Undergraduate Minors and Specializations ................................. 8
- Graduate Concurrent and Articulated Degrees ............................... 8

## About UCLA
- Life on Campus ............................................................................. 11
- Academic Programs ....................................................................... 11
- Research Programs ........................................................................ 13
- Supporting Resources ...................................................................... 16
- Student Services ............................................................................ 21
- Student Activities ........................................................................... 28
- UCLA Alumni Association ................................................................. 30

## Undergraduate Study
- Undergraduate Admission ................................................................. 31
- Registration ...................................................................................... 33
- Financial Support .............................................................................. 36
- Majors and Degrees ......................................................................... 39
- Degree Requirements ....................................................................... 40
- Undergraduate Research ................................................................. 41
- Internship, Study Abroad, and Service Programs ......................... 42
- Lower Division Seminar Programs ................................................... 44
- Advising and Academic Assistance .................................................. 45
- Academic Excellence ........................................................................ 47

## Graduate Study
- Graduate Admission ......................................................................... 49
- Registration ...................................................................................... 52
- Financial Support .............................................................................. 55
- Degree Requirements ....................................................................... 56

## Academic Policies
- Academic Credit ............................................................................... 58
- Grades ............................................................................................. 59
- Absence and Readmission ................................................................. 61
- Transcripts and Records ................................................................. 62
- Degrees ........................................................................................... 63
- Graduation ....................................................................................... 65

## College and Schools
- College of Letters and Science .......................................................... 67
- David Geffen School of Medicine ....................................................... 76
- Graduate School of Education and Information Studies ................. 77
- Henry Samueli School of Engineering and Applied Science ........ 80
- John E. Anderson Graduate School of Management ....................... 88
- School of the Arts and Architecture ................................................... 90

## Curricula and Courses
- School of Dentistry .......................................................................... 95
- School of Law .................................................................................... 96
- School of Nursing ............................................................................. 101
- School of Public Affairs .................................................................... 107
- School of Public Health ..................................................................... 109
- School of Theater, Film, and Television ........................................... 113

- African Studies .................................................................................. 120
- Afro-American Studies .................................................................... 120
- American Indian Studies ................................................................... 125
- Anesthesiology .................................................................................. 128
- Anthropology .................................................................................... 129
- Applied Linguistics and Teaching English as a Second Language .... 139
- Archaeology ...................................................................................... 146
- Architecture and Urban Design ......................................................... 147
- Art ..................................................................................................... 150
- Art History ........................................................................................ 153
- Arts and Architecture ....................................................................... 159
- Asian American Studies .................................................................... 160
- Asian Languages and Cultures ............................................................ 165
- Atmospheric and Oceanic Sciences ................................................... 178
- Biomedical Engineering .................................................................. 189
- Biomedical Physics ........................................................................... 194
- Biomedical Research ........................................................................ 196
- Biostatistics ....................................................................................... 196
- Chemical and Biomolecular Engineering .......................................... 199
- Chemistry and Biochemistry ............................................................. 204
- Chicana and Chicano Studies, César E. Chávez ................................ 213
- Civic Engagement ............................................................................. 219
- Civil and Environmental Engineering ............................................... 220
- Classics ............................................................................................ 226
- Communication Studies ................................................................... 233
- Community Health Sciences ............................................................... 236
- Comparative Literature .................................................................... 241
- Computational and Systems Biology .................................................. 246
- Computer Science ............................................................................ 248
- Conservation of Archaeological and Ethnographic Materials ........ 256
- Dentistry ........................................................................................... 258
- Design | Media Arts .......................................................................... 258
- Disability Studies .............................................................................. 262
- Earth and Space Sciences ................................................................. 262
- East Asian Studies ............................................................................ 269
- Ecology and Evolutionary Biology .................................................... 270
- Economics ........................................................................................ 278
- Education .......................................................................................... 286
- Electrical Engineering ....................................................................... 297
Engineering Schoolwide Programs ................. 305
English ............................................. 306
English Composition ............................. 314
Environmental Health Sciences .................. 315
Environmental Science and Engineering ......... 318
Epidemiology ..................................... 319
Ethnomusicology .................................. 323
European Studies ................................ 329
Family Medicine .................................. 330
Film, Television, and Digital Media .............. 330
Foreign Literature in Translation .................. 339
French and Francophone Studies ................. 340
Freshman General Education Clusters .......... 343
Geography ........................................ 345
Germanic Languages ............................. 351
Gerontology ...................................... 356
Global Studies ................................... 357
Health Services .................................. 358
History ............................................ 362
History/Art History ............................... 375
Honors Collegium ................................ 376
Human Complex Systems ......................... 381
Human Genetics .................................. 382
Indo-European Studies ............................ 384
Information Studies .............................. 384
Institute of the Environment ...................... 388
International Development Studies ............... 391
International Relations ........................... 392
Islamic Studies ................................... 393
Italian ............................................. 393
Labor and Workplace Studies .................... 397
Latin American Studies ........................... 399
Law ................................................ 401
Lesbian, Gay, Bisexual, and Transgender Studies 403
Life Sciences ..................................... 404
Linguistics ........................................ 406
Management ..................................... 414
Materials Science and Engineering ............... 425
Mathematics ..................................... 429
Mathematics/Atmospheric and Oceanic Sciences 439
Mathematics/Economics .......................... 439
Mechanical and Aerospace Engineering ......... 440
Medicine .......................................... 447
Microbiology, Immunology, and Molecular Genetics 448
Middle Eastern and North African Studies ....... 451
Molecular and Medical Pharmacology .......... 452
Molecular Biology ................................ 454
Molecular, Cell, and Developmental Biology .... 454
Molecular, Cellular, and Integrative Physiology 459
Molecular Toxicology ............................ 460
Moving Image Archive Studies .................... 461
Music .............................................. 462
Musicology ....................................... 466
Near Eastern Languages and Cultures .......... 470
Neurobiology ..................................... 480
Neurology ........................................ 482
Neuroscience, Undergraduate ..................... 482
Neuroscience, Graduate ........................ 484
Neurosurgery ..................................... 486
Nursing .......................................... 486
Obstetrics and Gynecology ....................... 494
Ophthalmology ................................... 494
Oral Biology ..................................... 494
Orthopaedic Surgery ................................ 495
Pathology and Laboratory Medicine ............ 496
Pediatrics ........................................ 497
Philosophy ....................................... 497
Physics and Astronomy .......................... 502
Physiological Science ............................ 510
Physiology ....................................... 514
Political Science .................................. 514
Psychiatry and Biobehavioral Sciences ......... 523
Psychology ....................................... 527
Public Affairs Schoolwide Programs ............. 540
Public Health Schoolwide Programs .............. 541
Public Policy ..................................... 542
Radiation Oncology ................................ 547
Radiological Sciences ........................... 547
Religion, Study of ................................ 547
Romance Linguistics and Literature .............. 548
ROTC Program – Aerospace Studies ............ 549
ROTC Program – Military Science ............... 550
ROTC Program – Naval Science ................ 552
Scandinavian Section ............................. 553
Slavic Languages and Literatures ................. 556
Social Thought .................................... 562
Social Welfare .................................... 563
Society and Genetics ............................. 567
Sociology ......................................... 567
South Asian Studies ............................. 575
Southeast Asian Studies .......................... 575
Spanish and Portuguese ......................... 577
Statistics .......................................... 585
Surgery ............................................ 590
Theater ............................................ 591
Urban Planning ................................... 600
Urology ........................................... 605
Women's Studies .................................. 606
World Arts and Cultures ......................... 611

APPENDIXES .................................. 620
Appendix A: Regulations and Policies ............... 620
Appendix B: University Administrative Officers .... 630
Appendix C: Endowed Chairs ....................... 631
Appendix D: Distinguished Teaching Awards ....... 631

INDEX ...................................... 634

CAMPUS MAP ................................. 639
# UCLA Majors and Degrees

## College of Letters and Science

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Studies Interdepartmental</td>
<td>M.A.</td>
</tr>
<tr>
<td>African Studies Interdepartmental</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Afro-American Studies Interdepartmental</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>American Indian Studies Interdepartmental</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Anthropology Department</td>
<td>B.A., B.S., M.A., Ph.D.</td>
</tr>
<tr>
<td>Applied Linguistics and Teaching English as a Second Language Department</td>
<td>C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Archaeology Interdepartmental Program</td>
<td>M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Art History Department</td>
<td>B.A., B.A., M.A., Ph.D.</td>
</tr>
<tr>
<td>Asian American Studies Department</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Asian Languages and Cultures Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Asian Languages and Cultures</td>
<td>M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Asian Religions</td>
<td>B.A.</td>
</tr>
<tr>
<td>Chinese</td>
<td>B.A.</td>
</tr>
<tr>
<td>Japanese</td>
<td>B.A.</td>
</tr>
<tr>
<td>Korean</td>
<td>B.A.</td>
</tr>
<tr>
<td>Atmospheric and Oceanic Sciences Department</td>
<td>B.S.</td>
</tr>
<tr>
<td>Atmospheric and Oceanic Sciences</td>
<td>M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Chemistry and Biochemistry Department</td>
<td>B.S.</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>B.S.</td>
</tr>
<tr>
<td>Biochemistry and Molecular Biology</td>
<td>B.S., M.S., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Chemistry</td>
<td>B.S., M.S., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>B.S.</td>
</tr>
<tr>
<td>Chemistry/Materials Science Interdepartmental Program</td>
<td>B.S.</td>
</tr>
<tr>
<td>Chemistry/Materials Science</td>
<td>B.S.</td>
</tr>
<tr>
<td>Chicana and Chicano Studies Degree</td>
<td>B.A.</td>
</tr>
<tr>
<td>Chicana and Chicano Studies</td>
<td>B.A.</td>
</tr>
<tr>
<td>Classics Department</td>
<td>M.A, C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Classics</td>
<td>B.A.</td>
</tr>
<tr>
<td>Classical Civilization</td>
<td>B.A.</td>
</tr>
<tr>
<td>Greek</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Greek and Latin</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Latin</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Communication Studies Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Comparative Literature Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>B.A., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Computational and Systems Biology Interdepartmental Program</td>
<td>B.S.</td>
</tr>
<tr>
<td>Computational and Systems Biology</td>
<td>B.S.</td>
</tr>
<tr>
<td>Conservation of Archaeological and Ethnographic Materials Interdepartmental Program</td>
<td>B.S.</td>
</tr>
<tr>
<td>Conservation of Archaeological and Ethnographic Materials</td>
<td>M.A.</td>
</tr>
<tr>
<td>Earth and Space Sciences Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Earth and Environmental Science</td>
<td>B.A.</td>
</tr>
<tr>
<td>Geography</td>
<td>M.S., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Geology</td>
<td>B.S., M.S., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Geology/Engineering Geology</td>
<td>B.S.</td>
</tr>
<tr>
<td>Geosciences</td>
<td>B.S.</td>
</tr>
<tr>
<td>Geosciences/Geophysics</td>
<td>B.S.</td>
</tr>
<tr>
<td>Geosciences/Geophysics and Space</td>
<td>B.S.</td>
</tr>
<tr>
<td>Geophysics</td>
<td>B.S.</td>
</tr>
<tr>
<td>Geophysics and Space Physics</td>
<td>M.S., Ph.D.</td>
</tr>
<tr>
<td>East Asian Studies Interdepartmental Program</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Ecology and Evolutionary Biology Department</td>
<td>B.S., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Ecology, Behavior, and Evolution</td>
<td>B.S.</td>
</tr>
<tr>
<td>Marine Biology</td>
<td>B.S.</td>
</tr>
<tr>
<td>Economics Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Economics</td>
<td>B.A., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Economics/International Area Studies</td>
<td>B.A.</td>
</tr>
<tr>
<td>English Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>English</td>
<td>B.A., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>European Studies Interdepartmental Program</td>
<td>B.A.</td>
</tr>
<tr>
<td>European Studies</td>
<td>B.A.</td>
</tr>
<tr>
<td>French and Francophone Studies Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>French and Francophone Studies</td>
<td>B.A.</td>
</tr>
<tr>
<td>French and Linguistics</td>
<td>B.A.</td>
</tr>
<tr>
<td>Geography Department</td>
<td>B.A., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Geography/Environmental Studies</td>
<td>B.A.</td>
</tr>
<tr>
<td>Germanic Languages Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>German</td>
<td>B.A.</td>
</tr>
<tr>
<td>Germancian Languages</td>
<td>M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Scandinavian Languages</td>
<td>M.A.</td>
</tr>
<tr>
<td>Scandinavian Languages</td>
<td>B.A.</td>
</tr>
<tr>
<td>Global Studies Interdepartmental Program</td>
<td>M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Global Studies</td>
<td>B.A.</td>
</tr>
<tr>
<td>History Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>History</td>
<td>B.A., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>History/Art History Interdepartmental Program</td>
<td>B.A.</td>
</tr>
<tr>
<td>History/Art History</td>
<td>B.A.</td>
</tr>
<tr>
<td>Individual Field of Concentration</td>
<td>B.A.</td>
</tr>
<tr>
<td>Individual Field of Concentration</td>
<td>B.A.</td>
</tr>
<tr>
<td>Indo-European Studies Interdepartmental Program</td>
<td>B.A.</td>
</tr>
<tr>
<td>Indo-European Studies</td>
<td>C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Institute of the Environment, Center for Interdisciplinary Instruction</td>
<td>B.A.</td>
</tr>
<tr>
<td>International Development Studies Interdepartmental Program</td>
<td>B.A.</td>
</tr>
<tr>
<td>International Development Studies</td>
<td>B.A.</td>
</tr>
<tr>
<td>Islamic Studies Interdepartmental Program</td>
<td>M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Italian</td>
<td>B.A., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Italian Department</td>
<td>B.A., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Italian and Special Fields</td>
<td>B.A.</td>
</tr>
<tr>
<td>Latin American Studies Interdepartmental Program</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Latin American Studies</td>
<td>B.A., M.A.</td>
</tr>
<tr>
<td>Linguistics Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and Anthropology</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and Asian Languages and Cultures</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and Computer Science</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and English</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and French</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and Italian</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and Philosophy</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and Psychology</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and Scandinavian Languages</td>
<td>B.A.</td>
</tr>
<tr>
<td>Linguistics and Spanish</td>
<td>B.A.</td>
</tr>
<tr>
<td>Mathematics Department</td>
<td>B.S.</td>
</tr>
<tr>
<td>Mathematics</td>
<td>B.S., M.A., M.A.T., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Mathematics/Engineering Geology</td>
<td>B.S.</td>
</tr>
<tr>
<td>Mathematics/Engineering Geology</td>
<td>B.S.</td>
</tr>
<tr>
<td>Mathematics/Physics</td>
<td>B.A.</td>
</tr>
<tr>
<td>Mathematics for Teaching</td>
<td>B.S.</td>
</tr>
<tr>
<td>Mathematics of Computation</td>
<td>B.S.</td>
</tr>
<tr>
<td>Mathematics/Atmospheric and Oceanic Sciences Interdepartmental Program</td>
<td>B.S.</td>
</tr>
<tr>
<td>Mathematics/Atmospheric and Oceanic Sciences</td>
<td>B.S.</td>
</tr>
<tr>
<td>Mathematics/Economics Interdepartmental Program</td>
<td>B.S.</td>
</tr>
<tr>
<td>Mathematics/Economics</td>
<td>B.S.</td>
</tr>
<tr>
<td>Microbiology and Molecular Genetics</td>
<td>B.S., M.S., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Microbiology and Molecular Genetics</td>
<td>B.S., M.S., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Middle Eastern and North African Studies Interdepartmental Program</td>
<td>B.S., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Middle Eastern and North African Studies</td>
<td>B.A.</td>
</tr>
<tr>
<td>Molecular Biology Interdepartmental Program</td>
<td>B.A.</td>
</tr>
<tr>
<td>Molecular Biology</td>
<td>B.A.</td>
</tr>
<tr>
<td>Molecular, Cell and Developmental Biology Department</td>
<td>B.S., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Molecular, Cell and Developmental Biology</td>
<td>B.S., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Molecular, Cellular and Integrative Physiology Interdepartmental Program</td>
<td>B.A.</td>
</tr>
<tr>
<td>Molecular, Cellular and Integrative Physiology</td>
<td>B.A.</td>
</tr>
<tr>
<td>Musicology Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Musicology</td>
<td>B.A.</td>
</tr>
<tr>
<td>Near Eastern Languages and Cultures Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Near Eastern Languages and Cultures</td>
<td>B.A.</td>
</tr>
<tr>
<td>Neuroscience Interdepartmental Program</td>
<td>B.S.</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>B.S.</td>
</tr>
<tr>
<td>Philosophy Department</td>
<td>B.A., M.A., C.Phil., Ph.D.</td>
</tr>
<tr>
<td>Physics and Astronomy Department</td>
<td>B.S.</td>
</tr>
<tr>
<td>Physics and Astronomy</td>
<td>B.S.</td>
</tr>
<tr>
<td>Physics and Astronomy</td>
<td>B.S.</td>
</tr>
<tr>
<td>Physiology Department</td>
<td>B.S., M.S., M.A.T., Ph.D.</td>
</tr>
<tr>
<td>Political Science Department</td>
<td>B.A.</td>
</tr>
<tr>
<td>Political Science</td>
<td>B.A.</td>
</tr>
<tr>
<td>Public Administration</td>
<td>M.P.A.</td>
</tr>
<tr>
<td>Department/Program</td>
<td>Degrees Offered</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>David Geffen School of Medicine</strong></td>
<td></td>
</tr>
<tr>
<td>Biological Chemistry Department</td>
<td>Biological Chemistry ...................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Biostatistics Department</td>
<td>Biostatistics ............................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Biomedical Physics Interdepartment Program</td>
<td>Biomedical Physics                    ...................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Human Genetics Department</td>
<td>Human Genetics                       ...................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Medicine Schoolwide Program</td>
<td>Medicine Schoolwide Program           ...................... M.D.</td>
</tr>
<tr>
<td>Microbiology, Immunology, and Molecular Genetics Department</td>
<td>Microbiology, Immunology, and Molecular Genetics Department ..................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Molecular and Medical Pharmacology Department</td>
<td>Molecular and Medical Pharmacology Department ........................................ M.S., Ph.D.</td>
</tr>
<tr>
<td>Neurobiology Department</td>
<td>Neurobiology Department ..................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Neuroscience Interdepartment Program</td>
<td>Neuroscience Interdepartment Program .................................................. Ph.D.</td>
</tr>
<tr>
<td>Pathology and Laboratory Medicine Department</td>
<td>Pathology and Laboratory Medicine Department ........................................ Ph.D.</td>
</tr>
<tr>
<td><strong>Graduate School of Education and Information Studies</strong></td>
<td></td>
</tr>
<tr>
<td>Education Department</td>
<td>Education Department ...................... M.A., M.Ed., Ed.D., Ph.D.</td>
</tr>
<tr>
<td>Educational Administration</td>
<td>Educational Administration ................. Joint Ed.D. with UCI, CSULA</td>
</tr>
<tr>
<td>Special Education</td>
<td>Special Education .......................... Joint Ph.D. with CSULA</td>
</tr>
<tr>
<td><strong>School of Law</strong></td>
<td></td>
</tr>
<tr>
<td>Law Department</td>
<td>Law............................................. J.L.M., J.D., S.J.D.</td>
</tr>
<tr>
<td><strong>School of Nursing</strong></td>
<td></td>
</tr>
<tr>
<td>Nursing Department</td>
<td>Nursing ...................................... B.S., M.S.N., Ph.D.</td>
</tr>
<tr>
<td><strong>School of Public Affairs</strong></td>
<td></td>
</tr>
<tr>
<td>Public Policy Department</td>
<td>Public Policy ................................ M.P.P.</td>
</tr>
<tr>
<td>Social Welfare Department</td>
<td>Social Welfare .............................. M.S.W., Ph.D.</td>
</tr>
<tr>
<td>Urban Planning Department</td>
<td>Urban Planning ............................. M.A., Ph.D.</td>
</tr>
<tr>
<td><strong>School of Public Health</strong></td>
<td></td>
</tr>
<tr>
<td>Biostatistics Department</td>
<td>Biostatistics ............................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Community Health Sciences Department</td>
<td>Community Health Sciences Department ............................................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Environmental Health Sciences Department</td>
<td>Environmental Health Sciences Department ........................................... M.S.</td>
</tr>
<tr>
<td>Environmental Science and Engineering Interdepartment Program</td>
<td>Environmental Science and Engineering Interdepartment Program ................. M.A., Ph.D.</td>
</tr>
<tr>
<td>Epidemiology Department</td>
<td>Epidemiology                           ...................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Health Services Department</td>
<td>Health Services                       ...................... M.S., Ph.D.</td>
</tr>
<tr>
<td>Molecular Toxicology Interdepartment Program</td>
<td>Molecular Toxicology Interdepartment Program ........................................ Ph.D.</td>
</tr>
<tr>
<td>Public Health Schoolwide Programs</td>
<td>Public Health Schoolwide Programs .... Preventive Medicine and Public Health . M.S.</td>
</tr>
<tr>
<td></td>
<td>Public Health ................................ M.P.H., Dr.P.H.</td>
</tr>
<tr>
<td><strong>School of Theater, Film, and Television</strong></td>
<td></td>
</tr>
<tr>
<td>Film, Television, and Digital Media Department</td>
<td>Film, Television, and Digital Media Department ........................................ Ph.D.</td>
</tr>
<tr>
<td>Moving Image Archive Studies Interdepartment Program</td>
<td>Moving Image Archive Studies Interdepartment Program ........................................ M.A.</td>
</tr>
<tr>
<td>Theater Department</td>
<td>Theater ....................................... B.A., M.A., M.F.A.</td>
</tr>
<tr>
<td>Theater and Performance Studies</td>
<td>Theater and Performance Studies .................. C.Phil., Ph.D.</td>
</tr>
<tr>
<td><strong>School of Dentistry</strong></td>
<td></td>
</tr>
<tr>
<td>Dentistry Department</td>
<td>Dentistry Department .............................. D.D.S.</td>
</tr>
<tr>
<td>Oral Biology Section</td>
<td>Oral Biology Section .............................. M.S., Ph.D.</td>
</tr>
</tbody>
</table>
Undergraduate Minors and Specializations

MINORS
John E. Anderson Graduate School of Management
Accounting
Graduate School of Education and Information Studies
Education Studies
Henry Samueli School of Engineering and Applied Science
Environmental Engineering
College of Letters and Science
African Studies
Afro-American Studies
American Indian Studies
Anthropology
Applied Developmental Psychology
Arabic and Islamic Studies
Armenian Studies
Art History
Asian American Studies
Asian Humanities
Asian Languages
Atmospheric and Oceanic Sciences
Biomedical Research
Central and East European Studies
Chicana and Chicano Studies
Civic Engagement
Classical Civilization
Cognitive Science
Comparative Literature
Conservation Biology
Disability Studies
English
Environmental Systems and Society
French
Geochemistry
Graduate School of Education and Information Studies
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
Disability Studies
English
Environmental Systems and Society
French
Geochemistry

Graduate Concurrent and Articulated Degrees

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

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

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.A.
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.
Latin American Studies Interdepartmental M.A. — Urban Planning M.A.
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.
Management M.B.A. — Urban Planning M.A.
Philosophy Ph.D. — Law J.D.
Public Health M.P.H. — Law J.D.
Public Health M.P.H. — Social Welfare M.S.W.
Public Policy M.P.P. — Law J.D.
Social Welfare M.S.W. — Law J.D.
Social Welfare M.S.W. — Public Policy M.P.P.
Urban Planning M.A. — Law J.D.

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

Graduate Concurrent and Articulated Degrees

CONCURRENT DEGREES
Degree Program number one
Degree Program number two

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

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.A.
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.
Latin American Studies Interdepartmental M.A. — Urban Planning M.A.
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.
Management M.B.A. — Urban Planning M.A.
Philosophy Ph.D. — Law J.D.
Public Health M.P.H. — Law J.D.
Public Health M.P.H. — Social Welfare M.S.W.
Public Policy M.P.P. — Law J.D.
Social Welfare M.S.W. — Law J.D.
Social Welfare M.S.W. — Public Policy M.P.P.
Urban Planning M.A. — Law J.D.

Social Thought
Society and Genetics
South Asian Studies
Southeast Asian Studies
Spanish
Spanish Linguistics
Statistics
Teaching English as a Second or Foreign Language
Women’s Studies
School of Public Affairs
Public Affairs
Urban and Regional Studies
School of Public Health
Public Health
School of Theater, Film, and Television
Film, Television, and Digital Media
Theater

ARTICULATED DEGREES
Degree Program number one
Degree Program number two
Articulated degree programs permit no credit overlap; students must complete degree requirements separately for each degree.

African Studies Interdepartmental M.A. — Public Health M.P.H.
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
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 Conference Board of Associated Research Councils, which evaluates the quality of the faculty in 274 American research universities, rates UCLA fourteenth in the nation among both public and private universities. Of the 41 doctoral degree disciplines studied, 11 UCLA academic departments are ranked among the top 10 in the country and 20 are ranked among the top 20. Distinguished faculty members at UCLA include Nobel prizewinners, Guggenheim fellows, Sloan fellows, and Fulbright scholars, as well as numerous members of the National Academy of Sciences and the American Academy of Arts and Sciences. In fact, UCLA consistently places among the leading universities nationwide in the number of these prestigious awards granted to its faculty members.

This remarkable pool of talent is shared between one college and 11 professional schools. The College of Letters and Science offers programs leading to both undergraduate and graduate degrees, as do the School of the Arts and Architecture, Henry Samueli School of Engineering and Applied Science, School of Nursing, and School of Theater, Film, and Television. The other professional schools offer graduate programs exclusively: the Graduate School of Education and Information Studies, School of Law, John E. Anderson Graduate School of Management, School of Public Affairs and, in the health sciences, the School of Dentistry, David Geffen School of Medicine, and School of Public Health.

Undergraduates may earn a Bachelor of Arts or Bachelor of Science degree in one of 125 different disciplines; graduate students may earn one of 90 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 $913 million in 2006-07 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.

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

With only 11,000 inhabitants in 1880, the pueblo of Los Angeles convinced the state government to establish a State Normal School in Southern California. Enthusiastic citizens contributed between $2 and $500 to purchase a site, and on August 29, 1882, the Los Angeles Branch of the State Normal School welcomed its first students in a Victorian building that had been erected on the site of an orange grove.

By 1914 Los Angeles had grown to a city of 350,000, and the school moved to new quarters—a Hollywood ranch off a dirt road that later became Vermont Avenue. In 1919, the school became the Southern Branch of the University of California and offered two years of instruction in Letters and Science. Third- and fourth-year courses were soon added; the first class of 300 students was graduated in 1925, and by 1927 the Southern Branch had earned its new name: University of California at Los Angeles. (The name was changed again in 1958 to University of California, Los Angeles.)

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

The most spectacular growth at UCLA occurred in the 25 years following World War II, when it tripled its prewar enrollment of 9,000 students and undertook what would become a $260 million building program that included residence halls, parking structures, laboratories, more classrooms, service buildings, athletic and recreational facilities, and a 715-bed teaching hospital that is now one of the largest and most highly respected in the world.

The University of California System

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

Today the University is one of the largest and most renowned centers of higher education in the world. Its 10 campuses span the state, from Davis in the north to San Diego in the south. In between are Berkeley, San Francisco, Santa Cruz, Merced, Santa Barbara, Riverside, Irvine and, of course, Los Angeles.

All campuses adhere to the same admission guidelines and high academic standards, yet each has its own distinct character and academic individuality. Riverside, for example, excels in the plant sciences and entomology; Davis has a large agricultural school and the University’s only veterinary medicine program; San Diego has excellent oceanography and marine biology programs; San Francisco is devoted exclusively to the health sciences. Among the campuses there are five medical schools and four law schools, as well as schools of architecture, business administration, education, engineering, and many others.

The UC campuses have a combined enrollment exceeding 214,000 students, over 90 percent of them California residents. About one fifth study at the graduate level. Some 150 laboratories, extension centers, and research and field stations strengthen teaching and research while providing public service to California and the nation. The collections of over 100 UC libraries on the 10 campuses are surpassed in size on the American continent only by the Library of Congress collection.

The UC faculty is internationally known for its distinguished academic achievements. On its 10 campuses the University has 27 Nobel laureates, and membership in the National Academy of Sciences is the largest of any university in the country.

The UC system is governed by a Board of Regents whose regular members are appointed by the Governor of California. In addition to setting general policy and making budgetary decisions for the UC system, the Regents appoint the President of the University, the 10 chancellors, and the directors and deans who administer the affairs of the individual campuses and divisions of the University.

The Regents delegate authority in academic matters to the Academic Senate, which determines academic policy for the University as a whole. The Senate, composed of faculty members and certain administrative officers, determines the conditions for admission and granting of degrees, authorizes and supervises courses and curricula, and advises University administrators on budgets and faculty appointments and promotions. Individual divisions of the Universitywide Academic Senate determine academic policy for each campus. Students participate in policymaking at both campuswide and systemwide levels.
With the new Ronald Reagan UCLA Medical Center now open, UCLA furthers its tradition of medical outreach and assures the highest quality of care to Los Angeles and the world. Low-income families receive top-quality treatment from School of Dentistry clinics on campus and in Venice. The Santa Monica-UCLA Medical Center’s Rape Treatment Center offers 24-hour care to victims. The School of Public Health’s Community Health Promotion Program supports community-service projects to benefit poor and underserved communities, and the School of Nursing offers care through its nurse-managed clinic at Skid Row’s Union Rescue Mission. The University also supports K-12 enhancement programs such as the School of the Arts and Architecture’s Music Partnership Program, which funds UCLA students to be academic and musical mentors for at-risk youth.

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

LIFE ON CAMPUS

Just five miles from the ocean, UCLA lies in one of the most attractive areas of Southern California. It is bordered on the north by the protected wilderness of the Santa Monica Mountains and on the south by Westwood Village. Some 325 buildings on 419 acres house the College of Letters and Science plus 11 professional schools and serve more than 38,896 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. (310) 825-8764 or (310) 206-3719

A LARGE CAMPUS WITH A COMFORTABLE FEEL

The general campus population, some 34,890 students, is enriched by an additional 4,006 in the health sciences schools of Dentistry, Medicine, Nursing, and Public Health. While such numbers sound daunting, the University provides orientation sessions and innovative academic assistance programs to help acclimate new students and, through a range of services and social programs, new students quickly meet people with common interests in their academic departments, residence halls, or clubs and organizations. Even athletic events help to cement relationships as the campus comes together to celebrate Bruin victories.

Large lecture groups exist, especially in introductory courses; however, 96 percent of lower division lecture classes in 2006-07 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 16 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 2007 entering freshman class had an average high school GPA of 4.17, with an average composite score on the SAT Reasoning Test of 2,003 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 130 foreign countries to study at UCLA. Ethnic minorities comprise 65.7 percent of the undergraduates and 59.7 percent of the graduate and professional students of the graduate student population, and international students number nearly 3,000, 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 all graduate and professional schools present an extraordinary richness and diversity of teaching programs. The International Institute, Summer Sessions, and UCLA Extension provide academic and professional resources to UCLA and the greater Los Angeles community, as well as to the international community.
UCLA COLLEGE AND SCHOOLS

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

INTERNATIONAL EDUCATION OFFICE

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

The IEO administers several programs, including the Education Abroad Program (EAP), Quarter Abroad, Travel Study, and various student exchange agreements.

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

EDUCATION ABROAD PROGRAM

The Education Abroad Program offers short- and long-term study programs in cooperation with over 150 host universities and colleges in 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. The cost of study is comparable to the cost of studying on campus. While on EAP, students are eligible for financial assistance.

TRAVEL STUDY

Travel Study has over 30 short-term summer programs on five different continents. The Travel Study programs offer UC credit, the promise of an exciting summertime adventure, and intensive learning experiences taught by distinguished UCLA faculty members. Over 20 academic departments offer Travel Study programs that include from 8 to 16 quarter units of UC credit. Financial aid is available for qualified UC students. Registration begins in November for the following summer on a first-come, first-served basis. Travel Study is open to all students at any academic level. There is no grade-point average requirement to participate.

SUMMER SESSIONS AND SPECIAL PROGRAMS

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

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 the 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 the graduate adviser in advance concerning this possibility. Summer Sessions courses may also satisfy the academic residence requirement for master's or doctoral degrees.

Unlike enrollment in regular terms, students may attend another college institution for credit while they are enrolled in Summer Sessions. Registration information is available in 1147 Murphy Hall. See http://www.summer.ucla.edu. (310) 825-4101

UCLA EXTENSION

With over 65,000 adult student enrollments each year, UCLA Extension is one of the largest university continuing education programs in the world. It is designed to bring the benefits of the University—its scholars, research, and resources—to the community and the state as a whole.

Many of UCLA Extension's 4,500 classes are innovative and experimental in content, format, and teaching methods. Credit and noncredit courses are offered in nearly every academic discipline, in many interdisciplinary areas, and in emerging fields.
In addition, Extension offers special programs each term on topical issues as well as those of ongoing public concern. Many noncredit Extension courses offer the opportunity to earn Continuing Education Units, widely used for relicensure and other professional/career-related purposes.

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

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

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

UCLA INTERNATIONAL INSTITUTE

The UCLA International Institute comprises 15 multidisciplinary research centers that focus on major regions of the world and on global issues that cut across regional boundaries. The institute is committed to the education of global citizens through its research, teaching programs, and the knowledge and people-to-people linkages it fosters among students, scholars, and citizens around the globe. Major issues include security concerns that transcend traditional interstate conflict; new forms of governance and coordination, whether by governments, nongovernmental organizations, or markets; the causes and effects of globalization; transnational cultures and multiple identities (or resistance to these trends); and public health, the environment, and economic development.

The U.S. Department of Education has recognized the institute’s excellence in area studies by designating National Resource Centers in East Asia, Europe, Latin America, Near East, and Southeast Asia. The Asia Institute acts as a catalyst for interdisciplinary teaching and research among six specialized Asian studies centers. The Ronald W. Burke Center for International Relations provides teaching, research, and policy advice on the most pressing issues affecting the U.S. and the world. All of the centers have formed extensive scholarly alliances with institutions of higher education around the world.

Each year more than 600 UCLA students travel abroad through the Education Abroad Program to more than 140 programs in over 30 countries.

The institute is also home to the Fulbright Program for Greater Los Angeles, which hosts international Fulbright scholars and introduces them to the community. The International Visitors Bureau serves as a liaison between UCLA and international academic and professional leaders while hosting more than 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, learning, and testing to meet student, academic, and professional needs and serves local, national, and international agencies in the design, implementation, and evaluation of programs dedicated to modern language education. See http://www.international.ucla.edu. (310) 825-4811

RESEARCH PROGRAMS

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

ORGANIZED RESEARCH UNITS

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

BRAIN RESEARCH INSTITUTE

The Brain Research Institute (BRI) has one of the largest programs for neuroscience research and education in the country, with more than 250 scientists involved in every aspect of neuroscience research from molecular organization to human behavior. The BRI provides facilities with new technologies for research and training and sponsors affinity groups, conferences, and symposia to strengthen ties among neuroscientists. Public service activities include an elementary school outreach program and a joint educational program with UCLA Extension. See http://www.bri.ucla.edu. (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 offers an interdepartmental graduate major and provides fellowships to graduate students in European area studies. See http://www.international.ucla.edu/euro/. (310) 825-4060

CENTER FOR MEDIEVAL AND RENAISSANCE STUDIES

The Center for Medieval and Renaissance Studies supports research in 28 academic disciplines dealing with development of civilization between A.D. 300 and 1650.
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. (310) 206-8552

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

The Center for the Study of Women (CSW) draws on the expertise of more than 245 faculty members from 10 professional schools and 34 departments. To facilitate faculty research, the center organizes conferences and lecture series on feminist theory; administers research grants, and offers an affiliation for research and visiting scholars. The center sponsors working groups, produces calendar of events posters, and hosts graduate programs, as well as an annual graduate student research conference. See http://www.csw.ucla.edu. (310) 825-0590

The Cotsen Institute of Archaeology studies the creation of archives. The institute, the only one of its kind in the U.S., coordinates facilities for more than 40 researchers and many graduate students and volunteers in 11 associated academic departments. Facilities include the Information Center (regional office of the California Archeological Inventory), Ceramics Laboratory, Computer Imaging of Archaeological Data, Obsidian Hydration and Lithic Analysis Laboratory, Paleoenvironmental Laboratory, Rock Art Archive, 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. (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. (310) 825-6539

The Dental Research Institute (DRI) fosters professional training and public education as it focuses on the basic mechanisms of disease in the orofacial region. Members include scientists in molecular biology, immunology, virology, biochemistry, pharmacology, pathology, genetics, developmental biology, neurobiology, and 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.dent.ucla.edu/Research/index.asp?id=256. (310) 206-3048

The von Grunebaum Center for Near Eastern Studies (CNES) coordinates research and academic programs related to the Near East. It administers the degree programs in Middle Eastern and North African Studies and in Islamic Studies. Resources of the center include the largest faculty, one of the most comprehensive library holdings, and the richest variety of Near and Middle Eastern studies courses of any institution in the Western Hemisphere. The center conducts publication, community outreach, and scholarly exchange programs. See http://www.international.ucla.edu/cnes/. (310) 825-1181

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.gdnet.ucla.edu/iacweb/iachome.htm. (310) 206-9791

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

The American Indian Studies Center (AISC) serves as an educational and research catalyst and includes a library; B.A., undergraduate minor, master’s, and 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. (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, postdoctoral fellowships, and B.A., undergraduate minor, and master’s programs. See http://www.aasc.ucla.edu. (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. (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, geochronology, 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. (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 institute administers the Labor and Workplace Studies minor. See http://www.irle.ucla.edu. (310) 794-5957

Institute for Social Science Research
The Institute for Social Science Research (ISSR) promotes interdisciplinary research on contemporary sociological, psychological, political, and economic problems and community issues. Research components include the Center for American Politics and Public Policy, Center for the Study of Urban Poverty, California Center for Population Research, Center for Social Theory and Comparative History, Center for the Study of Race, Ethnicity, and Politics, and Social Science Data Archive. Training in survey research methodology is available to students through participation in the annual Los Angeles County Social Survey. The institute publishes the ISSR Working Papers in the Social Sciences. See http://www.issr.ucla.edu. (310) 825-0711

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/. (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. (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 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/lac/. (310) 825-4571

Mental Retardation Research Center
The Mental Retardation Research Center (MRCC) provides laboratories and clinical facilities for research and training in mental retardation and developmental disabilities. Interdisciplinary activities range from anthropological studies to molecular aspects of inherited metabolic diseases. See http://www.mrcc.npi.ucla.edu. (310) 825-0313
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, as well as the administration of the Molecular Biology Interdepartmental Ph.D. Program, the UCLA-DOE Laboratory of Structural Biology and Molecular Medicine, and the UCLA ACCESS to Programs in the Molecular, Cellular, and Integrative Life Sciences. See http://www.mbi.ucla.edu. (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 development, laser-plasma interactions, and the use of plasma in applications ranging from particle accelerators to the processing of materials and surfaces used in microelectronics or coatings. See http://www.physics.ucla.edu/psti/. (310) 825-4789

UCLA-DOE Laboratory of Structural Biology and Molecular Medicine
The UCLA-DOE Laboratory of Structural Biology and Molecular Medicine, funded though a Department of Energy contract, conducts research in molecular nuclear medicine and structural biology and genetics. Laboratory faculty members have joint appointments in academic departments and teach at both undergraduate and graduate levels. Major facilities include a biomedical cyclotron, advanced scanning equipment, nuclear magnetic resonance, protein expression, and X-ray crystallography facilities. See http://www.doe-mbi.ucla.edu/Overview.html. (310) 825-3754

Specialized Research Centers, Laboratories, and Institutes
Additional research centers, laboratories, and institutes advance scholarship in all fields. The breadth of research conducted on campus is reflected in undertakings as diverse as the Center for Astrobiology (http://www.astrobiology.ucla.edu)—which is developing new strategies for Mars exploration—and the Jonsson Comprehensive Cancer Center (http://www.cancer.mednet.ucla.edu)—one of only 39 comprehensive centers in the nation.

Interdisciplinary activities in the social sciences include the nationally respected UCLA Anderson Forecast (http://www.uclaforecast.com) in UCLA’s John E. Anderson Graduate School of Management and the Center for Study of Evaluation (http://www.cse.ucla.edu) in the Graduate School of Education and Information Studies, which is at the forefront of efforts to improve the quality of schooling in America.

In the health sciences, research ranges from improving the quality of life for Alzheimer patients and caregivers at the UCLA Alzheimer Disease Center (http://www.adc.ucla.edu) to epidemiology, immunology, and the clinical management of AIDS at the UCLA AIDS Institute (http://www.ucllaidsinstitute.org) and the Center for Clinical AIDS Research and Education (http://www.uclacarecenter.com). The Fernald Child Study Center (http://www.psych.ucla.edu/centers_Programs/fcs/) 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. 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 the Study of Urban Poverty (http://www.sscnet.ucla.edu/issr/csup/index.php) initiates new research on issues related to urban poverty and sponsors seminars in the field. The Center for Policy Research on Aging (http://www.spa.ucla.edu/cpra/) addresses the significant issues of an aging society through policy analysis, dissemination of information, and technical assistance to the public and private sectors.

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

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

Fowler Museum at UCLA
The Fowler Museum at UCLA is internationally known for the quality of its collections, which encompass the arts and material culture of much of the world, with particular emphasis on West and Central Africa, Asia and the Pacific, and the Americas, past and present. It supports UCLA instruction and research and sponsors major exhibitions, lecture programs, and symposia. The museum is open to the public Wednesday through Sunday. For more information on hours and admission, see http://www.fowler.ucla.edu. (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 Contemporary 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 Curielshank Collection and the Frank Lloyd Wright Collection of Japanese prints. The center is open only by appointment. See http://www.hammer.ucla.edu/collections/3/. (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://www.hammer.ucla.edu/collections/4/. (310) 443-7040

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. See http://www.art.ucla.edu/gallery.html. (310) 825-0557

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://www.hammer.ucla.edu. (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 eight million volumes, and nearly 80,000 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, Institute for Social Science Research Data Archives Library, Instructional Media Collections and Services, and William Andrews Clark Memorial Library. It also provides library item location and circulation status.

Other available catalogs include the UC Libraries Catalog (Melvyl), WorldCat, RLG Union Catalog, numerous abstracting and indexing databases, and gateways to other systems. The Melvyl Catalog contains information on library holdings at all 10 UC campuses.

While continuing to develop and manage collections of traditional printed materials, the UCLA Library also makes a number of digital resources available for campus use through the library site. These include College Library electronic reserves and electronic journals, texts, reference resources, periodical indexes, and abstracts. See http://www2.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. Arts Library Special Collections, housed in the Young Research Library, contain noncirculating materials, including the Princeton Index of Christian Art, 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://www2.library.ucla.edu/libraries/Arts/index_arts.cfm. (310) 825-3817

Charles E. Young Research Library

The Young Research Library primarily serves graduate research in the humanities, social sciences, education, public affairs, government information, and maps. Most of its collections are arranged in open stacks. The building also houses reference, circulation, graduate reserve, and periodicals services and the Microform and Media Service, with microcopies of newspapers, periodicals, and other materials. The Department of Special Collections contains rare books and pamphlets, primarily in the humanities, social sciences, and visual arts, from the fifteenth to twentieth century. University Archives, early maps and atlases, early California newspapers, manuscript collections, transcripts of oral history, ephemera, microfilm, tape recordings, prints, paintings, and drawings, including original architectural drawings. See http://library.ucla.edu/libraries/yril/. (310) 825-1323
The UCLA Library is among the top research libraries in the U.S.

**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/. (310) 825-5756

**EUGENE AND MAXINE ROSENFIELD MANAGEMENT LIBRARY**

Located in the John E. Anderson Graduate School of Management complex, the Rosenfeld Management Library houses materials on accounting information systems, arts management, business history, corporate history, entrepreneurship, finance, general management and management theory, industrial relations, international and comparative management, management information systems, management strategy and policy, marketing, operations, research, production and operations management, public/not-for-profit management, and real estate. See http://www.anderson.ucla.edu/library.xml. (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 550,000 bound volumes. See http://www.law.ucla.edu/home/index.asp?page=11. (310) 825-4743

**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, 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 640,000 print volumes and 4,400 journal subscriptions. See http://www2.library.ucla.edu/libraries/Biomed/index.cfm. (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. Music Special Collections 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; it also houses the Archive of Popular American Music, a special collection of published and manuscript sheet music, recordings, and related materials. See http://www2.library.ucla.edu/libraries/Music/9597.cfm. (310) 825-4882

**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://www2.library.ucla.edu/libraries/EastAsian/6469.cfm. (310) 825-1401

**SCIENCE AND ENGINEERING LIBRARY**

The Science and Engineering Library (SEL) collections on engineering, mathematics, and the physical sciences are housed in three separate locations. SEL/Chemistry in Young Hall houses materials on chemistry, biochemistry, and molecular biology; solid-state, elementary particle, high-energy, mathematical, nuclear, and plasma physics; acoustics; spectroscopy; optics; and astrophysics. SEL/Engineering and Mathematical Sciences in Boelter Hall houses materials on aeronautics, astronomy, and atmospheric sciences; bioengineering; chemical, civil, electrical, environmental, manufacturing, mechanical, and nuclear engineering; computer science and electronics; energy technology; mathematics; metals and materials; pollution; and statistics. SEL/Geology-Geophysics in the Geology Building houses materials on geology, geophysics, geochemistry, space physics, planetary science, regional geology, paleobiology, micropaleontology, invertebrate paleontology, ore deposits, geomorphology, hydrology, and chemical oceanography. See http://www.library.ucla.edu/libraries/sel/. (310) 825-4951

**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 Center for African American Studies Library (http://www.bunche.ucla.edu/lmc/library_main.html) contains materials reflecting the African American experience in the social sciences, arts, and humanities. The
American Indian Studies Center Library (http://www.aisc.ucla.edu/lib/aislibrary.htm) houses a collection on American Indian life, culture, and state of affairs in historical and contemporary perspectives, while the Asian American Studies Center Reading Room/Library (http://www.aasc.ucla.edu/library/default.htm) features Asian and Pacific American resources.

Materials related to Chicano and Latino cultures are housed in the Chicano Studies Research Center Library (http://www.chicano.ucla.edu/library/default.htm), and the William Andrews Clark Memorial Library (http://www.hunnet.ucla.edu/hunnet/clarklib/) contains rare books, manuscripts, and other noncirculating materials on English culture (1640 to 1750). The English Reading Room (http://wwwenglish.ucla.edu/resources/ert/) 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/imlib/. (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/. (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 220,000 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, and other persons of prominence in the American film industry.

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

The archive's exhibition program presents evening screenings and discussions that focus on archival materials, new work by independent filmmakers, and an array of international films. See http://www.cinema.ucla.edu. (310) 206-8013

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

OTHER COLLECTIONS


COMPUTER SUPPORT

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

ACADEMIC TECHNOLOGY SERVICES

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

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

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

The Ethnomusicology Archive includes recordings and a vast collection of musical instruments from many non-Western countries.
RESEARCH COMPUTING TECHNOLOGIES
Research Computing Technologies offers integrated services to faculty members. Areas of expertise include technical and administrative grant development support; storage and management tools for research and instructional data; analysis and interpretation of complex data sets through statistical and visualization support; high-performance network consulting services for research; and high-performance computing through Beowulf clusters, consulting support for faculty to access the National Supercomputer Centers, and support for the development of central and local commodity-based Linux clusters. See http://www.ats.ucla.edu/clusters/hpc/. (310) 206-7323

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

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

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

BIOLOGICAL COLLECTIONS
The Biological Collections of the Ecology and Evolutionary Biology Department include marine fishes from the Eastern Pacific and Gulf of California, and birds and mammals primarily from the Western U.S., Canada, Mexico, and Central America. The department also maintains a more limited collection of amphibians, reptiles, and fossil vertebrates. See http://www.eeb.ucla.edu/dickey/index.html. (310) 825-1282

DIVISION OF LABORATORY ANIMAL MEDICINE
The Division of Laboratory Animal Medicine is responsible for the procurement, husbandry, and general welfare of animals required for teaching and investigative services. It also administers the veterinary medical and husbandry programs throughout the campus. See http://www.dlam.ucla.edu. (310) 794-0161

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

MARINE SCIENCE CENTER
The Marine Science Center coordinates marine-related teaching and research on campus and facilitates interdepartmental interaction of faculty members and students. UCLA offers one of the broadest interdisciplinary educational programs in marine sciences in the U.S. Field trips for marine-related courses and access to research sites in the Santa Monica Bay, Channel Islands, and the Southern California Bight are provided by UCLA’s 68-foot research vessel Sea World UCLA. See http://www.msc.ucla.edu. (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.bogard.ucla.edu. (310) 825-1260

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 utilize Stunt Ranch and other NRS sites. See http://stunt ranch.ucnrs.org. (310) 206-3887
STUDENT SERVICES

Like a small city, UCLA has its own police department and fire center, 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 major 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, and at the BOL office in Kerckhoff Hall. See http://www.bol.ucla.edu. (310) 267-4357

COMPUTER LABORATORIES

Student laboratories are supported through Academic Technology Services (ATS) and the College Library Instructional Computing Commons (CLICC), a collaborative effort between ATS, Center for the Digital Humanities, Social Sciences Computing, 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 http://www.computerlabs.ucla.edu. (310) 206-0271

COURSE WEB PAGES

The Instructional Enhancement Initiative assures that all undergraduate nontutorial courses in the College of Letters and Science and the Henry Samueli School of Engineering and Applied Science provide an individual course website for faculty members, teaching assistants, and enrolled students. The sites facilitate the distribution of supplementary course materials, lecture notes, homework assignments, research links, and electronic communication, including virtual office hours and class bulletin boards for interactive question and answer sessions. Instructors decide which of these online capabilities are best suited to their course websites.

LECTURE NOTES AND COURSE READERS

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

Academic Publishing provides custom course readers, obtaining 5,000 copyright authorizations each year. See http://www.uclaestore.com/ucla/outerweb/academicpublishing.asp. (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. (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 6 p.m. through Tuesday at 1 a.m. and Tuesday through Saturday from 6 a.m. to 1 a.m., including holidays. See http://www.ursa.ucla.edu.

For most students, URSA provides the easiest way to gain real-time access to academic, financial, and personal records. The site is designed with an intuitive visual interface that walks students through the 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 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.

Fifteen computer laboratories are available throughout the campus, many catering to specific areas of study.
SERVICES FOR HEALTH AND SAFETY

ARTHUR ASHE STUDENT HEALTH AND WELLNESS CENTER
The Ashe Student Health and Wellness Center in Westwood Plaza 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. (310) 825-4073

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 Graduate and Undergraduate 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, and men's health 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.

Student Psychological Services
Student Psychological Services (SPS) offers short-term personal counsel and psychotherapy in Wooden Center West. (310) 825-0768

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

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

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

STUDENT SAFETY AND SECURITY
Dial 911 from any campus phone for police, fire, or medical emergencies. For nonemergency information, contact the UCLA Police Department. See http://www.ucpd.ucla.edu. (310) 825-1491

The police department provides a free Campus Escort Service every day of the year from dusk to 1 a.m. Uniformed community service officers (CSOs)—specially trained UCLA students—walk students, staff, faculty, and visitors between campus buildings, local living areas, or Westwood Village. See http://www.ucpd.ucla.edu/ucpd/cso/escorts.html. (310) 794-WALK

The free Evening Van Service provides a safe, accessible, and convenient mode of transportation around campus at night. Vans provide transportation between Ackerman Union, westside apartments, Lot 36, campus buildings, and residence halls. See http://www.ucpd.ucla.edu/ucpd/cso/vanroutes.html. (310) 825-9800

UCLA Sexual Violence Prevention and Education Services—including workshops, self-defense classes, counseling, and referrals—increase physical and psychological preparedness and heighten awareness of the complex issues of rape, sexual assault, and relationship violence. See http://www.thecenter.ucla.edu/sexviol.html. (310) 825-3945

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

The Office of Environment, Health, and Safety (EH&S) works to the 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. (310) 825-5689

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

### UCLA Emergency Numbers

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police, Fire, or Medical Emergency</td>
<td>911</td>
</tr>
<tr>
<td>UCLA Police Department (24 hours)</td>
<td>(310) 825-1491</td>
</tr>
<tr>
<td>UCLA Emergency Medical Center (24 hours)</td>
<td>(310) 825-2111</td>
</tr>
<tr>
<td>Campus Escort Service (dusk to 1 a.m.)</td>
<td>(310) 794-WALK</td>
</tr>
</tbody>
</table>

### 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. (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 is a member of USA.

The breadth of USA activities offers an invaluable service to the campus and surrounding communities and provides students the opportunity to participate in and benefit from these endeavors. For example, USA programs benefit both campus and community through programs to tutor youths and adults, address health needs of ethnic communities, combat poverty and homelessness, and better the environment.

Student government also supports approximately 20 student advocacy groups on campus from the African Student Union to the Vietnamese Student Union. See http://students.asucla.ucla.edu.

### Campus Events

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

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

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

The Cultural Affairs Commission sponsors art exhibits in the Kerckhoff Hall Art Gallery and the Jazz/Reggae Festival. (310) 825-6564

### Publications and Broadcast Media

Publications and media provide a training ground for aspiring writers, journalists, photographers, and radio and television announcers while serving the communication needs of the campus community. Most publications offices are in Kerckhoff Hall. See http://www.studentmedia.ucla.edu. (310) 825-2787

**Daily Bruin**

The Daily Bruin, with a circulation of 15,000, 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, and advertising sales representatives; new staff members are welcome. See http://www.dailybruin.ucla.edu. (310) 825-9898

**Newsmagazines**

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

**Online Media**

Student Media supports the Bruinwalk community portal website.

**UCLAradio**

UCLAradio broadcasts live over the Internet from http://www.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; all positions, including on-air, news staff, and
advertising representatives, are open to students. (310) 825-6955

UCLAtv
UCLAtv, the student-run television station, broadcasts over the campus cable network (channel 29)—available in the residence halls and select campus buildings—and the Internet via Daily Bruin TV at http://www.daily.bruin.ucla.edu/dbtv/. It gives students an opportunity to practice television-related skills and to provide information, entertainment, and a forum for the free expression and exchange of ideas to the UCLA community. Station facilities are in Kerckhoff Hall and Ackerman Union.

UCLA Yearbook
The UCLA yearbook, Bruinlife, is one of the largest student publication efforts on campus. Available each summer, 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. (310) 825-2640

UCLA RESTAURANTS
ASUCLA operates more than a dozen restaurants and three coffee houses on campus, assuring a range of eating options from Italian to sushi. From the residence halls to the student union, a restaurant is never far. Hours vary, especially during summer and holidays. For hours and locations of all the restaurants, see http://www.asucla.ucla.edu/restaurants/hours.asp.

UCLA STORE
In terms of sales, the UCLA Store is the biggest college store in the nation. There are five locations on campus. Author signings, sales, and other special events are announced in the Daily Bruin or on the UCLA Store site. See http://www.uclastore.com.

The UCLA Store–Ackerman Union has eight departments. The Textbooks department carries required and recommended texts for most undergraduate and many graduate courses and operates a buyback service so students can sell used texts. BookZone offers reference books and a wide selection of titles in literature, science, history, and technical disciplines, including the UCLA Faculty Authors section. The Computer Store carries personal computers, peripherals, accessories, and software at low academic prices. Essentials offers school and office supplies, including consumables for computer printers. BearWear specializes in UCLA emblematic merchandise. Fast Track carries active sportswear for men and women, plus an extensive Clinique counter. Market is a convenience store, with snacks, health and beauty aids, gifts, greeting cards, and cut flowers. The store also houses a sporting goods department. (310) 825-7711

UCLA Store–Health Sciences, http://www.uclastore.com/uclahs/, (310) 825-7721, specializes in books and supplies for students in dentistry, medicine, nursing, public health, and related areas. UCLA Store–Lu Valle Commons, (310) 825-7238, carries art supplies and books, as well as textbooks and supplies for all on-campus Extension courses and selected academic programs (architecture and urban design, art, design, film, information studies, law, management, public policy, social welfare, theater, urban planning). North Campus Shop, and Hill Top Shop in Sunset Village, are convenience store locations.

OTHER SERVICES AND ENTERPRISES
ASUCLA oversees a variety of other services ranging from a copy center and post office to a hair salon and travel agency. Most are located in Ackerman Union.

Students preparing to graduate can use the Campus Photo Studio, (310) 206-8433, for their senior yearbook portraits. Graduation Etc., http://www.collegestore.org/ge2/default.asp, (310) 825-2587, sells and rents caps, gowns, and hoods for degree ceremonies and provides announcements, diploma mounting, and other graduation-related products and services.

On the lighter side, ASUCLA operates the Coinz Arcade with pool tables and pinball, video, and electronic games. (310) 206-0829

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. (310) 206-7011

On-Campus Housing
Many students, especially those in their first year, choose to live on campus. Besides the convenience, it’s a good way to meet other people and to find out about social and academic activities. Four residence halls, two residential suites, and five residential plazas accommodate over 9,200 undergraduates. Three more residential houses accommodate 120 transfer and upper division 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://www.housing.ucla.edu/myhousing/. Students applying for Winter or Spring Quarter are assigned on a space-available basis in the order applications are received.

Per-person costs for the academic year start at just over $9,800. Consult the housing office for the range of price options. See http://www.housing.ucla.edu.
The Office of Residential Life is responsible for student conduct in residence halls and suites and provides professional and student staff members to counsel residents on programming and other problems. See http://www.orl.ucla.edu. (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

The UCLA Community Housing Office provides information and listings for University-owned apartments, cooperatives, private apartments, roommates, rooms in private homes, and short-term housing. Rental listings are updated daily. Fraternity and sorority housing provides another option for members of the Greek system.

Within walking distance of campus, the University maintains seven off-campus apartment buildings for full-time undergraduate 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. (310) 206-7011

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. (310) 398-4692

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/chapter houses/housing.html. (310) 825-6322

The Community Housing 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. (310) 825-4491

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. (310) 477-6628

BRUINCARD

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

The primary benefit of the BruinCard is convenience. It is a versatile card that serves the following functions: confirmation of student status; I.D. card for faculty, staff, and students; residence hall access and meal card; library card; recreation card; debit card (if activated) for purchases at campus stores and restaurants on and off campus; time-management card for departments using the Kronos system; and access to the Santa Monica Big Blue Bus system.

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

BruinCard centers are in 123 Kerckhoff Hall, 107 UCLA Wilshire Center, and 150A Sproul Hall. See http://www.bruincard.ucla.edu to check account balance, make deposits, view recent transactions, and report lost or stolen cards. (310) 825-2336

CAREER CENTER

The UCLA Career Center, located in the Strathmore Building, offers career planning and employment assistance free to all UCLA students. See http://career.ucla.edu. (310) 206-1915

Career Planning and Exploration

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

Employment Assistance

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

The Center for Women and Men in the Student Activities Center offers services to all UCLA students, with special focus on gender-related issues and concerns and reentry/nontraditional student services. The center presents workshops and support groups on topics such as assertiveness training, child care, career and leadership development, healthy relationships, mentorship for women in the sciences, men’s issues, returning to school, single parenting, sexual violence prevention and education, and health and wellness. It also offers referrals for medical, legal, career planning, personal counseling, and other services both on and off campus. In addition, rape services consultants (RSCs)—individuals who provide information, support, and resources for members of the UCLA community who have been raped or sexually assaulted—can discuss options and alternatives, help identify and assist in contacting the most appropriate support services, and answer any questions that may arise. See http://www.thecenter.ucla.edu. (310) 825-3945

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

CENTRAL TICKET OFFICE

Tickets for UCLA events are available at the Central Ticket Office (CTO) in the James West Alumni Center. As part of its service, CTO offers students with current BruinCards discount tickets to campus athletic and cultural events and local movies. Students may also purchase tickets to off-campus events through Ticketmaster, as well as student discount tickets for Los Angeles area buses. See http://www.tickets.ucla.edu. (310) 825-2101

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: University Policies in the Appendix for more information. See http://www.deanofstudents.ucla.edu. (310) 825-3871

EARLY CARE AND EDUCATION

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. (310) 825-5086

The Child Care Resource Program helps parents make off-campus child care arrangements and coordinates a Choosing Child Care Forum each month. (310) 825-8474

The University Parents Nursery School is a multicultural cooperative school for two- through five-year-old children of UCLA students, faculty, and staff. See http://upns.bol.ucla.edu. (310) 397-2735

The 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://www.ece.ucla.edu/UVK_Program.asp. (310) 915-5827

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. (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. (310) 206-3628
Office for Students with Disabilities

The Office for Students with Disabilities (OSD) in Murphy Hall provides academic support services to regularly enrolled students with documented permanent or temporary disabilities in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and University policies. Services include campus orientation and accessibility, note takers, readers, sign language interpreters, Learning Disabilities Program, registration assistance, test-taking facilitation, special parking assistance, real-time captioning, assistive listening devices, on-campus transportation, adaptive equipment, support groups and workshops, tutorial referral, special materials, housing assistance, referral to the Disabilities and Computing Program, and processing of California Department of Rehabilitation authorizations. There is no fee for any of these services. All contacts and assistance are handled confidentially. See http://www.osd.ucla.edu. (310) 825-1501, TDD (310) 206-6083, fax (310) 825-9656

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

Office of Ombuds Services

The Office of Ombuds Services responds to issues and concerns from students, staff, faculty, and administrators. Acting impartially, ombuds persons may investigate unresolved conflicts or facilitate the resolution of problems for which there are no established guidelines and may also, where possible and when requested by the visitor, assist in resolving an issue through mediation (including sexual harassment cases). The office is in the Strathmore Building. See http://www.ombuds.ucla.edu. (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 Assistance-Ridesharing (CAR) Office is the best place for information on transportation options. Many students form or join existing UCLA carpools or vanpools. More than 150 vanpools commute to UCLA from nearly 80 Southern California communities. Full- and part-time riding opportunities are available, and registered two- and three-person student carpools are given top priority to receive parking (see below).

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

Parking Permits

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

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

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

Student Parking Request forms, along with important quarterly due dates and information on how to apply for a parking permit, are available online, by phone, or in person at Parking Services. Parking request forms can also be downloaded at http://www.transportation.ucla.edu/appmain.htm. (310) 825-9871

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. (310) 267-2004

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, Document, and Distribution Services, which offers full-service document processing and delivery for the campus community. See http://www.maildoc.ucla.edu. (310) 825-0374

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

Student Legal Services

Through Student Legal Services in Dodd Hall, currently registered and enrolled students with legal problems or
ABOUT UCLA

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. (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 1920s. Today UCLA counts over 60 national and local Greek-letter organizations that make up one of the largest Greek systems on the West Coast.

Fraternity and Sorority Relations (FSR) interprets University policies, procedures, and regulations and acts as a liaison between established Greek organizations and the University. It coordinates Greek-letter social organizations that participate in programs such as the Greek Leadership Conference, Membership Recruitment, Greek Week, New Member Forums, Dating Expectations Programs, intramural tournaments, and University-sponsored programs. See http://www.greeklife.ucla.edu. (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 the pedagogical role of students should not only consist of classroom instruction but should be relevant to social issues as well.

Currently, the CPO houses over 25 student-initiated community and student support projects that encompass educational, legal, social, medical, and academic services to underserved communities in the Los Angeles area. CPO is unique in its multicultural and ethnically diverse environment and the experience it offers in campus and community programming. See http://www.communityprograms.ucla.edu. (310) 825-5969

PERFORMING ARTS

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

DEPARTMENT EVENTS

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

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

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

The World Arts and Cultures Department presents events and concerts involving departmental faculty, guest artists, and students. Student performances include M.F.A. concerts, an undergraduate and graduate student-produced concert, and the Senior Concert/Colloquium. Students also perform in more informal programs, such as the end-of-term student works festival or Pau Hana, that feature many world dance forms. See http://www.wac.ucla.edu.

UCLA LIVE

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

SPORTS AND ATHLETICS

Athletics play a major role in the University's mission to provide a well-rounded education both in and out of the classroom. UCLA continues to live up to its reputation as a national leader in intercollegiate sports and ranks first in the U.S. in the number of National Collegiate Athletic Association (NCAA) championships won (103). In 2006-07 the UCLA athletic programs (men and women) placed second 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://uclabruins.cstv.com.

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

ATHLETIC FACILITIES

The major indoor arena at UCLA is the famed Pauley Pavilion, which seats 12,800 for UCLA basketball, volleyball, and gymnastics events. It was the site of the 1984 Summer Olympics gymnastics competition. Immediately adjacent, Drake Stadium is the home of UCLA track and field and soccer competitions and site of many outdoor events, including the U.S. Olympic Festival '91. The 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. 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-10 Conference, which includes Arizona State University; University of Arizona; University of California, Berkeley; Stanford University; University of Southern California; University of Oregon; Oregon State University; Washington State University; and the University of Washington. UCLA teams have won an overall total of 71 NCAA men’s championships—second highest in the nation—including 19 in volleyball, 16 in tennis, 11 in basketball, eight each in track and field and water polo, four in soccer, two each in golf and gymnastics, and one in swimming. Students can participate on the varsity level in football, basketball, track, baseball, tennis, volleyball, water polo, golf, soccer, and cross-country. (310) 825-8699

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 32 NCAA titles—second highest in the nation—including 10 in softball, six in water polo, five each in gymnastics and track and field, three in volleyball, two in golf, and one in tennis. Other nationally ranked teams are those in basketball, swimming, cross-country, and soccer. (310) 825-8699

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. (310) 825-3701

INTRAMURAL AND CLUB SPORTS

The UCLA Intramural Sports Program consists of team, dual, and individual sports competition in tournament or league play. Over 1,800 teams and 9,000 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. (310) 267-5416

The Club Sports Program 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, men's crew, cycling, dragon boat, equestrian, fencing, field hockey, men's gymnastics, ice hockey, kendo, men's and women's lacrosse, roller hockey, men's and women's rugby, running, sailing, snowboarding and skiing, men's and women's soccer, surfing, table tennis, tae kwon do, tennis, triathlon, men's and women's ultimate, men's and women's volleyball, water skiing, men's water polo, waterskiing, and wrestling. (310) 267-5416

OUTDOOR ADVENTURES

Outdoor Adventures offer students the chance to get away and enjoy the wonders of local and distant mountains and waterways. Activities designed for beginning to experienced outdoors people include camping, rock climbing, scuba diving, windsurfing, canoeing, kayaking, and hiking. (310) 206-1252

CLASS PROGRAMS

Noncredit recreation classes in arts, dance, fitness sports, martial arts, swimming, tennis, 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. A Fitness Pass must be purchased to participate in drop-in fitness classes.

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 gymnasia, racquetball/handball/squash courts, a weight training facility, rock climbing wall, exercise/dance and martial arts studios, and a games lounge. The Sunset Canyon Recreation Center offers activities in an outdoor park setting that features a 50-meter swimming pool, 25-yard family pool, picnic/barbecue areas, play fields, outdoor amphitheater, eight lighted tennis courts, sand volleyball court, two multipurpose sports courts, and various meeting rooms and lounges, as well as a challenge course. The UCLA Marina Aquatic Center offers sailing, windsurfing, kayaking, rowing, surfing, and other activities. Students also have the use of Pauley Pavilion, Drake Stadium, Sycamore Tennis Courts, Los Angeles Tennis Center, Intramural Fields, Student Activities Center, and Kaufman Hall for recreational sports and activities.

YOUTH AND FAMILY PROGRAMS
Youth and Family Programs offer exciting activities for children 3 to 17 years old. Summer programs include Camp Adventure for ages 11 to 15, Camp Bruin Kids for ages 5 to 10, Camp Bruin Tots for ages 4 and 5, Bruins on Broadway for ages 8 to 15, Camp Explore for ages 7 to 11, Camp Extreme for ages 14 to 16, Sunset Sleepover for ages 7 to 12, Camp Voyager for ages 11 to 13, Counselors in Training for ages 15 to 17, group and private lessons, and the Family Outdoor Entertainment Series. Activities combine play with skill development and deepen the fun in learning. (310) 825-3701

UCLA ALUMNI ASSOCIATION
Celebrating more than 74 years of serving the UCLA community, the UCLA Alumni Association has more than 84,000 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, 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://www.uclalumni.net. (310) 825-2586 or, outside Los Angeles County, (800) 825-2586.
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.

**UNDERGRADUATE ADMISSION**

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

Prospective UCLA undergraduates 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. High school honors level and advanced placement courses are good preparation regardless of the desired major. To be competitive, UCLA applicants need to present an academic profile much stronger than that represented by the minimum UC admission requirements.

**APPLYING FOR ADMISSION**

To apply for admission to UCLA, complete the UC application for admission and scholarships. Applicants may apply for the Fall Quarter at http://www.universityofcalifornia.edu/admissions/. Applicants may also download and print an application from the same website.

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, the School of Arts and Architecture, the School of Theater, Film, and Television, the School of Nursing, and the Henry Samueli School of Engineering and Applied Science are open for Fall Quarter. The application filing period is November 1-30 of the prior year. The Henry Samueli School of Engineering and Applied Science currently accepts transfer applications for Winter Quarter for all majors except Bioengineering and Chemical Engineering. See http://www.admissions.ucla.edu/apply/ for up-to-date information on application procedures.

**NOTIFICATION OF ADMISSION**

The UC Undergraduate Application Processing Service mails out notices to acknowledge receipt of applications. Subsequently, UCLA UARS notifies students of the admission decision. The length of time before admission notification varies. In general, 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 University registration 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 one eighth 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. UCLA offers admission to those students with the best overall academic preparation, viewed in the context of the applicants’ academic and personal circumstances 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 three main requirements: the subject requirement, the examination requirement, and the examination requirement.

Subject Requirement

The subject requirement, sometimes called A to G requirements, is a sequence of high school academic courses required for admission to the University. Each course must be completed with a grade of C or better. The requirement consists of 15 year-long courses, seven of which must be taken during the last two years in high school. 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. 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 prerequisites 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

Subject Requirement

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

Scholarship Requirement

Eligibility for admission to the University of California is based on a combination of the grade-point average in the academic subject requirement and the ACT Assessment plus Writing Tests or the SAT Reasoning Test, and SAT Subject Test scores. For details, refer to Introducing the University at http://www.universityofcalifornia.edu/admissions/ITU.pdf.

Examination Requirement

All freshman applicants must submit scores from the following tests:

1. Either the ACT Assessment plus Writing Tests score or the SAT Reasoning Test score
2. Two SAT Subject Tests in two different subject areas: English (literature), history/social studies, mathematics (level 2 only), science, or languages other than English. Applicants to the Henry Samueli School of Engineering and Applied Science are strongly encouraged to take the following SAT Subject Tests: mathematics level 2 and a science test (biology E/M, chemistry, or physics) that is closely related to the applicant’s intended major

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 each 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.

Freshman applicants who are admitted must have an official, final high school transcript (showing the date
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) or UCLA general education requirements.

For details on transfer admission requirements, refer to the guidelines in the application. See http://www.admissions.ucla.edu/prospect/Adm_tr/tradms.htm.

INTERCAMPUS TRANSFERS

Undergraduate students registered in a regular session at any campus of the University (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 × 1.5 = 18 quarter units.

College credit for examinations given by national testing services is generally not allowed, except for the AP Tests given by the College Board and the International Baccalaureate. See http://www.admissions.ucla.edu/trcredit.htm.

INTERNATIONAL APPLICANTS

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

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

Proficiency in English. Students whose native language is not English must have sufficient command of English to benefit from instruction at UCLA. To demonstrate that command, they are required to take the UCLA English as a Second Language Placement Examination (ESLPE) before 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 English as a second language 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, except in the School of Nursing R.N. to B.S./postlicensure program.

REGISTRATION

Enrollment and Degree Services
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. Billing and Receivable (BAR) accounts can be viewed through URSA.

of graduation) sent to UCLA. Sixth or seventh semester transcripts are not required.

Because admission requirements and selection criteria may change, freshman applicants should see http://www.admissions.ucla.edu/freshman/ for the most complete and up-to-date information.
2. Enrollment in classes is completed via URSA at http://www.ursa.ucla.edu.

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

**PAYING FEES**

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

**eBILL**

BAR accounts are administered electronically (eBill) through URSA. Monthly financial activity is displayed for the current month, as well as account activity for the last 24 months. URSA also provides a link to the Student Financial Services website (http://www.sfs.finance.ucla.edu) where students can find important communications from the University regarding registration and University policies. Students can pay their BAR account electronically using Visa, MasterCard, Discover Card, American Express, PULSE, NYSE, or STAR through URSA only. Students can also print a remittance document from the eBill webpage and mail payments with a check or money order. UCLA converts checks into electronic payments.

**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. Legal residents of California are not required to pay tuition. Students classified as nonresidents must pay annual tuition in addition to registration fees. 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 registration 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.

<table>
<thead>
<tr>
<th><strong>Course Materials Fees</strong></th>
<th><strong>University registration fee</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$864.00</td>
</tr>
<tr>
<td>Educational fee</td>
<td>6,262.00</td>
</tr>
<tr>
<td>Undergraduate Students Association fee</td>
<td>121.38</td>
</tr>
<tr>
<td>Ackerman Student Union fee</td>
<td>43.50</td>
</tr>
<tr>
<td>Ackerman/Kerckhoff Seismic fee</td>
<td>113.00</td>
</tr>
<tr>
<td>Wooden Recreation Center fee</td>
<td>45.00</td>
</tr>
<tr>
<td>Student Programs, Activities, and Resources Center fee</td>
<td>93.00</td>
</tr>
<tr>
<td>Student Health Insurance Plan (SHIP)</td>
<td>756.00</td>
</tr>
<tr>
<td><strong>Total for California residents</strong></td>
<td><strong>$8,297.88</strong></td>
</tr>
<tr>
<td>Nonresident educational fee</td>
<td>6,849.00</td>
</tr>
<tr>
<td>Nonresident tuition</td>
<td>20,021.00</td>
</tr>
<tr>
<td><strong>Total for nonresidents</strong></td>
<td><strong>$28,905.88</strong></td>
</tr>
</tbody>
</table>

**MISCELLANEOUS FEES**

Miscellaneous fees include charges for late registration fee payment. Late fees also apply if students file their Study List late or do not pay off BAR 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 PLAN**

All UCLA undergraduate students are automatically assessed for and enrolled in the Undergraduate Student Health Insurance Plan (USHIP) as a condition of registration at UCLA. Continued enrollment in a qualified medical/health insurance plan must be maintained during all registered terms.

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

**Waiving USHIP**

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

Students must apply for a USHIP waiver online. See the Ashe Center website for details, including a definition of a qualified private medical/health insurance plan. Follow the Online Services link from http://www.studenthealth.ucla.edu.
**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 the educational fee. The reduction is based on total units enrolled as of Friday of the third week of classes.

File a Request for Fee Reduction with the academic dean’s office by Friday of the second week. Except for these qualified and approved part-time students, there is no reduction in the University registration, educational, 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 tuition fee. File a Request for Fee Reduction with the College or school office by Friday of the second week of classes for the applicable term.

Full-time University employees may apply for a reduction of the registration and educational fees at their Campus Human Resources office. Students who use the part-time fee reduction may also use the UC employee reduction.

**ENROLLING IN CLASSES**

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

The Orientation Program takes new students through a step-by-step process designed to insure that they enroll in an effective program.

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

**URSA ENROLLMENT**

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

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

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

**IN-PERSON ENROLLMENT**

For classes that require written approval or specialized processing, students may enroll in person at 1113 Murphy Hall Monday through Friday from 9 a.m. to 5 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 another college 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.

**INTERSEGMENAL CROSS-ENROLLMENT**

At the discretion of the appropriate campus authorities on both campuses, California Senate Bill 361 allows 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 Enrollment and Degree Services, 1113 Murphy Hall. Obtain 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 is March 2. Applications received after the deadline are considered late, and limited aid is offered. The Financial Aid Handbook contains complete details on all aid. Obtain a free copy at http://www.fao.ucla.edu/publications.html.

**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.

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

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

The FAFSA is used to apply for all federally funded programs, funds administered by UCLA, and California 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.

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 beginning in January and should complete them by March 2 for on-time consideration. International students can obtain their applications for aid from the Financial Aid Office beginning in January.

Types of Financial Aid

The four basic types of aid are scholarships, grants, loans, and work-study employment. Since most students are eligible for several of these, the Financial Aid Office usually offers a combination.

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. Most scholarships are merit based, while 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 only 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 Continuing Undergraduate Scholarship Application at http://www.fao.ucla.edu. The application is available at the beginning of January and is due by March 2.

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 $15,000 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 $15,000. Awards are paid over four years; annual renewals require a combination of 30 hours of service annually to UCLA and the Alumni Association.

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

Applicants need not be related to UCLA alumni to apply. The UCLA Alumni Association administers these programs. For more information and applications, see http://www.uclalumni.net/Scholarships/.

ROTC Scholarships

ROTC Scholarships are awarded on a competitive basis to U.S. citizens regardless of parents’ income. Scholarships provide tuition, a book allowance, fees, and a tax-free monetary allowance between $250 and $500 per month during the academic year. Applications for scholarships may be obtained by calling—Army, (310) 825-7381; Air Force, (310) 825-1742; Navy/Marine Corps, (310) 825-9075—or by writing to Armed Forces Opportunities, P.O. Box 2865, Huntington Station, NY 11746-2102. When writing, specify if the scholarship is desired for Army, Air Force, or Navy/Marine Corps. Applications for Army scholarships can also be obtained at http://www.army.ucla.edu; for Air...
Force scholarships at http://www.afrotc.com; and for Navy scholarships at https://www.nrotc.navy.mil or by calling (800) 628-7682. Completed applications should be submitted prior to August 15 (Navy/Marine Corps) or by November 15 (Army) for early consideration, but no later than December 1 (all services) of the year preceding college matriculation. Two- 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 2008-09 range from $890 to $4,731. 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.

**Academic Competitive Grants**

Academic Competitive Grants (ACG) are available to first- and second-year undergraduate students who have completed a rigorous high school curriculum and are U.S. citizens, Pell Grant eligible, and enrolled full time. Sophomores must also have a 3.0 grade-point average at the time they advance a grade level to qualify for the second year of ACG. ACG provides up to $750 for the first year of study and up to $1,300 for the second year.

**Science and Mathematics Access to Retain Talent Grants**

Science and Mathematics Access to Retain Talent (SMART) Grants are available to third- and fourth-year undergraduate students who are U.S. citizens, Pell Grant eligible, enrolled full time, and majoring in physical, life, or computer sciences, engineering, mathematics, technology, or a critical foreign language. Students must have a 3.0 cumulative grade-point average to qualify. SMART provides up to $4,000 per year for the third and fourth year of study.

**Cal Grants A and B**

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

**State University Grants**

State grants provide eligible on-time applicants with financial assistance from state funds. Awards range from $100 to $9,000 and are based on student need. All undergraduate students who are U.S. citizens or eligible noncitizens and who apply on time are considered.

**Federal Supplemental Educational Opportunity Grants**

Federal Supplemental Educational Opportunity Grants (FSEOG) are awarded to undergraduates with financial need. Awards range from $100 to $4,000. 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 should assess their total educational debt and ability to repay after graduation. The University makes every effort to assist students during the repayment of their obligation, but University services, including registration and the release of official transcripts, are withheld if the loan becomes delinquent. Seriously delinquent accounts are referred to a professional collection agency for action. All first-time borrowers must complete a debt management session at http://www.loans.ucla.edu before funds are released.

All loan recipients must come to the Student Loan Services Office (A227 Murphy Hall, 310-825-9864, http://www.loans.ucla.edu) for a loan exit interview 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. Call for an interview before graduating, transferring, or withdrawing from UCLA.

**Federal Perkins Loans**

Low-interest Federal Perkins Loans are awarded to eligible, on-time applicants who are U.S. citizens or eligible noncitizens. The loan limit per academic year is $4,000 for undergraduate students and $6,000 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.
Federal Family Education Loan Program

Federal Stafford Loans

Federal Stafford Loans are low-interest subsidized and unsubsidized loans financed by participating banks and other lending institutions. Loans are available to undergraduate, graduate, and professional students who are U.S. citizens or eligible noncitizens. The interest rate is fixed at 6 percent for Stafford Loans and 6.8 percent for Unsubsidized Stafford Loans. Loan repayment begins six months after graduation or dropping below half-time enrollment.

Subsidized Federal Stafford Loans are awarded to students who have demonstrated need. Interest is paid by the federal government until six months after the student leaves school or drops below half-time enrollment.

Unsubsidized Federal Stafford Loans are available to all students regardless of income. Interest accrues from the date of disbursement, but students can avoid the extra costs of accrual by making regular interest payments while in school.

Federal PLUS Loans

Federal 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 8.5 percent. Borrowers may want to consult a tax adviser to see if this interest is tax deductible.

Private Loans

Private loans are available to students who have received the maximum award amounts under the Federal Family Education 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.

<table>
<thead>
<tr>
<th>Annual Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subsidized Stafford Loans</strong></td>
</tr>
<tr>
<td>Freshmen</td>
</tr>
<tr>
<td>Sophomores</td>
</tr>
<tr>
<td>Juniors/Seniors</td>
</tr>
<tr>
<td>Graduates (beyond bachelor’s degree)</td>
</tr>
<tr>
<td><strong>Unsubsidized Stafford Loans</strong> (includes any unsubsidized funds awarded)</td>
</tr>
<tr>
<td>Freshmen</td>
</tr>
<tr>
<td>Sophomores</td>
</tr>
<tr>
<td>Juniors/Seniors</td>
</tr>
<tr>
<td>Graduates (beyond bachelor’s degree)</td>
</tr>
<tr>
<td><strong>Additional Unsubsidized Funding</strong> (for independent students and students whose parents are denied PLUS loans)</td>
</tr>
<tr>
<td>Freshmen</td>
</tr>
<tr>
<td>Sophomores</td>
</tr>
<tr>
<td>Juniors/Seniors</td>
</tr>
<tr>
<td>Graduates (beyond bachelor’s degree)</td>
</tr>
</tbody>
</table>

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.

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 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 125 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 Tests in English OR
2. Scoring 5, 6, or 7 on the International Baccalaureate High Level English A Examination or scoring 6 or 7 on the International Baccalaureate Standard Level English A Examination OR
3. Scoring 680 or higher on the SAT II Subject Test in Writing (last offered in January 2005) or on the SAT Reasoning Test Writing Section OR
4. Scoring 30 or higher on the ACT Combined English/Writing test OR
5. Presenting transfer credit for an acceptable college-level course in English composition (passed with a grade of C or better) at another institution OR
6. Passing the University of California Analytical Writing Placement Examination (all freshmen from California high schools should have taken the examination during the month of May before they enrolled; others take an examination at UCLA early in their first term)

If students do not meet the requirement in one of the ways described above, Academic Senate regulations require them to enroll in either English Composition A or 2 (determined by performance on the Analytical Writing Placement Examination) or 2I (determined by performance on both the Analytical Writing Placement Examination and English as a Second Language 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/sas/awpe/index.html.

ENGLISH AS A SECOND LANGUAGE
The English as a Second Language Placement Examination (ESLPE) is required of all entering UCLA students whose native language is not English and who have not otherwise satisfied the English as a Second Language (ESL) requirement. 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 ESLPE. Undergraduate students may take the ESLPE once only. Unauthorized retakes of the examination result in an invalid examination score.

Nonnative-speaking first-year students who have taken the Analytical Writing Placement Examination are evaluated on the basis of their composition and informed if they need to take the ESLPE before the term in which they are to register. Failure to take the ESLPE results in a hold on student records. Results of the ESLPE and the Analytical Writing Placement Examination are reviewed to determine which track (Entry-Level Writing or ESL) is a more appropriate placement. Students placed in the Entry-Level Writing track may satisfy the Entry-Level Writing requirement by following the guidelines listed above. If students are placed in the ESL track, they must complete the requirement by taking the designated courses through the ESL track.

Nonnative-speaking 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. This includes but is not limited to all students who received a grade below B in either of these equivalent courses. Any transfer student held by UARS to the ESL requirement must take the UCLA English as a Second Language Placement Examination (ESLPE) before 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 33A, 33B, 33C, and 35. Students must begin taking courses during their first term in residence at UCLA and must complete the courses in sequence with grades 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 fulfill major prerequisite requirements and provide upper division elective units.

**AMERICAN HISTORY AND INSTITUTIONS**

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

1. Completing a year’s course in American history or American government, or a one-year combination of both, in high school with an average grade of B or better OR
2. Completing any one of the following UCLA courses with a grade of C or better, or a grade of Passed:
   - Asian American Studies M171D
   - Chicana and Chicano Studies M159A, M159B, M183
   - Economics 183
   - Geography 136
   - Equivalent courses completed in UCLA Extension or at another college institution, and accepted by the Board of Admissions, may be used to fulfill the requirement OR
3. Presenting a satisfactory result of the requirement, by examination, as administered at another college or university within the state OR
4. Scoring 500 or better on the SAT Subject Test in U.S. History OR
5. Scoring 3, 4, or 5 on the College Board Advanced Placement Test in American History.

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

Students attending the University on an F-1 or J-1 visa may petition for exemption from this requirement by showing proof of temporary residence in the U.S.

For more information on this requirement, contact the undergraduate History Department counselor in 6248 Bunche Hall, (310) 825-3720.

**COLLEGE OR SCHOOL REQUIREMENTS**

The College and each school with undergraduate programs establish their own degree requirements. These generally include a (1) unit requirement, which defines the total number of units to be completed, (2) scholarship requirement, which defines a minimum grade-point average, (3) residence requirement, which defines the amount of study that must be undertaken in residence at the UCLA campus, and (4) course requirements, which may include general education courses, reading and composition courses, foreign language courses, and core courses for the field of study. See the College and Schools section of this catalog for details on requirements set by the College and by each of the schools.

**DEPARTMENT REQUIREMENTS**

Each department or interdepartmental program sets its own degree requirements in addition to those established by the College or school. Department requirements generally include (1) preparation for the major, which are lower division courses designed to prepare students for advanced study and (2) the major, which are upper division course requirements. Requirements for each department are listed in the Curricula and Courses section of this catalog.

**DEGREE POLICIES**

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

**UNDERGRADUATE RESEARCH**

**UNDERGRADUATE RESEARCH CENTERS**

The Undergraduate Research Centers (URC) assist students in the arts, humanities, and social sciences (A334 Murphy Hall, 310-825-2935) and in science, engineering, and mathematics (2121 Life Sciences, 310-794-4227) by supporting scholarly, critical, and creative research. The centers provide mentoring and tutorials,
manage the Student Research Program (SRP), and administer research stipends and scholarships. They also sponsor three student-run publications—the Undergraduate Science Journal, Aleph humanities and social sciences journal, and Westwind literary journal; organize campuswide conferences and events; and coordinate the Student Research Forum that promotes a broader and deeper understanding of university research and helps entry-level student researchers define their place in the larger research community. See http://www.ugeducation.ucla.edu/ugresearch/.

**CENTER FOR ACADEMIC AND RESEARCH EXCELLENCE**

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

**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. See http://www.ugeducation.ucla.edu/urccare/srprogram.htm or http://www.ugeducation.ucla.edu/urccare/srprogram.

**UNDERGRADUATE RESEARCH FELLOWS PROGRAM**

The Undergraduate Research Fellows Program (URFP) is available on a competitive basis and by application for undergraduate students who have financial need and who want to participate in two terms of research (Winter and Spring Quarters) through SRP. Applications are accepted during Fall Quarter only, and the deadline for submission of applications is November 30. See http://www.ugeducation.ucla.edu/urccare/ or http://www.college.ucla.edu/ugresearch/sch_urfp.html.

**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. See http://www.ugeducation.ucla.edu/urccare/scholursp.htm or http://www.ugeducation.ucla.edu/urccare/scholursp.htm.

**ACADEMIC RESEARCH COURSES**

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

**INTERNSHIP, STUDY ABROAD, 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.

**INTERNSHIP AND STUDY ABROAD SERVICES**

Internship and Study Abroad Services, an office of the UCLA Career Center, offer access to a variety of off-campus learning experiences. The office is in 200 Strathmore Building. (310) 825-0831. See http://career.ucla.edu/InternshipStudyAbroad/

**NATIONAL INTERNSHIP PROGRAM**

The Washington, DC, program allows students to do fall, winter, spring, and summer 10-week internships. Internships are available with elected officials, government agencies, public interest groups, international organizations, the media, and a wide range of public and private enterprises. In Sacramento, internships are available only in the summer. Stipends, loans, and scholarships are available to students through the program.
Los Angeles Internship Program

Local internships are available throughout the year in fields such as advertising, business, engineering, film, law, media, politics, public affairs, sales, and social services.

International Opportunities

The Internship and Study Abroad office advises students on study, travel, volunteer, international internship, and short-term work opportunities outside the U.S., offering information on overseas study programs open to UCLA students. The office maintains a library of current materials related to study, travel, and other opportunities abroad.

Quarter in Washington, DC

The Center for American Politics and Public Policy (CAPPP) selects undergraduates each fall, winter, and spring to participate in its Quarter in Washington Program. The program offers an exciting opportunity to combine UCLA courses with research and field experience. Students live at the UC Washington Center for up to 12 weeks, dividing their time between courses taught by UC faculty members and a part-time internship placement. They are registered as UCLA students and earn UC credit in multiple majors by petition for all classes taken. The core course, a research development seminar, is multiple-listed in political science, sociology, and history, meets the capstone requirement for the Public Affairs minor, applies toward the Civic Engagement minor, and is eligible for College Honors by petition. At least one course in a subject other than political science, such as economics or history, is offered each quarter. All courses take advantage of Washington’s unique resources for study and research.

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/quarterwashington/index.asp.

Reserve Officers’ Training Corps

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

Teaching Opportunities

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

Education Studies Minor

The Education Studies minor provides an introductory course sequence for students who might want to pursue a career in education. The program office is in 1009 Moore Hall. See http://www.gseis.ucla.edu/edminor/.

Mathematics/ Education Program

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

Science Teacher Education Program

The Science Teacher Education Program, cosponsored by the College and GSE&IS, allows science majors to observe and participate in classrooms in schools in the Los Angeles area and to begin teacher education courses. Students earn a master’s in education and a teaching credential in one academic year beyond the baccalaureate. For details, e-mail Dr. Arlene Russell at russell@chem.ucla.edu or contact any science department undergraduate counseling office. See http://www.nsclc.ucla.edu/STEP/.

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
The quarterly experiential learning program offers students an opportunity to participate in an intensive internship course and take a research seminar course that investigates policy issues. Along with internship placement and academic courses, the center offers a speaker series featuring prominent guests from state government. The residential program is open to juniors and seniors who have completed a significant part of their upper division and major courses. UCCS is open to students in all fields of study. Contact the UCLA Center for Community Learning, A265 Murphy Hall, (310) 825-7867. See http://uccs.universityofcalifornia.edu.

LOWE DIVISION SEMINAR PROGRAMS

COLLEGIUM OF UNIVERSITY TEACHING FELLOWS

The Collegium of University Teaching Fellows (CUFT) 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 in 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.college.ucla.edu/up/honors/hchome.html.

FIAT LUX SEMINARS FOR FRESHMAN STUDENTS

In 2002-03, UCLA established a program of innovative freshman seminars. The one-unit seminars, taught by faculty members in areas of their expertise, span the rich array of disciplines studied at UCLA. The seminars inform freshman students about topics of intellectual importance and enable them to participate in critical discussion of these topics with a small group of peers and faculty. Since the seminars illuminate the many paths of discovery explored by UCLA faculty members, the program takes its name from the motto of the University of California: Fiat Lux — Let There be Light! For details about course offerings each term, see the Schedule of Classes at http://www.registrar.ucla.edu/schedule/. For more information, see http://www.college.ucla.edu/ fiatlux/.
ADVISING AND ACADEMIC ASSISTANCE

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

ORIENTATION PROGRAM

The Orientation Program introduces students to UCLA campus life through special programs, academic counseling, and educational planning. 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.

During the summer, Orientation offers 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. For more information, contact the Orientation Program office in 201 Covel Commons, (310) 206-6685. See http://www.orientation.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. 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 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/ask/. Students may also e-mail questions to ask@college.ucla.edu.

COUNSELING ASSISTANTS

Letters and Science counseling assistants (CAs) are graduate students who help primarily lower division students with course selection, major requirements, and graduate school information. Many CAs serve as teaching assistants and can give unique perspectives on courses and faculty. See http://www.ugeducation.ucla.edu/counseling/counselors/cas.htm.

For appointments, go to Window 1, A316 Murphy Hall. CAs are also available in selected departments and through http://my.ucla.edu.

ACADEMICS IN THE COMMONS

Academics in the Commons, home to Covel Tutorials, offers registered UCLA students academic success and preprofessional career planning workshops plus free individual and small-group tutoring aimed at developing academic skills and critical thinking. Programs are staffed by carefully selected and trained peer tutors and workshop leaders, and conveniently located in Covel Commons in Sunset Village. For details on all the services below, see http://www.ugeducation.ucla.edu/aitc/.

ACADEMIC WORKSHOPS

Academics in the Commons offers the Academic Workshop Program that promotes academic success through a variety of workshops. For specific topics, dates, and times, see http://www.ugeducation.ucla.edu/aitc/workshops.html or call (310) 825-1379.

COVEL COMPOSITION AND ESL TUTORIALS

Covel Composition and ESL Tutorials offer free tutoring services to undergraduate students writing papers for their UCLA courses, especially those who are enrolled in English Composition 2, 3, and Writing II courses. Composition tutors are trained undergraduate students who have been recommended by faculty members for their outstanding writing and communication skills. They help students at any stage of the writing process, from generating and organizing ideas to polishing final drafts.

ESL tutors are experienced composition tutors with ESL training who assist nonnative speakers of English with grammar, composition, and reading. In addition, they help international students improve pronunciation and listening comprehension skills during Summer Sessions.

Covel Composition and ESL Tutorials are located in 228 Covel Commons, (310) 206-1491. See http://www.ugeducation.ucla.edu/aitc/tutoring.html.

COVEL MATHEMATICS AND SCIENCE TUTORIALS

Covel Mathematics and Science Tutorials offer free group tutoring sessions for many introductory courses in chemistry, life sciences, mathematics, and physics. Trained undergraduate tutors, selected for their academic excellence and communication skills, meet with students in weekly sessions to help them improve problem-solving skills and test-taking strategies. Covel Mathematics and Science Tutorials are located in 230
UNDERGRADUATE STUDY


TUTORIALS FOR STUDENT ATHLETES

Tutorials for Student Athletes provide tutoring in the evening and on weekends for intercollegiate athletes whose practice and competition schedules prevent them from participating in other tutorial services. Eligible student athletes can receive regular individual or small group assistance in a wide range of courses, provided they request tutoring throughout each term. Trained tutors clarify course content, teach study strategies and, in consultation with course instructors, develop problem-solving exercises and practice examinations to build learning and performance skills. The coordinator is in 209 Covel Commons, (310) 206-8124. See http://www.ugeducation.ucla.edu/aap/. html or call (310) 206-7771.

ACADEMIC ADVANCEMENT PROGRAM

The Academic Advancement Program (AAP), a multiracial program, has a three-fold mission: (1) to ensure the academic success, retention, and graduation of its more than 6,500 students, (2) to increase the numbers of its students entering graduate and professional schools, and (3) to develop the academic, political, scientific, economic, and community leadership necessary to transform society in the twenty-first century. Programs are oriented toward furthering long-term academic and personal growth.

Students are eligible for AAP if their academic profiles and personal backgrounds may impact their University experience and their retention and graduation from UCLA. Students are also eligible if they are part of any federally funded program that requires counseling, tutoring, or mentoring. For more information, contact AAP Administration in 1232 Campbell Hall, (310) 206-1551. See http://www.ugeducation.ucla.edu/aap/.

ACADEMIC COUNSELING

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

PEER COUNSELING

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

TUTORIAL SERVICES

AAP tutorial services promote academic excellence in over 450 courses. Most tutors 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 tutoring is done in small groups that foster discussion and allow students to listen to and articulate new and different perspectives. See http://www.ugeducation.ucla.edu/aap/tutoring/index.html or call (310) 206-7771.

PROGRAM LEADING TO UNDERGRADUATE SUCCESS

The Program Leading to Undergraduate Success (PLUS) is a federally funded component of AAP that provides intensive counseling, tutoring, workshops, and social and cultural programs for first-generation college, low-income freshmen. Applications are available at 1209 Campbell Hall, (310) 825-9276. See http://www.ugeducation.ucla.edu/aap/plus/index.html.

CENTER FOR COMMUNITY COLLEGE PARTNERSHIPS

The Center for Community College Partnerships (CCCP) develops academic partnerships between California community colleges and the University to strengthen and diversify curriculum, create strong academic support programs, improve student competitiveness for UC admissions, and increase the diversity of the UCLA transfer admit pool. See http://www.ugeducation.ucla.edu/aap/cccp/index.html or call (310) 267-4441.

MENTORING PROGRAMS

AAP offers several programs aimed at helping students achieve academic and professional goals.

Arts IN Mentoring Program

Arts IN works to support students in specific arts-related research projects in established partnerships such as Arts IN Civic Engagement, Arts IN Education, Arts IN Global Health, Arts IN Labor, and Arts IN International. The objective is to mentor underrepresented and underresourced students who would normally not consider the arts as a viable area of study leading to a career in the arts. See http://www.ugeducation.ucla .edu/aap/mentoring/artsin.html or call (310) 794-4186.

Community Development and Social Justice Program

The Community Development and Social Justice Program assists undergraduate students interested in graduate and professional schools. The program works with the Schools of Public Affairs and Public Health to increase their enrollment of AAP students committed to working toward social equity. Students work as interns, under the supervision of a professional staff member, at a community-based organization. See http://www.ugeducation.ucla.edu/aap/mentoring/cdsj.html or call (310) 794-4186.
Educators for Tomorrow Scholars Program
The Educators for Tomorrow (EFT) Scholars Program aims to advance a new generation of socially conscious leaders interested in careers in education. It provides AAP students with opportunities to meet faculty members and students in the Graduate School of Education and Information Studies and 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, receive a stipend of up to $3,000, and participate in educational roundtables. See http://www.ugeducation.ucla.edu/aap/mentoring/eft.html or call (310) 794-4186.

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

McNair Research Scholars Program
The McNair Research Scholars Program prepares undergraduate students for the best graduate programs in the country and to excel in graduate school on the way to earning a Ph.D. in the humanities or social sciences. The program selects 22 students annually from those populations most severely underrepresented in graduate programs and the professoriate in 11 targeted departments in the humanities, social sciences, and behavioral sciences. See http://www.ugeducation.ucla.edu/aap/mentoring/mcnair.html or call (310) 794-4186.

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

Scholarships
There are many opportunities for eligible students in AAP to receive both merit and/or need-based scholarship funds. Some awards require application; others are available through nomination. Call (310) 206-8405 for further information.

Summer Programs
Two six-week AAP academic summer programs—the Freshman Summer Program and the Transfer Summer Program—prepare students to succeed by exposing them to the rigor and demands of academic life and to undergraduate programs, services, and learning resources.

Students enroll in two or three University courses that meet UCLA requirements for graduation and receive personal attention, in either small groups or individual sessions, from teaching assistants and tutors. They are encouraged to live on campus and to participate in cultural and social events, interact with students of diverse backgrounds, build a network of friends, and broaden their life experiences and world outlook. See http://www.ugeducation.ucla.edu/aap/summer/index.html or call (310) 206-1571.

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

Dean’s Honors List
The School of the Arts and Architecture, Henry Samueli School of Engineering and Applied Science, School of Nursing, School of Theater, Film, and Television, and the deans of the four 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 to overall grade-point average at graduation. To be eligible students must have completed at least 90 (98 for the School of Nursing) University of California units for a letter grade. The levels of honors are summa cum laude, magna cum laude, and cum laude. Specific requirements vary for each level and are detailed in the College and Schools section of this catalog. See the Schedule of Classes for the most current calculations of Latin Honors.

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

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

HONOR SOCIETIES

Alpha Lambda Delta and Phi Eta Sigma
Membership in the national freshman honor societies is based solely on academic achievement during the freshman year. To be eligible students must have a 3.5 grade-point average with 12 graded University of California units in the first term of their freshman year, or a cumulative 3.5 GPA at the end of the second and/or third terms. Invitations are issued in Winter Quarter, and initiation 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.studentgroups.ucla.edu/aldpes/.

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 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, provides economic assistance to outstanding members by means of an annual scholarship for initiates and graduating seniors, and promotes scholastic achievement and altruistic conduct through voluntary service. Invitations are issued in Fall Quarter, and a reception is held in Winter Quarter. For further information, contact the Office of the Dean of Students, 1206 Murphy Hall, (310) 825-3871. See http://www.studentgroups.ucla.edu/goldenkey/.

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.studentgroups.ucla.edu/mboard/membership.html early in Winter Quarter and are due by mid-February. Approximately 40 members are selected each spring by the outgoing chapter. See http://www.studentgroups.ucla.edu/mboard/ or call (310) 206-5523.

Applications are also available from the Office of the Dean of Students in 1206 Murphy Hall, (310) 825-3871.

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

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

A reasonable distribution of courses in the humanities and sciences is also required. A Passed grade is computed approximately as a B, depending on number of courses taken and graded units. Students who are elected are notified by mail. For further information, contact Phi Beta Kappa in the Honors Programs Office, A311 Murphy Hall, (310) 206-9667. See http://www.college.ucla.edu/pbk/.
Graduate Study

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

Graduate training at UCLA takes place in 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

Meeting the minimum requirements does not ensure graduate admission, which is limited by the number of places and the amount of student support available in UCLA’s graduate programs. Applicants are evaluated on scholastic qualifications and formal preparation for the graduate field of study. Departments may have other requirements for admission, which are listed by department at http://www.gdnet.ucla.edu/gasaa/deptinfo/deptinfointro.asp.

APPLICATION FEE

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

ENTRANCE REQUIREMENTS

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

Requirements for international applicants are listed below.

SUPPORTING MATERIALS

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

GRADUATE RECORD EXAMINATION

Applicants who apply for admission to a department or school that requires Graduate Record Examination (GRE) scores should arrange to take the examination no later than December so scores arrive on
GRADUATE STUDY

GRADUATE COUNCIL.

The Graduate Council is responsible for the establishment of quality standards in all UCLA graduate programs. The dean of 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 postdoctoral 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 member serving as a graduate 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.

GRADUATE STUDY

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. In some cases, these letters may mean the difference between acceptance and rejection. Letters should be sent directly to the prospective department. Forms to be used are available at http://www.gdnet.ucla.edu.

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 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 who do not meet the academic requirements of the University may be admitted as Conditionally Classified Students. Students are expected to complete all of the conditions of admission within five years or be dismissed from the University. Students who plan to work as teaching assistants (TAs) and are nonnative English-speaking international students are required to take the Test of Oral Proficiency (TOP), which is administered by the Office of Instructional Development (OID). Students who do not plan to work as teaching assistants do not need to take the TOP.

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 a 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 chancellor of Graduate Studies.

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 postdoctoral 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 member serving as a graduate 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.

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. In some cases, these letters may mean the difference between acceptance and rejection. Letters should be sent directly to the prospective department. Forms to be used are available at http://www.gdnet.ucla.edu.

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 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 who do not meet the academic requirements of the University may be admitted as Conditionally Classified Students. Students are expected to complete all of the conditions of admission within five years or be dismissed from the University. Students who plan to work as teaching assistants (TAs) and are nonnative English-speaking international students are required to take the Test of Oral Proficiency (TOP), which is administered by the Office of Instructional Development (OID). Students who do not plan to work as teaching assistants do not need to take the TOP.

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 a 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 chancellor of Graduate Studies.

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 postdoctoral 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 member serving as a graduate 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.

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. In some cases, these letters may mean the difference between acceptance and rejection. Letters should be sent directly to the prospective department. Forms to be used are available at http://www.gdnet.ucla.edu.

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 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 who do not meet the academic requirements of the University may be admitted as Conditionally Classified Students. Students are expected to complete all of the conditions of admission within five years or be dismissed from the University. Students who plan to work as teaching assistants (TAs) and are nonnative English-speaking international students are required to take the Test of Oral Proficiency (TOP), which is administered by the Office of Instructional Development (OID). Students who do not plan to work as teaching assistants do not need to take the TOP.

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 a 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 chancellor of Graduate Studies.

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 postdoctoral 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 member serving as a graduate 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.

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. In some cases, these letters may mean the difference between acceptance and rejection. Letters should be sent directly to the prospective department. Forms to be used are available at http://www.gdnet.ucla.edu.

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 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 who do not meet the academic requirements of the University may be admitted as Conditionally Classified Students. Students are expected to complete all of the conditions of admission within five years or be dismissed from the University. Students who plan to work as teaching assistants (TAs) and are nonnative English-speaking international students are required to take the Test of Oral Proficiency (TOP), which is administered by the Office of Instructional Development (OID). Students who do not plan to work as teaching assistants do not need to take the TOP.
For students receiving a clear pass (7.1 or above) on the TOP, no coursework is required. Students receiving a 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 coursework in the English as a Second Language 33 series before taking the TOP.

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

http://www.oid.ucla.edu/top/. (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, Molecular and Medical Pharmacology, and Neurobiology in the David Geffen School of Medicine; Molecular Toxicology in the School of Public Health; and Microbiology, Immunology, and Molecular Genetics in the College of Letters and Science and the 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 applications and 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. See http://www.uclaaccess.ucla.edu. (310) 206-6051

**First-Year Course Requirements**

Individual requirements vary based on background and scientific interest and are determined by the steering committee. In general a formal course of study consists of two lecture courses, three laboratory rotations, and two elective survey courses. In addition, participation is required in related activities on an informal basis.

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.

An additional course in ethics (Microbiology, Immunology, and Molecular Genetics C234) is required.

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.

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 to acquire academic credits, or international students on a year’s stay in the U.S., may wish to apply in this manner. Requirements for admission are the same as those for degree programs, and the academic program must agree to accept the student for the no degree objective (NDO) status. All admission to NDO status must be specially approved by the dean of the Graduate Division, as must any University financial assistance for students on NDO status.

#### Duplication of Degrees

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

#### Summer Sessions Courses

Enrollment in Summer Sessions courses does not constitute admission to graduate standing, nor does it substitute for the required continuous registration in Fall, Winter, and Spring Quarters. Students who wish to apply Summer Sessions courses to their subsequent graduate program should consult in advance with their departmental adviser. This is also true if they have been readmitted to graduate standing and wish to resume graduate study in Summer Sessions. Information and applications are available from Summer Sessions, 1147 Murphy Hall.

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

### Readmission

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

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

### Registration

Enrollment and Degree Services
1113 Murphy Hall
(310) 825-1091
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. BAR (Billing and Receivable) accounts can be viewed through URSA.
2. Enrollment in classes is completed via URSA at http://www.ursa.ucla.edu.

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

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/.

### eBill

BAR accounts are administered electronically (eBill) through URSA. Monthly financial activity is displayed for the current month as well as past account activity for the last 24 months. URSA also includes a link to the Student Financial Services website (http://www.sfs.ucla.edu) where students can find important communications from the University regarding registration and University policies. Students can pay their BAR account electronically using Visa, MasterCard, PULSE, NYSE, STAR, Discover, or American Express. Students can also print a remittance document from the eBill webpage and mail payments with a check or money order.

### Annual Graduate Fees

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

### Estimated Annual Fees for 2008-09

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>University registration fee</td>
<td>$864.00</td>
</tr>
<tr>
<td>Educational fee</td>
<td>$7,122.00</td>
</tr>
<tr>
<td>Graduate Students Association fee</td>
<td>$39.00</td>
</tr>
<tr>
<td>Graduate Writing Center fee</td>
<td>$12.00</td>
</tr>
<tr>
<td>Ackerman Student Union fee</td>
<td>$43.50</td>
</tr>
<tr>
<td>Ackerman/Kerckhoff Seismic fee</td>
<td>$113.00</td>
</tr>
<tr>
<td>Wooden Recreation Center fee</td>
<td>$45.00</td>
</tr>
<tr>
<td>Student Programs, Activities, and Resources Center fee</td>
<td>$93.00</td>
</tr>
<tr>
<td>Student Health Insurance Plan (GSHIP)</td>
<td>$1,338.00</td>
</tr>
<tr>
<td><strong>Total for California residents</strong></td>
<td><strong>$9,669.50</strong></td>
</tr>
<tr>
<td>Nonresident educational fee</td>
<td>$7,343.00</td>
</tr>
<tr>
<td>Nonresident tuition</td>
<td>$14,694.00</td>
</tr>
<tr>
<td><strong>Total for nonresidents</strong></td>
<td><strong>$24,675.50</strong></td>
</tr>
</tbody>
</table>

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

Students in the Schools of 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 fee payment. Late fees also apply if students file their Study List late or do not pay off BAR 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](http://www.registrar.ucla.edu/fees/miscfee.htm).

### STUDENT HEALTH INSURANCE PLAN

All UCLA graduate students are automatically assessed for and enrolled in the Graduate Student Health Insurance Plan (GSHIP) as a condition of registration at UCLA. Continued enrollment in a qualified medical/health insurance plan must be maintained during all registered terms.

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

### Waiving GSHIP

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

Students must apply for a GSHIP waiver online. See the Ashe Center website for details, including a definition of qualified private medical/health insurance plan. Follow the Online Services link from [http://www.studenthealth.ucla.edu](http://www.studenthealth.ucla.edu).

### Deadlines for Waiving GSHIP

Third-party individuals may not waive GSHIP for a student. Waivers must be submitted by the stated deadline whether or not fees have been paid by that date. Deadlines are strictly enforced. There are no refunds after the deadline.

The schedule for waiving GSHIP is as follows:

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

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

### FEE REFUNDS

Students who formally withdraw from the University or take an approved leave of absence may receive partial refunds of fees. For more information, see Withdrawal in the Academic Policies section of this catalog or consult the *Schedule of Classes* for policy details and specific refund deadlines for each term.

### FEE DEFERRALS

Academic apprentice personnel are eligible to receive a fee deferral for part or all of the 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 University, they are responsible for the fees, but may be eligible to receive a partial fee refund, according to the refund schedule in the *Schedule of Classes*. Fees not paid by the deadline are subject to the late fee charge.

### REDUCED NONRESIDENT TUITION

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

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

**Annual Budget Estimates**

Students admitted to the D.D.S., D.Env., Dr.P.H., J.D., M.B.A., M.F.A. in Film and Television, M.F.A. in Theater, M.D., M.P.H., M.P.P., and M.S.N. degree programs must add a professional school fee, which varies by school.

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. Nonresident tuition and certain University fees were under review at the time of publication. All fees are subject to change without notice by The Regents. See the Schedule of Classes fee charts for updates at http://www.registrar.ucla.edu/fees/.

**Enrolling in Classes**

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

**URSA Enrollment**

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

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

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

**In-Person Enrollment**

For classes that require written approval or specialized processing, students may enroll in person at 1113 Murphy Hall Monday through Friday from 9 a.m. to 5 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

Graduate Student Support
1228 Murphy Hall
(310) 825-1025
http://www.gdnet.ucla.edu

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

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

Financial Support for Entering Graduate Students and Graduate Student Financial Support for Continuing Students describe the full range of financial assistance available. They are revised annually and made available at the Graduate Division's website. Students should contact their department for more detailed information.

FELLOWSHIPS

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

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

ASSISTANTSHIPS

Academic apprenticeships train qualified students for careers in teaching and research, and compensate them for their services. Teaching assistantships provide experience in teaching undergraduates, with faculty supervision. (Teaching assistants, associates, and fellows are eligible to receive partial payment at the beginning of the term in the form of an interest-free advance loan check. Interested students should apply to their departments.) Graduate student researcher appointments give students experience working on faculty-supervised research projects.

AWARDS BASED ON FINANCIAL NEED

Because the cost of a graduate education may present a financial hardship, students who require assistance in meeting educational costs are encouraged to apply for aid based on their financial need. Need is defined as the difference between allowable school-related expenses and financial resources. Financial aid applicants must file the Free Application for Federal Student Aid (FAFSA). The priority filing deadline is March 2.

Students who need financial aid for Summer Sessions must submit a Summer Aid Application in addition to FAFSA. Summer applications are available at http://www.fao.ucla.edu beginning April 1 and should be filed by April 30 for on-time consideration.

Financial aid awards include work-study and low-interest loans. Students are usually awarded a financial aid package that is a combination of these forms of assistance. Further information is available from the Financial Aid Office, A129J Murphy Hall or at http://www.fao.ucla.edu.
DEGREE REQUIREMENTS

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

MASTER'S AND DOCTORAL STUDY

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

UNIVERSITY MINIMUM STANDARDS

The requirements described here for master's and doctoral degrees are minimum standards set by the University. Individual schools or departments may set higher standards and may require additional courses and examinations for their master's degree. Each department also sets additional requirements for doctoral degrees according to the demands of the field of study. See Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu and the departmental graduate adviser for details. Policies and regulations are outlined in Standards and Procedures for Graduate Study at UCLA, which is available from Graduate Admissions/Student and Academic Affairs, 1255 Murphy Hall or at http://www.gdnet.ucla.edu.

ACADEMIC RESIDENCE

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

Academic residency for both degrees is established by successfully completing a minimum of one graduate or upper division course (4 units) during a term. Students may earn one term of residence for summer study in either of these ways: (1) enroll in two six-week Summer Sessions taking at least 2 units of upper division and/or graduate work in each session OR (2) enroll in one eight-week session for at least 4 units of credit. Residence earned through Summer Sessions enrollment is limited to one third of the degree requirements.

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

FOREIGN LANGUAGE REQUIREMENTS

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

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

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

For further details on foreign language requirements, consult the departmental graduate adviser.

CHANGING MAJORS

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

MASTER’S DEGREE

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

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

Plan I: Master's Thesis

After advancement to candidacy, students under Plan I must submit a thesis reporting on results of their original investigation of a problem. While the problem may be of only limited scope, the thesis must show a significant style, organization, and depth of understanding of the subject.

A thesis committee, consisting of at least three faculty members who hold regular professorial appointments at the University, is nominated by the department and appointed by the dean of the Graduate Division for each student (consult the Graduate Division for more details on committee members' eligibility requirements). The thesis committee, which must be appointed before students may be advanced to candidacy, approves the subject and plan of the thesis, provides the guidance necessary to complete it, then reads and approves the completed manuscript. Approval must be unanimous among committee members.

Once the thesis committee and other concerned faculty members have approved the subject for the thesis, work may begin. Students are responsible for preparing the thesis in the proper form and for observing filing deadlines.

Plan II: Master’s Comprehensive Examination

Following advancement to candidacy, students under Plan II must pass a comprehensive examination administered by a committee consisting of at least three faculty members appointed by the department. In some departments the comprehensive examination may serve as a screening examination for admission to doctoral programs. Information concerning this examination and its format is available in the departments.

DOCTORAL DEGREE

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

Doctoral Examinations before Advancement to Candidacy

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

University Oral Qualifying Examination

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

Doctoral Dissertation

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

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

ACADEMIC CREDIT

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

UNITS OF CREDIT

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

CLASS LEVELS

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

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

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

REPETITION OF COURSES

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

1. To improve the grade-point average, students may repeat only those courses in which they receive a grade of C– or lower; NP or U grades may be repeated to gain unit credit. Courses in which a letter grade is received may not be repeated on a P/NP or S/U basis. Courses originally taken on a P/NP or S/U basis may be repeated on the same basis or for a letter grade.
2. Repetition of a course more than once requires the approval of the College or school or the dean of the Graduate Division, and is granted only under extraordinary circumstances.
3. Degree credit for a course is given only once, but the grade assigned each time the course is taken is permanently recorded on the transcript.
4. For undergraduates who repeat a total of 16 units or less, only the most recently earned letter grades and grade points are computed in the GPA. After repeating 16 units, however, the GPA is based on all letter grades assigned and total units attempted.
5. For graduate students, all courses in which a letter grade is given, including repeated courses, are used in computing the GPA.

CREDIT FOR UPPER DIVISION TUTORIALS

Credit for upper division tutorial courses numbered 195 through 199 in a single term is limited to a maximum of 8 units. Subject to regulations governing Passed/Not Passed grades, students may take these courses on a Passed/Not Passed or a letter-grade basis, but the total number of units allowed in upper division tutorial courses for a letter grade is 32.

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

CREDIT BY EXAMINATION

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>Extraordinary</td>
</tr>
<tr>
<td>A</td>
<td>Superior</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
</tr>
<tr>
<td>C</td>
<td>Fair</td>
</tr>
<tr>
<td>D</td>
<td>Poor</td>
</tr>
<tr>
<td>F</td>
<td>Fail</td>
</tr>
<tr>
<td>P</td>
<td>Passed (achievement at grade C level or better)</td>
</tr>
<tr>
<td>NP</td>
<td>Not Passed</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress</td>
</tr>
<tr>
<td>DR</td>
<td>Deferred Report</td>
</tr>
</tbody>
</table>

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:

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

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>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A−</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B−</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C−</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D−</td>
<td>0.7</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
<tr>
<td>NP</td>
<td>0.0</td>
</tr>
<tr>
<td>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) 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
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). They may not elect the P/NP option for Summer Sessions courses without an approved petition. 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.

**Deferred Report Grades**

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

**Correction of Grades**

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

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

CANCELLATION

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

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

WITHDRAWAL

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

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

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

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

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

Students who register and subsequently discontinue coursework or stop payment on registration checks without an approved petition for withdrawal, leave of absence, or cancellation receive F, NP, or U grades, as appropriate, for all courses in which they are enrolled for that term. A fine is assessed if any check for registration fee 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.

Reentering Students

To return to the University after an absence of more than one term, 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 re-admission 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. (310) 825-1091, option 6

GRADUATE READMISSION

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

Graduate students must be either registered and enrolled 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 a maximum of six quarters of official leave of absence.

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

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 information for the returning term.

Obtain a Request for Leave of Absence form from the academic department. See the Schedule of Classes calendar for the filing deadline.

**Application for Readmission**

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

Students who have registered at any time as a graduate student at UCLA and are returning after an absence (except a formal leave of absence) must file an Application for Graduate Admission which is available online at http://www.gdnet.ucla.edu. Payment of the nonrefundable application fee may be paid by credit card or by check or money order. 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 Academic Record Services, 1134 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 seven weeks after the end of the term. Students who require earlier proof of graduation should contact a degree auditor in 1113 Murphy Hall. A fee may be charged for this service.

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

**Verification Transcript**

The verification transcript certifies registration (fee payment), enrollment status, and degrees. For auto insurance “good student” discount, insurance forms should be presented at 1134 Murphy Hall. The verification fee is required for this service. Verification transcripts confirm student status only after registration fees have been paid for the term. Verification of student workload is based on actual enrolled units and does not consider wait-listed units or list courses for a term.

Verification of degree can be issued after students’ degrees have been posted to their student record approximately seven weeks after the term ends.
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 eight 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

Academic and verification transcripts can be ordered through URSA, in person at 1134 Murphy Hall, or by sending a request to UCLA Registrar's Office, Attn: [Academic or Verification] Transcripts, 1105 Murphy Hall, Box 951429, Los Angeles, CA 90095-1429.

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

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

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

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

More information on ordering transcripts is available by calling (310) 825-3801 or by contacting transcripts@registrar.ucla.edu.

FEES AND PAYMENT

Current students' transcript fees are billed to their BAR account. Former students may be billed or may submit a check or money order payable to Regents-UC. In some cases, special fees may apply. Forms that must be completed by the Registrar's Office or that require official signatures are charged a special handling fee. Expedited service—processing within 24 hours—is available for an additional fee, or transcripts can be faxed with payment of an additional fee. Transcripts that are faxed 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/.

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.adminvc.ucla.edu/appm/_entry_200.html.

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.

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 following the last date of attendance. Students may view their documents in Academic Record Services, 1134 Murphy Hall. Advance notice of two to three days is required for viewing. (310) 825-3801

UNIVERSITY RECORDS SYSTEM ACCESS

Through University Records System Access (URSA), UCLA students acquire academic, financial, and personal information from their University academic records. Students may access the system for up to 10 years after their graduation or last term of attendance. 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 in the Murphy Hall northwest lobby) and submit it with documentation supporting the name change to Enrollment and Degree Services, 1113 Murphy Hall. All name changes are recorded on the transcript. If students change their address, they should update their address through URSA.

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 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 × 1.5 = 18 quarter units. To convert quarter units into semester units, multiply the quarter units by .666—for example, 12 quarter units × .666 = 7.99 or 8 semester units.

**Summer Sessions**

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

**UCLA Extension**

Students who wish to receive degree credit for work taken through UCLA Extension should take courses that correspond in number to the undergraduate courses offered in regular session. The designation XL
DEGREE CHECKS

Anytime prior to graduation students may request a review of degree progress. These official degree checks detail requirements remaining to complete the bachelor's degree. The degree check process is different for the College and each school.

College of Letters and Science

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

Students should review questions about their DPR with departmental undergraduate advisers or College counselors, as appropriate.

School of the Arts and Architecture

Degree Progress Reports are available via 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 starting their upper division major field coursework must submit a "satisfied" Academic Program Proposal to the Office of Academic and Student Affairs, 6426 Boelter Hall. All engineering students may pick up a Graduation Evaluation Report at 6426 Boelter Hall. The report outlines the courses completed for each required category of the student’s major. Students should obtain an official degree check at least one term prior to their graduation term. For details, see http://www.seasoasa.ucla.edu/degree_check.html.

School of Nursing

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

School of Theater, Film, and Television

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

GRADUATE DEGREES

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

CERTIFICATE OF RESIDENT STUDY

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

GRADUATION

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

UNDERGRADUATE STUDENTS

Approximately eight out of every 10 UCLA freshmen eventually receive a baccalaureate degree, either from UCLA or from another campus or institution. One third of all UCLA baccalaureate recipients go on to graduate school.

DECLARATION OF CANDIDACY

To initiate the steps leading to the award of a bachelor's degree, students must identify the term they expect to complete degree requirements through URSA by the time they complete 160 units (172 units for engineering students) to avoid a late candidacy fee. The identified term must fall within the academic year (four quarters) subsequent to the term in which students reach or expect to reach the 160- or 172-unit mark. Once they complete 160/172 or more units, a fee is assessed each time students change the degree expected term.

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

Friday of the second week is the last day to declare candidacy for the current term (with fee depending on...
ACADEMIC POLICIES

DEGREE DATE

Degrees are awarded at the end of Fall, Winter, and Spring Quarters and at the end of Summer Session C. School of Law and School of Medicine degrees are awarded at the end of Fall and Spring semesters. Consult the UCLA quarter, summer sessions, and semester calendars for the degree award date, which is the final day of the term. See http://www.registrar.ucla.edu/calendars/.

COMMENCEMENT

The College and each school conduct ceremonies for their graduates. Ceremonies feature addresses and recognize candidates who have achieved high academic distinction and honors. Names of students who request that no public information be released do not appear in commencement ceremony programs. Students may change their privacy status on URSA.

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

DIPLOMAS

Diplomas for both undergraduate and graduate students are available approximately three to four months after the degree award date. Information about obtaining the diploma in person (no fee) or by mail (with fee) is sent to students approximately seven weeks after the end of their final term. To expedite receipt of the diploma, students should return the diploma mailer form and remit the mailing fee. Obtain recorded diploma availability information at (310) 825-8883. The Registrar’s Office retains diplomas for five years from graduation date.

Change of Name

To be reflected on the diploma, name changes must be submitted to Enrollment and Degree Services, 1113 Murphy Hall, by the last day of the degree expected term. Students submitting name changes after that date must request a replacement diploma at 1113 Murphy Hall and pay an additional fee.

Duplicate Diplomas

If the original diploma is destroyed, a duplicate may be ordered by contacting the Registrar’s Office, Diploma Reorder, 1113 Murphy Hall. There is a fee for the replacement diploma, and it bears a reissue date and the signatures of the current officials of the state and University.

GRADUATE STUDENTS

Candidates for both master’s and doctoral degrees must be advanced to candidacy and complete all degree requirements, including the master’s thesis or comprehensive examination, or doctoral dissertation, before the degree is conferred (see the Schedule of Classes calendar for filing deadlines). For graduate degree requirements and procedures, see Program Requirements for UCLA Graduate Degrees and Standards and Procedures for Graduate Study at UCLA at http://www.gdnet.ucla.edu.
The UCLA campus has one College and 11 professional schools. Each has its own degree requirements and is headed by a dean who has final academic authority. UCLA students enroll in the University and in the College or one of the schools described in this section.

**COLLEGE OF LETTERS AND SCIENCE**

Timothy A. Stowell, Dean of Humanities
Emil Reisler, Dean of Life Sciences
Joseph A. Rudnick, Acting Dean of Physical Sciences
Reynaldo F. Macías, Acting Dean of Social Sciences
Judith L. Smith, Dean/Vice Provost of Undergraduate Education

UCLA
2300 Murphy Hall
Box 951430
Los Angeles, CA 90095-1430
(310) 825-9009
http://www.college.ucla.edu

UCLA is one of the world’s premier universities. At the core of the University’s research programs, graduate training, and undergraduate instruction is the UCLA College of Letters and Science. With over 24,000 students and more than 900 faculty members, the College is the largest academic unit in the UC system. The College offers more than 130 majors leading to the Bachelor of Arts, Bachelor of Science, or Bachelor of Arts and Sciences (B.A.S.), as well as to master’s and doctoral degrees.

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

The undergraduate programs in the College stress a liberal arts education that brings together perspectives from many fields in a unified approach to learning. Students learn ways that issues are analyzed, questions are posed, and knowledge is organized. After sampling many general subjects, they concentrate on one field or subject and are required to pursue it rigorously and in depth, according to the standards of scholars in the field. When they reach the graduate level, they pose their own questions, analyze academic issues of their own making and, through their research, participate in the creation of knowledge.

**ORGANIZATION OF THE COLLEGE**

The College is organized in five divisions, each led by a dean. A description of each division follows.

**HUMANITIES**

The Humanities Division promotes, through scholarly inquiry and the transmission of ideas, sensitive, imaginative, and rigorous reflection on the human condition. Courses in literature help students understand the enduring power of texts both great and small—from cuneiform to manuscript to hypertext. Studies of nearly 100 foreign languages create a gateway to civilizations that span the globe and five millennia of human history. Philosophers provide training in the fundamental principles of logic and moral reasoning, and linguists—both theoretical and applied—illuminate the physiological, cognitive, and social aspects of human language. Musicologists and art historians explore with students the forms and media through which humans have sought to express themselves and to challenge and make sense of their worlds. Programs in the humanities teach students to interpret texts with an informed sensitivity, to evaluate ideas critically, to write clearly and effectively about them, and to be able to question and discuss them with their peers. See http://www.college.ucla.edu/humanities/.

**LIFE SCIENCES**

Faculty members and students in the Life Sciences Division play an essential role in unlocking the basic mechanisms of life at the most fundamental level. The geography of Southern California is conducive to life sciences research, since the diverse region is a natural laboratory for environmental biologists, plant and animal ecologists, and evolutionary biolo-
gists. Scientists in microbiology and molecular, cell, and developmental biology study embryo formation, cell signaling, and genetics. Neurochemists, neurophysiologists, psychobiologists, and behavior biologists study the underlying mechanisms of the neural basis of behavior. Physiological scientists examine the structure of muscle, hormonal control of behavior, and environmental conditions, such as weightlessness, that affect bone and muscle structure and function. Cognitive psychologists are concerned with the nature of knowledge—how people learn, remember, associate, and think, and how computers relate to human thought processes. See http://www.college.ucla.edu/lifesciences/.

**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.physicalsciences.ucla.edu/about.asp.

**SOCIAL SCIENCES**

Majors in the Social Sciences Division help students make sense of the rapidly changing world around them by giving them the tools and sensibilities to appreciate the complex interplay of individuals, environment, culture, and economy that makes up their social world. They study human and animal evolution, as well as the transformation of human societies from small groups to states. They explore and debate the meaning of cultural, ethnic, and racial identities in historical and contemporary settings. Some majors challenge students to analyze the role of labor, markets, and exchange, as well as the dynamics of political choices, participation, and institutions. Communication, from interpersonal conversation to mass media, and its impact on personal and political behavior are studied in different fields, while the impact of place and the natural environment are examined through geography. Underlying all of these topics is a drive to capture the elusive nature of human behaviors and relationships through direct observation and the questioning of prevailing theories.

In addition, students learn exciting and diverse methods of social and environmental analysis, such as archaeology, linguistics, statistics, game theory, remote sensing and imagery, textual analysis, ethnography, geographic information systems, fieldwork, and ecology. See http://www.sscnet.ucla.edu/college/.

**UNDERGRADUATE EDUCATION**

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

**Academic Advancement Program.** The Academic Advancement Program (AAP) is a multiracial, multiethnic, and multicultural program that promotes academic excellence through academic counseling, tutorials, and mentoring. Students are eligible for AAP if their academic profiles and personal backgrounds may impact their University experience and their retention and graduation from UCLA. See http://www.ugeducation.ucla.edu/aap/.

**Academics in the Commons.** The Academics in the Commons (AITC) program provides students, through workshops and tutorials, with an understanding of skills and techniques, an awareness of campus resources, and knowledge of self, so that personal and academic success at UCLA can be achieved. See http://www.ugeducation.ucla.edu/aitc/.

**Center for Community Learning.** The Center for Community Learning serves faculty members, undergraduate students, and community partners through academic courses and programs, including credit-bearing internships, service learning courses, community-based research, and service scholarships. It is home to the undergraduate minor in Civic Engagement. The center works closely with the Center for Community Partnerships and is the undergraduate curricular arm of the Chancellor’s UCLA in LA Initiative. See http://www.ugeducation.ucla.edu/communitylearning/.

**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.ugeducation.ucla.edu/honors/.

**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.

Orientation Program. Summer 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.orientation.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.ugeducation.ucla.edu/tap/.

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 Seminars, Freshman Cluster Program, and Writing II Program. See http://www.ugeducation.ucla.edu/uei/.

Undergraduate Evaluation and Research Office. The Undergraduate Evaluation and Research Office provides information and analysis to support planning, program and policy development, and other decision making about undergraduate education at UCLA. See http://www.ugeducation.ucla.edu/eval/.

Undergraduate Research Centers. Undergraduate Research Centers (URC)—one for students in the arts, humanities, and social sciences and one for students in science, engineering, and mathematics—exist as part of a continuing effort by the College to engage undergraduate students in research and creative activities at all levels. See http://www.ugeducation.ucla.edu/ugresearch/.

UNDERGRADUATE DEGREE REQUIREMENTS

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

Degree programs in the College offer students a variety of intellectual challenges by combining a wide distribution of courses and the opportunity to specialize in one particular field. To this end, students are required to select lower division courses that provide general foundations of human knowledge. In upper division courses, they concentrate on one major field of interest.

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

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

UNIVERSITY REQUIREMENTS

The University of California has two requirements that undergraduate students must satisfy in order to graduate: (1) Entry-Level Writing or English as a Second Language and (2) American History and Institutions. Students who do not satisfy the Entry-Level Writing requirement prior to enrollment must pass an approved course or other program prescribed by their UC campus of residence. Only after satisfying the Entry-Level Writing requirement can they take for transfer credit an English composition course after enrolling at UCLA. See Degree Requirements in the Undergraduate Study section for details.

COLLEGE REQUIREMENTS

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

UNIT REQUIREMENT

Students must satisfactorily complete for credit a minimum of 180 units for the bachelor’s degree. At least 60 of the 180 units must be upper division courses numbered 100 through 199. A maximum of 216 units is permitted. Students with advanced placement or international baccalaureate (transfer) credit may exceed the unit maximum by the amount of that credit.

SCHOLARSHIP REQUIREMENT

Students must earn at least a C (2.0) grade-point average in all courses undertaken at UCLA for receipt of

College of Letters and Science
Structure of a Degree

University Requirements
1. Entry-Level Writing or English as a Second Language
2. American History and Institutions

College Requirements
1. Unit
2. Scholarship
3. Academic Residence
4. Writing Requirement
   Writing I
   Writing II
5. Quantitative Reasoning
6. Foreign Language
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 the University, College, or department requirements are referred to as electives and are used to meet the minimum unit requirement for graduation.
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 a letter grade, 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, or an equivalent course approved by the College Faculty Executive Committee, within the first three terms of enrollment.

The Writing I requirement may also be satisfied by scoring 4 or 5 on one of the College Board Advanced Placement Tests in English or a 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 is satisfied by selecting a course from a list of courses approved by the College Faculty Executive Committee. Writing II courses are listed in the Schedule of Classes at http://www.registrar.ucla.edu/soc/writing.htm and are available in College Academic Counseling. Most Writing II courses may also be applied toward general education (GE) requirements or toward some preparation for the major requirements. It is strongly recommended that the requirement be fulfilled within the first six terms of enrollment.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum 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**

In the College of Letters and Science, students must demonstrate basic skills in quantitative reasoning. All courses taken to satisfy the quantitative reasoning requirement must be completed with a grade of Passed or C or better. The quantitative reasoning requirement can be satisfied by achieving an SAT Reasoning Test Mathematics Section score of 600 or higher, an SAT Subject Test in Mathematics score of 550 or higher, or by completing one of the following courses: Biostatistics 100A, 100B, Mathematics 2 (or any higher numbered course except 19, 71SL, 72SL, 89, 89HC, 98XA, 98XB, 99, 105A, 105B, 105C, 189, 189HC, 195, 197, 199, 330), Philosophy 31, Political Science 6, 6R, Program in Computing 10A, 10B, 10C, Statistics 10, 10H, 11, 12, 13, 14.

**Foreign Language Requirement**

The foreign language requirement can be satisfied by one of the following methods: (1) completing a college-level foreign language course equivalent to level three or above at UCLA or (2) scoring 3, 4, or 5 on the College Board Advanced Placement (AP) foreign language examination in Chinese, French, German, Italian, Japanese, or Spanish, or scoring 4 or 5 in Latin, thereby earning College credit or (3) presenting a UCLA foreign language departmental examination score indicating competency through level three. Consult the Schedule of Classes for times and places of the regularly scheduled examinations. Students who wish to demonstrate proficiency in a language that is taught in a UCLA department that has no scheduled examination should contact the appropriate department to arrange for one. Students wishing to take an examination in a language not taught at UCLA should contact a College counselor.

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

- African Languages (Linguistics) 1A-1B-1C or 15 (Swahili); 7A-7B-7C or 17 (Zulu); 11A-11B-11C or 25 (Yoruba); 31A-31B-31C or 35 (Bambara); 41A-41B-41C or 45 (Hausa); 51A-51B-51C or 56 (Amharic); 61A-61B-61C (Wolof); 75 (Chichewa); 85 (Setswana)
- Afrikaans (Germanic Languages) 105A and 105B
- Ancient Near East (Near Eastern Languages) 120A-120B-120C (Ancient Egyptian); 140A-140B-140C (Sumerian)
- Arabic (Near Eastern Languages) 1A-1B-1C
- Armenian (Near Eastern Languages) 101A-101B-101C or 104A-104B-104C
- Berber (Near Eastern Languages) 101A-101B-101C
- Bulgarian (Slavic Languages) 101A-101B-101C
- Chinese (Asian Languages) 1, 2, and 3, or 1A, 2A, and 3A, or 8
- Czech (Slavic Languages) 101A-101B-101C
- Dutch (Germanic Languages) 103A-103B, and 103C, or 104A-104B
- Filipino (Asian Languages) 1, 2, and 3
- 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; 15 (Modern Greek)
- Hebrew (Near Eastern Languages) 1A-1B-1C
- Hindi-Urdu (Asian Languages) 1, 2, and 3, or 3R
- Hungarian (Slavic Languages) 101A-101B-101C
- Indonesian (Asian Languages) 1, 2, and 3
- Iranian (Near Eastern Languages) 1A-1B-1C or 20A-20B-20C (Persian)
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 10
Latin (Classics) 1, 2, and 3, or 16 or 100
Polish (Slavic Languages) 101A-101B-101C
Portuguese (Spanish and Portuguese) 1, 2, and 3, or 102A-102B
Quechua (Linguistics) 17 or 18A-18B-18C
Romanian (Slavic Languages) 101A-101B-101C or 103
Russian (Slavic Languages) 1, 2, and 3, or 10 or 11A-15B (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 (Alkadian)
Serbian/Croatian (Slavic Languages) 101A-101B-101C
Spanish (Spanish and Portuguese) 1, 2, and 3, or 2A and 3A
Thai (Asian Languages) 1, 2, and 3, or 3R
Turkic Languages (Near Eastern Languages) 101A-101B-101C (Turkish); 111A-111B-111C (Uzbek); 115A-115B-115C (Azeri)
Ukrainian (Slavic Languages) 101A-101B-101C
Vietnamese (Asian Languages) 1, 2, and 3, or 1A, 2A, and 3A
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.

In 2002, the College changed its general education curriculum. Depending on when students enter UCLA and whether they enter as freshmen or transfer students, the requirements vary. For transfer students, applicability of either plan depends on whether or not they have completed the Intersegmental General Education Transfer Curriculum (IGETC).

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. One of the 10 courses must be either a GE-approved lower division seminar or a second GE-approved Writing II course in the appropriate foundational area. See the foundational area descriptions below for a breakdown of courses required.

Students who complete a GE Cluster series (1) fulfill the Writing II requirement, (2) complete a third of their general education requirements, (3) fulfill the GE seminar requirement, and (4) receive laboratory/demonstration credit where appropriate.

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

Foundations of the Arts and Humanities. Three 5-unit courses, one from each subgroup:

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

The aim of courses in this area is to provide perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses provide the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

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

<table>
<thead>
<tr>
<th>College of Letters and Science General Education Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations of the Arts and Humanities</td>
</tr>
<tr>
<td>Literary and Cultural Analysis . . . . . . . . . . . . . . . . 1 Course</td>
</tr>
<tr>
<td>Philosophical and Linguistic Analysis . . . . . . . . . . . . 1 Course</td>
</tr>
<tr>
<td>Visual and Performance Arts Analysis and Practice . . . . . 1 Course</td>
</tr>
<tr>
<td>Total = 15 units minimum</td>
</tr>
<tr>
<td>Foundations of Society and Culture</td>
</tr>
<tr>
<td>Historical Analysis . . . . . . . . . . . . . . . . . . . . . . . 1 Course</td>
</tr>
<tr>
<td>Social Analysis . . . . . . . . . . . . . . . . . . . . . . . . . . 1 Course</td>
</tr>
<tr>
<td>Third course from either subgroup . . . . . . . . . . . . . . . . 1 Course</td>
</tr>
<tr>
<td>Total = 15 units minimum</td>
</tr>
<tr>
<td>Foundations of Scientific Inquiry</td>
</tr>
<tr>
<td>Life Sciences . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 Courses</td>
</tr>
<tr>
<td>Physical Sciences . . . . . . . . . . . . . . . . . . . . . . . . . . . 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. Each of the other two courses may be 4 units.</td>
</tr>
<tr>
<td>Total = 18 units minimum</td>
</tr>
<tr>
<td>Total GE . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 10 Courses/48 Units Minimum</td>
</tr>
</tbody>
</table>

One of the 10 courses must be either an approved lower division seminar or a second Writing II course in an appropriate foundational area.
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 a laboratory or demonstration or carry Writing II credit. Each of the other two courses may be 4 units:

- Life Sciences
- Physical Sciences

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

Foundations Course Lists. Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor or see http://www.registrar.ucla.edu/ge/.

Advanced Placement Test Credit

Freshmen who entered Fall Quarter 2002 and transfer students who entered Fall Quarter 2004 may not use Advanced Placement (AP) credit to satisfy the College’s 10-course foundational area general education requirement. See the AP Chart at http://www.admissions.ucla.edu/Prospect/APCreditLS.htm. Consult a departmental or College counselor for applicability of AP credit toward course equivalencies or satisfaction of Preparation for the Major requirements.

Students who entered as freshmen prior to Fall Quarter 2002 and transfer students who entered prior to Fall Quarter 2004 should consult a College counselor for application of AP credit.

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. Otherwise, they must fulfill the College GE requirements.

Students who are unable to complete one or two IGETC courses for good cause may petition the community college for partial completion of IGETC. If the petition is approved by the community college, the remaining courses must be completed with a minimum grade of C within one calendar year after admission to UCLA. Failure to complete IGETC coursework within the specified time period results in a permanent denial of IGETC certification, and students 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. All courses 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 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. 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 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.ugeducation.ucla.edu/honors/individual.html.

Double Majors. Students in good academic standing may be permitted to have a double major consisting of departmental majors from two departments within the College. Both majors must be completed within the maximum limit of 216 units, and students must obtain the approval of both departments.

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

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

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

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

POLICIES AND REGULATIONS

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

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

STUDY LIST
The Study List is a record of classes that a student is taking for a particular term. The allowable Study List load is up to 19 units. After the first term, students may petition to enroll in more than 19 units if they attained at least a B average the preceding term in a total program of at least 15 units. First-term transfer students from any other campus of the University may carry excess units on the same basis as students who have completed one or more terms at UCLA; however, they are not encouraged to do so.

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

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

MINIMUM PROGRESS/EXPECTED CUMULATIVE PROGRESS

During a regular term of enrollment, undergraduate students in the College are required to enroll in a minimum of 13 units. Students are also required to meet cumulative progress unit expectations as outlined in the Expected Cumulative Progress Chart at http://www.ugeducation.ucla.edu/counseling/regulations/exprog.htm.

The following courses count toward minimum progress and expected cumulative progress but are exempt from the maximum unit limit of 216: 19 (Fiat Lux), 99 (student research tutorials), 190 (research colloquia), 193 (journal club seminars), 194 (research group or internship seminars), Honors Collegium 101A through 101E, Life Sciences 71SL, 72SL, 73SL, Mathematics 71SL, and 72SL.

REDUCED FEE PROGRAMS

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

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

Students should obtain the petition, Undergraduate Request for Fee Reduction, from College Academic Counseling. The application for part-time study must be submitted with accompanying documentation by Friday of the second week of the term. Students approved for part-time study who become enrolled 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 major).

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

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

**Changing a Major**

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

Students who fail to attain a grade-point average of 2.0 (C) in preparation for the major or major courses may be denied the privilege of entering or continuing in that major. Some departments may have higher grade-point requirements for their preparation and major courses; consult the appropriate department regarding minimum standards.

**Reentering Students and Their Majors**

Students returning to the University to resume their studies after an absence of several years may find their previous major area of study no longer available. They then must select a current major in which to complete their studies. Consult an academic counselor for assistance.

**Credit Limitations**

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

Transfer students with credit from other institutions (advanced standing credit) receive a Degree Progress Report (DPR) from Undergraduate Admissions and Relations with Schools indicating the transferable units from former institutions; however, the following credit limitations may reduce the total number of transferred units that apply toward the degree in the College. Consult a counselor in College Academic Counseling about these limitations.

**Advanced Placement Tests.** Advanced Placement (AP) Test credit may not be applied toward a degree unless students had less than 36 units of credit at the time of the examination(s). See the AP chart at http://www.admissions.ucla.edu/Prospect/APCreditLS.htm for UCLA course equivalents and credit allowed for GE requirements.

**College Level Examination Program.** Credit earned through the College Level Examination Program (CLEP) and through the California State University English Equivalency Examination may not be applied toward the bachelor’s degree.

**Community College Unit Limit.** After completing 105 quarter units toward the degree in all institutions attended, students are allowed no further unit credit for courses completed at a community college.

**Credit by Examination.** Within the College, eligibility for credit by examination is usually limited to students who have been approved as Departmental Scholars or who are admitted to a departmental honors program or UCLA Honors Programs. Students who have completed a minimum of 12 units at UCLA with a minimum 3.5 overall grade-point average may petition for credit by examination. The examination for that course must be taken successfully before they may petition for credit by examination in another course.

Students may receive credit by examination for only one course out of 10 courses completed. Credit by examination may not be used to gain credit for prior knowledge, audited courses, or courses taken elsewhere. Units for a course taken by examination are applied toward the 216-unit maximum allowable units for graduation. Petitions for credit by examination (with fee) are available only through an appointment with a counselor in the Honors Programs Office, A311 Murphy Hall.

**Education Abroad Program.** Students participating in the Education Abroad Program may receive a maximum of 48 units of credit toward the degree in addi-
tion 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 completed 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 (Ethnomusicology 91A through 91Z, 161A through 161Z, Music 60A through 65, C90A through 90S, 160A through 165, and World Arts and Cultures 5 through 16, 56 through 65, C109A, C113A, 114, C115, 116) may be applied toward the bachelor's degree whether taken at UCLA or another institution.

Physical Education. No more than 4 units in physical education activities courses may be applied toward the bachelor's degree.

Physics Courses. Any two or more courses from Physics 1A, 1AH, 6A, and 10 are limited to a total of 6 units of credit.

ROTC Courses. For students contracted in the Aerospace Studies Department, 36 units of aerospace studies credit may be applied toward the requirements for the bachelor's degree; for students contracted in the Military Science Department, 26 units of military science credit may be applied; for students contracted in the Naval Science Department, 26 units of naval science credit may be applied.

Statistics Courses. Credit is allowed for only one of the following introductory statistics courses: Economics 41, Statistics 10, 10H, 11, 10, 13, 14 (or former Anthropology M80, Geography M40, Sociology M18, or Statistics 10A), or any equivalent course taken at UCLA or another institution.

Upper Division Tutorials. No more than 8 units of credit may be taken per term in upper division tutorials numbered 195 through 199. The total number of units allowed in such courses for a letter grade is 32; see specific restrictions under each departmental listing.

300- and 400-Level Courses. No more than 8 units in the 300 and 400 series of courses may be applied toward the bachelor’s degree. Credit is not granted for X300 and X400 courses taken in UCLA Extension.

HONORS

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

COLLEGE HONORS

The highest academic recognition the College confers on its undergraduate students is College Honors, which is awarded to graduating seniors who successfully complete the College Honors program and who have an overall University of California grade-point average of 3.5 or better. The program provides excep-

tional undergraduate students an opportunity to pursue individual excellence.

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

DEAN’S HONORS

The Dean's Honors list recognizes high scholastic achievement in any one term. The following criteria are used to note Dean's Honors on the student records: (1) a 3.75 grade-point average in any one term with at least 12 graded units and no grade of NP or I or (2) a 3.66 GPA and at least 56 grade points during the term, with no grade of NP or I. Dean's Honors are automatically recorded on the transcript.

DEPARTMENTAL HONORS

Individual departments and programs in the College offer departmental honors programs. Admission and curricular requirements vary according to the department or program. See the Curricula and Courses section of this catalog for details, and consult the departmental adviser about procedures and arrangements. Students who successfully complete the requirements graduate with departmental honors or highest honors.

LATIN HONORS

Students who have achieved scholastic distinction may be awarded the bachelor's degree with Latin honors. To be eligible, students must have completed 90 or more units for a letter grade at the University of California and must have attained an overall grade-point average at graduation that places them in the top five percent of College graduates (GPA of 3.872 or better) for summa cum laude, the next five percent (GPA of 3.791 or better) for magna cum laude, and the next 10 percent (GPA of 3.654 or better) for cum laude. Coursework taken on the Education Abroad Program is applied toward Latin honors at graduation. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year (fall, winter, spring, summer) determine student eligibility. Students should consult their Degree Progress Reports or the Schedule of Classes for the most current calculations of Latin honors.

DEPARTMENTAL SCHOLAR PROGRAM

Departments may nominate exceptionally promising undergraduate students (juniors and seniors) as UCLA Departmental Scholars to pursue bachelor's and master's degrees simultaneously. Qualifications include completion of 24 courses (96 quarter units) at UCLA or the equivalent at a similar institution, the requirements in preparation for the major, and eligibility to participate in the College Honors program. Students must also have at least one term of coursework remaining at UCLA. To obtain both the bachelor's and master's degrees, students must be provisionally admitted to the Graduate Division, fulfill requirements for each program, and maintain a minimum B average. No
ranked among the nation’s elite, and superb affiliated clinical facilities. At the David Geffen School of Medicine at UCLA, faculty members and students play a dynamic role on campus and in Los Angeles communities. Not only are they in the clinics, wards, and operating rooms of the Ronald Reagan UCLA Medical Center and Los Angeles County Harbor-UCLA Medical Center, they are also at work in the facilities of the Molecular Biology Institute, the Department of Physiology, the Health Sciences Computer Center, the Semel Institute for Neuroscience and Human Behavior, and in dozens of other clinical and scientific units. They are in community clinics, health fairs, and schools, and assist at disaster sites in the international community.

Students at the Ronald Reagan UCLA Medical Center 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, and a biomedical library that is considered one of the world’s best.

Geffen School of Medicine departments are each staffed by a distinguished faculty of respected researchers and practitioners. They have some of the most technologically advanced equipment and facilities, including two of the nation’s 56 hospital-based biomedical cyclotrons producing short-lived radioisotopes for biological research and diagnostic nuclear medicine procedures.

**DEGREES AND PROGRAMS**

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

- Biological Chemistry (M.S., Ph.D.)
- Biomatichematics (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 therapeutics. Clinical skills are taught in the context of anatomical, molecular, pathophysiological, and psychosocial factors in health, disease, and treatment.

The curriculum is presented in an integrated, organ system-based program, with problem-based learning and laboratories to maximize the educational experience. Because medical school is but one phase in a physician’s education, the curriculum prepares students for a future in which scientific knowledge, social values, and human needs are ever changing. Formats for instruction include lectures, tutorials, seminars, laboratories, demonstrations, and visits to physicians’ offices; 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, preventive medicine, medical ethics, and clinical reasoning.

For details on the M.D. curriculum or to apply to the program, see http://dgsom.healthsciences.ucla.edu or contact the Geffen School of Medicine Admissions Office, 12-105 CHS, UCLA, Box 957035, Los Ange-
les, CA 90095-7035. See http://career.ucla.edu/GraduateSchool&PreProfessionalServices/Medicine.asp for details on the four-year premedical studies program.

**SPECIAL PROGRAMS**

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

**UCR/UCLA Thomas Haider Program in Biomedical Sciences**

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

**Drew/UCLA Medical Education Program**

The Drew/UCLA Medical Education Program is designed to attract students who are interested in addressing the concerns of underserved populations. Students in the program spend their first two years at the UCLA campus and complete their last two years of clinical work in specially designated training centers in medically underserved communities and at UCLA and affiliated hospitals. See http://www.cdrewu.edu.

**UCLA PRIME Program**

The UCLA PRIME Program is a five-year dual degree program to develop leaders in medicine who address policy, care, and research in healthcare for the underserved. The program leads to the M.D. and a master's degree in areas that complement the mission of the program. Options for the master's degree include M.B.A., M.P.H., and M.P.P. Each year the class is comprised of 18 students. Students identify with one of three programs: PRIME UCLA-CHS, PRIME UCLA-UCR, or PRIME UCLA-Drew. A commitment to serve and experience working with diverse medically disadvantaged populations is paramount. See http://www.medsch.ucla.edu/uclaprime/ or call (310) 794-5912.

**ARTICULATED AND CONCURRENT DEGREE PROGRAMS**

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

A concurrent program with the John E. Anderson Graduate School of Management and an articulated program with the School of Public Health allow UCLA medical students to earn both the M.D. and M.B.A. or the M.D. and M.P.H. degrees over five years by following a designated course of study and some shared coursework. Separate application must be made to the Anderson School or School of Public Health during the third year of medical school. Call (310) 825-2866 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.

**SEMEI 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. Twelve 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.npi.ucla.edu.

**GRADUATE SCHOOL OF EDUCATION AND INFORMATION STUDIES**

Aimée Dorr, Dean

UCLA
1009 Moore Hall
Box 951521
Los Angeles, CA 90095-1521

(310) 825-8326
fax: (310) 206-6293
e-mail: info@gseis.ucla.edu
http://www.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 stu-
Students in all programs, through internships, research projects, summer placements, and teaching opportunities.

GSE&IS is committed to the highest quality professional education and to the application of research and scholarship to the challenges facing a diverse and increasingly urbanized world.

DEPARTMENTS AND PROGRAMS

The school consists of two departments—the Department of Education and the Department of Information Studies. Both have a clear and strong commitment to the pursuit of excellence in their research-oriented and professional degree programs.

Research-oriented master's and doctoral programs prepare top scholars in their respective fields, while future librarians, archivists, and information professionals, teachers, student affairs practitioners, school administrators, and superintendents are prepared in the various master's and doctoral professional degree programs. Additionally, the Corinne A. Seeds University Elementary School, a laboratory school, provides an innovative educational program for students 4 to 12 years old.

DEGREES

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

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

Credential Programs

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

Administrative Services Credential
Preliminary Administrative Services Credential
Teacher Credential

Articulated Degree Programs

The school offers two articulated degree programs:

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

Concurrent Degree Programs

The school offers two concurrent degree programs:

Library and Information Science M.L.I.S./Latin American Studies M.A.
Education M.Ed., M.A., Ed.D., or Ph.D./Law J.D.

ADMISSION

Admission criteria established by the UCLA Graduate Division require a bachelor's degree from a regionally accredited institution comparable in standards and content to a bachelor's degree from the University of California. A scholastic average of B (3.0 on a 4.0 scale) or better—or its equivalent if the letter grade system is not used—is required for the last 60 semester units or last 90 quarter units of undergraduate study and in any postbaccalaureate study. Further requirements for international students are explained in the Graduate Study section. See http://www.gdnet.ucla.edu/gasaa/admissions/admisinfo.html.

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

DEGREE REQUIREMENTS

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

RESEARCH CENTERS

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

CALIFORNIA CENTER FOR THE BOOK

The California Center for the Book is a reading promotion agency that celebrates California’s rich literary heritage and promotes reading, libraries, literacy, and authorship. To advance its mission, the center develops and supports local and statewide programs and initiatives related to books and reading for the citizens of California, develops and maintains book- and literacy-related resources, and encourages and supports the study of print and electronic culture. The center is supported by the U.S. Institute of Museum and Library Services under the provisions of the Library Services and Technology Act, administered in California by the State Librarian. See http://www.calbook.org.

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 local evaluation process, building relationships with community part-
ners to inform research, practice, and professional development. The center has assisted numerous community-based agencies in evaluating the effectiveness of their programs to improve the quality of early care and education programs. CICCQ also works with local government and policy groups, including the Los Angeles County First 5 Commission, Los Angeles County Office of Child Care, and Los Angeles Universal Preschool.

**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 focuses around three interacting themes: accountability, artifacts, and advocacy. See http://www.gseis.ucla.edu/~cie/.

**Center for International and Development Education**
The Center for International and Development Education (CIDE) is a research and action center whose mission is to enhance educational capacity, facilitate human and economic development, and promote cross-cultural exchanges related to international and development education. This is accomplished through a series of publications, research programs, practical initiatives, and networks with existing development and academic institutions. Research and training are conducted in such areas as teacher development and higher education transformation. CIDE acts as a hub for researchers, graduate students, and organizations to network with and learn about critical issues in international and development education from a wide range of fields and disciplines. See http://www.gseis.ucla.edu/~cide/.

**Center for Research and Innovation in Elementary Education**
The Center for Research and Innovation in Elementary Education (CONNECT) provides a unique setting where nationally recognized scholars work together with teachers and administrators to improve education for the nation’s children. Recognizing the dramatic changes in the demographics of the American classroom and the challenges they present to public schools, the center combines the resources of UCLA and its laboratory elementary school to foster collaboration between researchers and practitioners who search for solutions to the problems facing schools as well as strategies for capitalizing on diversity. See http://www.connect.gseis.ucla.edu.

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

**Center for Study of Urban Literacies**
The Center for Study of Urban Literacies supports problem-oriented research that seeks to improve the educational experiences of urban children and communities. Specifically, the center houses three distinct but related research strands: (1) the study of language, culture, and human development, (2) the social and cognitive consequences of educational policies and practices, and (3) the study of new and empowering pedagogies. In addition, the center offers K-12 student programs that are based on the center’s research, such as UCLinks (Las Redes) after-school club. See http://centerx.gseis.ucla.edu.

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

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

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

INSTITUTE FOR DEMOCRACY, EDUCATION, AND ACCESS

The Institute for Democracy, Education, and Access (IDEA) is a network of UCLA scholars and students, professionals in schools and public agencies, advocates, community activists, and urban youth. IDEA's mission is to make high-quality public schooling and successful college participation routine occurrences in low-income neighborhoods of color. Research and advocacy are the tools IDEA uses to empower individuals, build relationships, and create knowledge for civic participation and social change. See http://www.idea.gseis.ucla.edu.

INSTITUTE FOR STUDY OF EDUCATIONAL ENTREPRENEURSHIP

Through the Institute for Study of Educational Entrepreneurship (ISEE), scholars and practitioners collaborate to investigate and analyze the current and potential impact of educational entrepreneurship, for profit, nonprofit, and intraorganizational, as a driving force for promoting educational reform and equitable access in the public school sector. See http://www.isee.gseis.ucla.edu.

PAULO FREIRE INSTITUTE

The Paulo Freire Institute/UCLA (PFI) seeks to gather scholars and critics of Freire's pedagogy in permanent dialog to foster the advancement of new pedagogical theories and concrete interventions in the real world. The objective of PFI is to bring together research, teaching, and technology while concentrating on four major areas: teacher education, a comparative perspective on Latin American education, the politics of education (research on gender, race, class, and the state), and Paulo Freire's political philosophy and critical pedagogy. See http://www.paulofreireinstitute.org.

SCHOOL MANAGEMENT PROGRAM

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

SUDIKOFF FAMILY INSTITUTE FOR EDUCATION AND NEW MEDIA

The Sudikoff Family Institute for Education and New Media is dedicated to providing support for the advancement of education and learning-related issues. Established as a communications channel between the scholarship of GSE&IS and policymakers, educators, and the general public, the institute utilizes the popular media as a catalyst toward creating a public forum for the most significant issues related to education and information studies. See http://www.gseis.ucla.edu/-sudikoff/

UC ALL-CAMPUS CONSORTIUM ON RESEARCH FOR DIVERSITY

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

HENRY SAMUELI SCHOOL OF ENGINEERING AND APPLIED SCIENCE

Vijay K. Dhir, Dean
UCLA
6426 Boelter Hall
Box 951601
Los Angeles, CA 90095-1601
(310) 825-2826
http://www.engineer.ucla.edu

As UCLA Engineering has grown into one of the top engineering programs in the country, the school has changed in many ways, but has not wavered from its early vision of developing an engineering program with imagination and integrity. Founded in 1945, the UCLA Henry Samueli School of Engineering and Applied Science is committed to creating a better future for Los Angeles and the world—to make discoveries that truly mean a better tomorrow.

The school supports dynamic programs in traditional and new areas of study and research, including bioengineering, wireless networked systems, bio-nano-info technology, wireless communications and computing, signal processing, sensor technologies, nanotechnology and nanomanufacturing, automated flight, alternative energy systems, smart structures and materials, and protection of the environment. Partnerships across tra-
ditional academic boundaries reflect the school’s commitment to a wide range of interdisciplinary activities. Students receive their professional education through classroom lectures, participation in real-world applications, and hands-on experience. The undergraduate degree curriculum provides exposure to the humanities, social sciences, and fine arts and recognizes the responsibility of engineers to create, protect, and manage technology with regard for ethics and human values. Students who are committed to a high standard of achievement are invited to contribute to the future of excellence in engineering at UCLA.

**DEPARTMENTS AND PROGRAMS**

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

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

**DEGREES**

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

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

**Concurrent Degree Program**

The school offers one concurrent degree program:

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

**UNDERGRADUATE ADMISSION**

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

In the selection process many elements are considered, including grades, test scores, and academic preparation.

Applicants are accepted at either the freshman or junior level.

**ADMISSION AS A FRESHMAN**

Freshman applicants must satisfy the examination requirement described in the Undergraduate Study section and should take required tests by the December test date, since scores are part of the review process. Instruct the testing agencies to send results directly to UCLA Undergraduate Admissions and Relations with Schools.

Applicants must submit scores from an approved core test of mathematics, language arts, and writing. This requirement may be satisfied by taking either (1) the ACT Assessment plus ACT Writing Test or (2) the SAT Reasoning Test. In addition, all applicants must complete two SAT Subject Tests in two different subject areas selected from history/social science, mathematics (Mathematics Level 2 only), laboratory science, and a language other than English.

Applicants to the school are strongly encouraged to take the following SAT Subject Tests: Mathematics Level 2 and a laboratory science test (Biology E/M, Chemistry, or Physics) that is closely related to the intended major.

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

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

**Credit for Advanced Placement Tests.** Students may fulfill part of the school requirements with credit allowed at the time of admission for College Board Advanced Placement (AP) Tests with scores of 3, 4, or 5. Students with AP Test credit may exceed the 213-unit maximum by the amount of this credit. AP Test credit for freshmen entering in Fall Quarter 2008 fulfills HSSEAS requirements as indicated on the school AP chart at http://www.admissions.ucla.edu/Prospect/APCreditEN.htm.
Students who have completed 36 quarter units after high school graduation at the time of the examination receive no AP Test credit.

**ADMISSION AS A JUNIOR**

Students who begin their college work at a California community college are expected to remain at the community college to complete the lower division requirements in chemistry, computer programming, English composition, mathematics, physics, and the recommended engineering courses before transferring to UCLA. Transfer students who have completed the recommended lower division program in engineering at California community colleges normally complete the remaining requirements for one of the B.S. degrees in six terms (two academic years) of full-time study. Students who select certain majors, such as Computer Science and Engineering or Chemical Engineering, may be required to complete additional lower division courses for the major sequence.

**Lower Division Requirements**

Applicants to the school in junior standing should have completed 90 quarter units (60 semester units) in good standing, including the following lower division minimum subject requirements:

1. Chemistry courses equivalent to UCLA’s Chemistry and Biochemistry 20A, 20B, 20L (only Chemistry and Biochemistry 20A is required for the Computer Science and Computer Science and Engineering majors and the electrical engineering and computer engineering options of the Electrical Engineering major; the Chemical Engineering curriculum also requires Chemistry and Biochemistry 30A, 30AL, 30B, 30BL, which do not need to be taken prior to admission to UCLA)


3. Physics courses equivalent to UCLA’s Physics 1A, 1B, 1C, 4AL, 4BL, depending on curriculum selected

4. Engineering courses equivalent to UCLA’s Civil and Environmental Engineering 15 or Computer Science 31 or Mechanical and Aerospace Engineering 20

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 more advanced course in English composition.

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.

A course in digital computer programming, using a higher-level language such as Fortran, Java, C, or C++, satisfies the computer programming requirement. Applicants to majors in Computer Science, Computer Science and Engineering, and Electrical Engineering should take C++.

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 a letter grade, 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 Tests in English or a combination of a score of 720 or higher on the SAT Reasoning Test Writing Section and superior performance on the English Composition 3 Proficiency Examination.

Students whose native language is not English may satisfy the Writing I requirement by completing English as a Second Language 36 with a grade of C or better (C– or a Passed grade is not acceptable). Admission into the course is determined by completion of English as a Second Language 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. 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 183 or 185 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 2008 and Thereafter**

**FOUNDATIONS OF KNOWLEDGE**

General education courses are grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Five courses (24 units minimum) are required. Engineering writing and ethics requirement courses also approved for GE credit may be applied toward the relevant GE foundational areas.
Students must meet with a counselor in the Office of Academic and Student Affairs to determine the applicability of GE Cluster courses toward the engineering writing or GE requirements.

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

Foundations of the Arts and Humanities. Two 5-unit courses selected from two different subgroups:
- Literary and Cultural Analysis
- Philosophical and Linguistic Analysis
- Visual and Performance Arts Analysis and Practice

The aim of courses in this area is to provide perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses provide the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

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

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

Foundations of Scientific Inquiry. One course (4 units minimum) from the Life Sciences subgroup or one course from Biomedical Engineering CM145/Chemical Engineering CM145, Chemistry and Biochemistry 153A, or Civil and Environmental Engineering M166/Environmental Health Sciences M166:
- Life Sciences
  - This requirement is automatically satisfied for Bioengineering majors, Chemical Engineering majors, and the biomedical engineering option of the Electrical Engineering major. The requirement may be satisfied for Civil Engineering majors if students select an approved major field elective that is also a course approved under Foundations of Scientific Inquiry.

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

Foundations Course Lists. Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor or see http://www.registrar.ucla.edu/ge/.

Requirements for Students Who Entered Prior to Fall Quarter 2008
For the approved list of courses, see http://www.seasoasa.ucla.edu/ge.html.

DEPARTMENT REQUIREMENTS

Henry Samueli School of Engineering and Applied Science departments generally set two types of requirements that must be satisfied for the award of the degree: (1) Preparation for the Major (lower division courses) and (2) the Major (upper division courses). Preparation for the Major courses should be completed before beginning upper division work.

PREPARATION FOR THE MAJOR

A major requires completion of a set of courses known as Preparation for the Major. Each department sets its own Preparation for the Major requirements; see the Curricula and Courses section of this catalog.

THE MAJOR

Students must complete their major with a scholarship average of at least a 2.0 (C) in all courses in order to remain in the major. All courses 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.

Henry Samueli School of Engineering and Applied Science General Education Requirements

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

| Foundations of Society and Culture | Historical Analysis | 1 Course |
| Social Analysis | 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.
POLICIES AND REGULATIONS

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

STUDENT RESPONSIBILITY

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

STUDY LIST

The Study List is a record of classes that a student is taking for a particular term. It is the student’s responsibility to present a Study List that reflects satisfactory progress toward the degree. Study Lists or programs of study that do not comply with the standards set by the faculty may result in enforced withdrawal from the University or other academic action. Study Lists require approval of the dean of the school or a designated representative.

Undergraduate students in the school are expected to enroll in at least 12 units each term. Students enrolling in less than 12 units must obtain approval by petition to the dean prior to enrollment in courses. The normal program is 16 units per term. Students may not enroll in more than 21 units per term unless an Excess Unit Petition is approved in advance by the dean.

MINIMUM PROGRESS

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

CREDIT LIMITATIONS

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

Advanced Placement Tests. Some portions of Advanced Placement (AP) Test credit are evaluated by corresponding UCLA course number. If students take the equivalent UCLA course, a deduction of UCLA unit credit is made prior to graduation. See the HSSEAS AP chart at http://www.admissions.ucla.edu/Prospect/APCreditEN.htm.

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

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

Foreign Language. No credit is granted toward the bachelor's degree for college foreign language courses equivalent to quarter levels one and two if the equivalent of level two of the same language was completed with satisfactory grades in high school.

DOUBLE MAJORS

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

COUNSELING SERVICES

New undergraduate students must have their course of study approved by an academic counselor. After the first term, curricular and career advising is accomplished on a formal basis. Students are assigned a faculty adviser in their particular specialization in their sophomore year or earlier.

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 transfers 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.

Undergraduate students following a catalog year prior to 2006-07 may use the computerized HSSEAS Academic Program Planner (APP), an interactive system that lets students know if their programs meet the requirements for graduation. Students beginning upper division coursework in the major are required to submit an Academic Program Proposal to the Office of Academic and Student Affairs for approval by the associate dean. Students following the 2006-07 catalog year and thereafter will be notified by the Office of Academic and Student Affairs of a new program called Degree Audit Reporting System (DARS).

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 3.889 or better) for summa cum laude, next five percent (GPA of 3.814 or better) for magna cum laude, and the next 10 percent (GPA of 3.618 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 3.889 grade-point average for summa cum laude, a 3.814 for magna cum laude, and a 3.618 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.

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 19 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 which 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.engineering.ucla.edu/swe/.

Continuing Education

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

Graduate Admission

In addition to meeting the requirements of the Graduate Division, applicants to the HSSEAS graduate programs are required to take the General Test of the Graduate Record Examination (GRE). Specific information about the GRE may be obtained from the department of interest.

Students entering the Engineer/Ph.D. program normally are expected to have completed the requirements for the master’s degree with at least a 3.25 grade-point average and to have demonstrated creative ability. Normally the M.S. degree is required for admission to the Ph.D. program. Exceptional students, however, can be admitted to the Ph.D. program without having an M.S. degree.

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

To submit a graduate application, see http://www.seas.oasa.ucla.edu/prospective/graduate.html. From there connect to the site of the preferred department or program and go to the online graduate application.

Graduate Degree Requirements

Graduate degree information is updated annually in Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.
MASTER OF SCIENCE DEGREES

No lower division courses may be applied toward graduate degrees. In addition, the various departments generally do not allow, for graduate degree credit, courses required of their undergraduate students. Consult the departmental graduate affairs office for more information.

Individual departments within the school may impose certain restrictions on the applicability of other undergraduate courses toward graduate degrees. Consult with the graduate adviser on departmental requirements and restrictions.

Major Fields or Subdisciplines

The M.S. program focuses on one major field. The major fields and subdisciplines offered at the M.S. level in most cases parallel those listed below for the Ph.D. program. There are some differences (for example, manufacturing engineering in the Department of Mechanical and Aerospace Engineering is offered only at the M.S. level). Contact the department concerned regarding possible differences between the M.S. and Ph.D. fields and subdisciplines. Students are free to propose to the school any other field of study, with the support of their adviser.

Course Requirements

A total of nine courses is required for the M.S. degrees, including a minimum of five graduate courses. (Some fields require more than five; obtain specific information from the department of interest.) A majority of the total formal course requirement and of the graduate course requirement must consist of courses in HSSEAS. In the thesis plan, seven of the nine courses must be formal courses, including at least four from the 200 series. The remaining two courses may be 598 courses involving work on the thesis. In the comprehensive examination plan, at least five of the nine courses must be in the 200 series; the remaining four courses may be either 200-series graduate or upper division undergraduate courses. No 500-series courses may be applied toward the comprehensive examination plan requirements.

Thesis Plan

The thesis must either describe some original piece of research that students have done, usually but not necessarily under the supervision of the thesis committee, or else provide a critical exposition of some topic in their major field of study. Students would normally start to plan the thesis at least one year before the award of the M.S. degree is expected. There is no examination under the thesis plan.

Comprehensive Examination Plan

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

CONCURRENT DEGREE PROGRAM

A concurrent degree program between HSSEAS and the John E. Anderson Graduate School of Manage-

MENT 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 new 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://www.engineer.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).

Ph.D. and Engineer degree programs are administered interchangeably, so that a student in the Ph.D. program may exit with an Engineer degree or pick up the Engineer degree en route to the Ph.D. degree; similarly, a student in the Engineer degree program may continue to the Ph.D. after receiving the Engineer degree. The time spent in either of the two programs may also be applied toward the minimum residence requirement and time limitation for the other program.

PH.D. DEGREES

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

Fields of Study

Established fields of study for the Ph.D. are listed below. With the support of an adviser, students may
propose any other field of study to their department. Instructions on the definition of acceptable ad hoc fields and procedures for their approval are available in each department office.

Biomedical Engineering Interdepartmental Program. Biocybernetics; biomechanics, biomaterials, and tissue engineering; biomedical instrumentation; biomedical signal and image processing and bioinformatics; medical imaging informatics; molecular and cellular bioengineering; neuroengineering

Chemical and Biomolecular Engineering Department. Chemical engineering

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

Computer Science Department. Artificial intelligence, computational systems biology, computer networks, computer science theory, computer system architecture and computer-aided design (CAD), 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 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

JOHN E. ANDERSON GRADUATE SCHOOL OF MANAGEMENT

Judy D. Olian, Dean

UCLA
F407 Mullin Management Commons
Box 951481
Los Angeles, CA 90095-1481

(310) 825-7982
fax: (310) 206-2002
http://www.anderson.ucla.edu

In today's rapidly changing global marketplace, it is essential that professional managers be conversant with the latest concepts and principles of management. At the UCLA John E. Anderson Graduate School of Management, which is consistently ranked among the best such schools in the nation, students prepare to become first-rate managers with both specialized skills and a broad understanding of the general economic, business, and managerial environment. This background enables them to become effective and efficient directors of organizations and people whether they are in the private, public, or not-for-profit sector.

Specifically, the Anderson School offers the business community a wide range of higher education programs that provide state-of-the-art information in a variety of fields. Through its faculty, the school advances the art and science of management by engaging in fundamental and cutting-edge research in all fields of management and by educating scholars who can continue to create this new knowledge.

John E. Anderson Graduate School of Management students come from diverse professional and educational backgrounds and seek equally diverse personal and professional goals. Whether they pursue the professional M.B.A., the academic M.S., or a Ph.D. in Management, they graduate with a broad understanding of 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.

The school offers a variety of programs leading to graduate degrees at the master’s and doctoral levels. These include both an academic (M.S.) and professional (M.B.A.) master’s, a Master of Financial Engineering (M.F.E.), as well as an Executive M.B.A. Program designed for working managers who are moving from specialized areas into general management and a three-year Fully Employed M.B.A. Program for emerging managers. The school also offers a part-time dual Executive M.B.A. degree with the National University of Singapore (NUS) Business School that prepares participants for top positions in organizations around the world. A Ph.D. in Management is also offered, as are a certificate Executive Program and research conferences and seminars for experienced managers.

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

**DEGREES**

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

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

**Concurrent Degree Programs**

The school offers 10 concurrent degree programs:
- Management M.B.A./Computer Science M.S.
- Management M.B.A./Dentistry D.D.S.
- Management M.B.A./Latin American Studies M.A.
- Management M.B.A./Law J.D.
- 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.
- Management M.B.A./Urban Planning M.A.

**RESEARCH CENTERS AND PROGRAMS**

Interdisciplinary research centers provide valuable resources that support school programs. See [http://www.anderson.ucla.edu/x40.xml](http://www.anderson.ucla.edu/x40.xml).

**CENTER FOR FINANCE AND INVESTMENTS**

The Center for Finance and Investments (CFI) sponsors research, teaching, and the application of financial knowledge in the global corporate and investment communities. CFI takes a leadership role in recruiting and retaining outstanding faculty members and scholars. The center also supports promising students in their efforts to gain a deeper understanding of the issues and challenges in the field of finance. See [http://www.anderson.ucla.edu/x13957.xml](http://www.anderson.ucla.edu/x13957.xml).

**CENTER FOR INTERNATIONAL BUSINESS EDUCATION AND RESEARCH**

The Center for International Business Education and Research (CIBER) is dedicated to enhancing the teaching and understanding of issues related to the global marketplace. The center actively increases international business research across the campus through the direct funding of faculty research travel, graduate student research assistantships, and academic conferences. See [http://www.anderson.ucla.edu/x327.xml](http://www.anderson.ucla.edu/x327.xml).

**ENTERTAINMENT AND MEDIA MANAGEMENT INSTITUTE**

The Entertainment and Media Management Institute (EMMI) sponsors research, industry events, and courses to bring together industry representatives, students, and researchers to develop new ways for entertainment and media companies to manage and thrive in the face of transforming entertainment and media business models. See [http://www.anderson.ucla.edu/x1030.xml](http://www.anderson.ucla.edu/x1030.xml).

**HAROLD AND PAULINE PRICE CENTER FOR ENTREPRENEURIAL STUDIES**

The Harold and Pauline Price Center for Entrepreneurial Studies provides academic and extracurricular activities that prepare M.B.A. candidates for the challenge of business management in entrepreneurial environments. These efforts include teaching and curriculum development, student activities, and scholarly research. The interdisciplinary curriculum draws on faculty expertise in many areas. See [http://www.anderson.ucla.edu/x554.xml](http://www.anderson.ucla.edu/x554.xml).

**HUMAN RESOURCES ROUND TABLE**

The Human Resources Round Table (HARRT) is affiliated with the Anderson School and the UCLA Institute of Industrial Relations. The program's mission is to enhance the profession of human resource management by linking the academic and practitioner human resource management communities. See [http://www.harrt.ucla.edu](http://www.harrt.ucla.edu).

**INFORMATION SYSTEMS RESEARCH PROGRAM**

The Information Systems Research Program (ISRP) was established to recognize the importance of maintaining close ties between the activities of practicing professionals and the activities of academics in the information systems area, while at the same time raising money to support education and research activities in the information systems area. The senior managers and technical professionals who belong to the Information Systems Associates participate in a number of activities to facilitate professional interchange and networking, such as the Information Systems Executive Leadership annual award dinner and the annual Information Systems Associates Symposium. See [http://www.anderson.ucla.edu/x691.xml](http://www.anderson.ucla.edu/x691.xml).

**LEADERSHIP, EDUCATION, AND DEVELOPMENT PROGRAM**

The Leadership, Education, and Development (LEAD) program sponsors four-week residential summer institutes at outstanding business schools, including the Anderson School, and recruits qualified African American, Hispanic, and Native American students between their junior and senior years of high school. LEAD introduces participants to the world of business, economics, finance, and management through a carefully tailored curriculum involving University faculty, guest lecturers from industry, and corporate field trips.
OFFICE OF EXECUTIVE EDUCATION PROGRAMS

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

RICHARD S. ZIMAN CENTER FOR REAL ESTATE

The Richard S. Ziman Center for Real Estate is a joint center of the Anderson School and the UCLA School of Law. It is charged with creating and administering UCLA’s activities surrounding real estate research, education, and professional development. The objectives are to (1) advance the quality of real estate research to a level comparable with financial economics, (2) train highly skilled professionals who use advanced scientific tools for designing new products, managing risk, and raising returns to real estate investments, and (3) undertake activities that bridge the gap between real estate research and practice. See http://www.anderson.ucla.edu/x323.xml.

RIORDAN PROGRAMS

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

UCLA ANDERSON FORECAST

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

SCHOOL OF THE ARTS AND ARCHITECTURE

Christopher Waterman, Dean

UCLA
8260 Broad Art Center
Box 951427
Los Angeles, CA 90095-1427

(310) 206-6465
fax: (310) 206-8504

http://www.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 provide students with unparalleled opportunities to learn from and interact with faculty members who rank among the most innovative artists, designers, musicians, choreographers, architects, and arts scholars of our time.

A balance of practice and theory, built on the academic foundation of the liberal arts, assures the understanding and appreciation of both the interdependence and integration of creativity, performance, and research. In educating the whole person, the school strives to empower and inspire the next generation of citizens to serve as cultural leaders of the twenty-first century.

Also under the School of the Arts and Architecture umbrella is an impressive array of public arts units, including UCLA Live, one of the largest arts presenters in the nation, the UCLA Hammer Museum which houses the Grunwald Center for the Graphic Arts, the Fowler Museum at UCLA, and the renowned Murphy Sculpture Garden. These institutions offer extraordinary access to leading anthropological, historical, and contemporary visual arts exhibitions and collections, and presentations by the world’s most outstanding performing artists.

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 offers an innovative curriculum 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 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:

Architectural Studies (B.A.)
Architecture (M.Arch. I, M.Arch. II, M.A., Ph.D.)
Art (B.A., M.A., M.F.A.)
Culture and Performance (M.A., Ph.D.)
Dance (M.F.A.)
Design | Media Arts (B.A., M.A., M.F.A.)
Ethnomusicology (B.A., M.A., C.Phil., Ph.D.)
World Arts and Cultures (B.A.)

New students are not being admitted to the M.A. in Art (critical and curatorial studies specialization) at this time.

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 undergraduates 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 the courses 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.

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 the University, school, or department requirements are referred to as electives and are used to meet the minimum unit requirement for graduation.
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. Two courses in English composition are required for graduation. Both courses must be taken for a letter grade, 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).

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

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

Writing II. The Writing II requirement is satisfied by selecting a 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) within the first six terms of enrollment.

A Writing II course also approved for general education may be applied toward the relevant general education foundational area.

**QUANTITATIVE REASONING REQUIREMENT**

In the School of the Arts and Architecture, students must demonstrate basic skills in quantitative reasoning. All courses taken to satisfy the quantitative reasoning requirement must be completed with a grade of Passed or C or better. The quantitative reasoning requirement can be satisfied by achieving an SAT Reasoning Test Mathematics Section score of 600 or higher, an SAT Subject Test in Mathematics score of 550 or higher, or by completing one of the following courses: Biostatistics 100A, 100B, Mathematics 2 (or any higher numbered course except 19, 71SL, 72SL, 89, 89HC, 98XA, 98XB, 99, 105A, 105B, 105C, 189, 189HC, 195, 197, 199, 330), Philosophy 31, Political Science 6, 6R, Program in Computing 10A, 10B, 10C, Statistics 10, 10H, 11, 12, 13, 14.

**FOREIGN LANGUAGE REQUIREMENT**

Students may meet the foreign language requirement by (1) scoring 3, 4, or 5 on the College Board Advanced Placement (AP) foreign language examination in Chinese, French, German, Italian, Japanese, or Spanish, or scoring 4 or 5 on the AP foreign language examination in Latin, (2) presenting a UCLA foreign language proficiency examination score indicating competency through level three, or (3) completing one college-level foreign language course equivalent to level three or above at UCLA with a grade of Passed or C or better. The foreign language requirement must be completed within the first six terms of enrollment.

International students may petition to use an advanced course in their native language for this requirement. Students whose entire secondary education has been completed in a language other than English may petition to be exempt from the foreign language requirement.

**UPPER DIVISION NONMAJOR REQUIREMENT**

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

**DIVERSITY REQUIREMENT**

The diversity requirement is predicated on the notion that students in the arts must be trained to understand the local, national, and global realities in which they make, understand, and interpret art. Those realities include the multicultural, transnational, and global nature of contemporary society. The requirement may be satisfied by taking courses in any of three parts of the students’ overall program: (1) general education courses, (2) courses in the major, or (3) upper division elective courses. As such, students are not required to complete an additional course to satisfy the diversity requirement. Courses satisfying this requirement consider intergroup dynamics along with such social dimensions as race, ethnicity, gender, socioeconomic background, religion, sexual orientation, age, and disability and are relevant to the understanding of these dynamics in contemporary society and culture in the U.S. and around the world.

**GENERAL EDUCATION REQUIREMENTS**

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

This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.

**Foundations of Knowledge**

General education courses are grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Eight courses (38 units minimum) are required. A Writing II course also approved for general education may be applied toward the relevant general education foundational area.

Students who complete a yearlong GE Cluster series fulfill the Writing II requirement and complete nearly a third of their general education requirements. Students who do not complete the yearlong GE Cluster series must meet with a counselor in the Student Services Office to determine applicable GE credit.

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

**Foundations of the Arts and Humanities.** Three 5-unit courses, one from each subgroup. Courses required to satisfy the major or other courses taken in the major department 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 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 one from either subgroup:

- Historical Analysis
- Social Analysis

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

**Foundations of Scientific Inquiry.** Two courses from either subgroup. If both courses are selected from the same subgroup, they must be from different departments:

- Life Sciences
- Physical Sciences

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

**Foundations Course Lists.** Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor or see 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.

---

**School of the Arts and Architecture**

**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/Physical Sciences: 2 Courses
  - Two courses from either subgroup. If both courses are selected from the same subgroup, they must be from different departments.
  - Total = 8 units minimum

- **Total GE** = 8 Courses/38 Units Minimum

A Writing II course also approved for general education may be applied toward the relevant general education foundational area.
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 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 14 courses (56 units), including at least nine upper division courses (36 units).

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. All courses 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 as soon 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.

Double Majors. Students may petition to be reviewed for a double major on an individual basis. It is strongly recommended that students pursuing a 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 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.

Concurrent Enrollment

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

Credit Limitations

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

Advanced Placement Tests. Credit earned through the College Board Advanced Placement (AP) Tests may be applied toward certain University/school requirements. Consult a counselor in the Student Services Office to determine applicable credit. Portions of AP Test credit may be evaluated by corresponding UCLA course numbers (e.g., French 4). If students take the equiva-
lent UCLA course, unit credit for such duplication is deducted before graduation.

**Graduate Courses.** Undergraduate students who wish to take courses numbered in the 200 series for credit toward the degree must petition for advance approval of the department chair and the dean of the school and must meet the specific qualifications. Courses numbered in the 400 and 500 series may not be applied toward the degree.

**COUNSELING SERVICES**

The School of the Arts and Architecture offers advising, program planning in the major and general education requirements, and individual meetings with school and departmental counselors. For counseling information, contact the Student Services Office, 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 are summa cum laude, magna cum laude, and cum laude. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year determine student eligibility. 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 Libraries, 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://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

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

**DEGREE REQUIREMENTS**

Requirements to fulfill each degree objective vary according to the degree and the department. For complete degree requirements, see Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

**SCHOOL OF DENTISTRY**

No-Hee Park, Dean

UCLA
53-038 Dentistry
Box 951762
Los Angeles, CA 90095-1762

(310) 206-6063
fax: (310) 794-7734
http://uclasod.dent.ucla.edu/index.asp

The UCLA School of Dentistry has a national and international reputation for its teaching, research activities, and public service, which prepare dental students for professional careers dedicated to patient treatment, leadership, and service. The curriculum prepares students for changes in treatment modalities and healthcare delivery systems. From the moment training begins, students actively participate in preventive and clinical dental care and soon make valuable contributions to the clinical health team. Clinical instruction emphasizes the comprehensive care of patients. Stu-
Dentists interact with their colleagues, faculty members, and dental auxiliary personnel in much the same way as they later will interact in a private or group practice. School of Dentistry students may undertake programs designed to meet their special needs; mandatory selections encourage advanced training in an area of particular interest and service learning. In addition to basic and applied research programs within the school, students participate in community service programs such as the Wilson-Jennings-Bloomfield UCLA Venice Dental Center and the Mobile Dental Clinic, the latter in conjunction with the University of Southern California. The graduate programs and resident specialty programs foster new lines of research which lead to better treatment options. An active continuing education program directed by UCLA faculty members provides a variety of hands-on courses for members of the dental profession and their auxiliaries.

DEGREES AND PROGRAMS

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

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

PREDENTAL CURRICULUM

For details on the three-year preental curriculum, see http://career.ucla.edu/GraduateSchool&PreProfessionalServices/Dentistry.asp.

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://uclasod.dent.ucla.edu/index.asp 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; a three-year prosthodontics, periodontics, and orthodontics program; two-year programs in the specialties of dental anesthesiology, endodontics, and orofacial pain and dysfunction; and a 26-month program in pediatric dentistry.

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

SCHOOL OF LAW

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

The technologically advanced, spacious, and comfortable Hugh and Hazel Darling Law Library—replete with natural lighting and views—houses an extensive collection of legal materials. The school's nationally recognized clinical program offers sophisticated courses that help students develop applied lawyering skills, focus on solving client problems, and see in their education at UCLA more of what ultimately will face them as lawyers and policymakers. An entire wing of the Law Building is designed especially for clinical teaching and student practice and facilitates work and study in the ever-expanding clinical curriculum, which includes courses in interviewing, counseling, negotiation, business transactions, criminal and civil trial advocacy, community-based lawyering, environmental law, and poverty law practice. 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. Over 400 law firms and agency interviewers from across the nation come to UCLA annually to hire our students. UCLA graduates (more than 12,900) 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.

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.A.

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.

**Juris Doctor Degree**

**Admission**

Students beginning their professional work are admitted only for Fall Semester. They must have received a bachelor's degree from a university or college of approved standing before beginning work in the school and are required to take the Law School Admission Test (LSAT).

The school seeks to admit students of outstanding intellectual ability who bring a wide range of backgrounds, experiences, and perspectives to the classroom and the legal profession. Through long experience the faculty has concluded that the quality of the education of each student is affected in significant ways by the presence of vital diverse viewpoints. Students of all backgrounds choose to come to UCLA in significant part because of the school's outstanding achievements in creating a highly diverse educational environment.

In evaluating each applicant the school places substantial weight on traditional measures of academic ability, namely grades and LSAT scores. It also recognizes in its evaluation that other factors and attributes contribute greatly to a person's ability to succeed as a law student and lawyer. When assessing academic promise and achievement, the applicant's entire file is considered, including letters of recommendation, whether economic, physical, or other challenges have been overcome, scholarly achievements such as graduate study, awards, or publications, and the rigor of the undergraduate educational program.

In addition, the school considers attributes that may contribute to assembling a diverse class. Special emphasis is placed on socioeconomic disadvantage in the evaluation. Also considered are work experience and career achievement, community or public service, career goals (with particular attention to the likelihood of applicants representing underrepresented communities), significant hardships overcome, evidence of and potential for leadership, language ability, unusual life experiences, and any other factors (except those deemed inadmissible by The Regents or by other applicable law) that indicate the applicant may significantly diversify the student body or make a distinctive contribution to the school or the legal profession. The UCLA School of Law has as one of its central purposes the training of attorneys who attain high levels of professional excellence and integrity and who exercise civic responsibility in myriad ways over long careers.
Detailed information about the academic programs offered by the School of Law, course titles and descriptions, fees, and the semester-system calendar by which it operates are available at http://www.law.ucla.edu.

Residence and Unit Requirements
Candidates for the degree of Juris Doctor must pursue resident law school study for six semesters and successfully complete 87 units. The residence requirements may be satisfied as follows: (1) six semesters in regular session in this school or (2) two semesters in regular session (or equivalent) in a school which 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 hours and may not take more than 16 hours 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 which 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 which 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 in fields of law 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 LL.M. degree (or be enrolled in a program leading to an LL.M. degree). For further information, see http://www.law.ucla.edu/sjd/.

ACADEMIC SPECIALIZATIONS

BUSINESS LAW AND POLICY SPECIALIZATION
More than 60 courses and seminars are offered in the Business Law and Policy specialization. For students who want to be prepared for transactional practice to the highest level, the specialization offers an unparalleled opportunity by providing lawyers who can combine legal analysis with a thorough understanding of the business client's goals and obstacles. In an effort to help students further hone their area of study, the specialization offers four tracks that highlight the program's core strengths: business law, bankruptcy, tax law, and securities regulation.

CRITICAL RACE STUDIES SPECIALIZATION
The UCLA School of Law is the first American law school to offer an advanced curriculum that fosters students' systematic and rigorous study in the area of critical race studies. With many faculty members who have been instrumental in pioneering and advancing critical race theory, the Critical Race Studies specialization is essential to promoting insightful, intelligent public conversation about race relations. It is appropriate for law students who seek advanced study and/or practice in race and the law, critical race theory, civil rights, public policy, and other legal practice areas that are likely to involve working with racial minority clients and communities or working to combat racial inequality. The course of study emphasizes mastery of five areas: (1) history (centered on the Constitution but focused as well on a variety of other legal documents and experiences), (2) theory (critical race theory, jurisprudence, and theoretical advances outside the legal academy), (3) comparative subordination (understanding of the multiracial nature of American race relations, as well as how racial inequality is affected by discrimination based on gender, sexual orientation, and disability), (4) doctrine (case and statutory law and its interpretation), and (5) practice (including legal practice, community service, and lawyers' use of social science inquiries and methods).
ENTERTAINMENT AND MEDIA LAW AND POLICY SPECIALIZATION

Los Angeles is the center of the entertainment industry, and recognizing the unique ability to offer a specific program in that arena, the school launched the Entertainment and Media Law and Policy 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 and media law and policy.

LAW AND PHILOSOPHY SPECIALIZATION

The new 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 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.

PROGRAMS AND CENTERS

BUSINESS LAW AND POLICY PROGRAM

The Business Law and Policy Program is comprised of some of the most prominent scholars in areas such as corporate governance, tax law, and bankruptcy. The innovative research of the faculty members influences the national legal and policy debate over critical issues affecting the regulation and governance of business. Built on the incredible work and scholarship of the faculty, the program offers students a unique blend of policy-based and practice-oriented courses designed to prepare them to be leaders in the new economy. Each year the program hosts timely conferences and scholarly events on matters that facilitate and advance the public discussion.

CLINICAL PROGRAM

With 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 startup 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. Only five years old, 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.

EMPIRICAL RESEARCH GROUP

The UCLA School of Law is one of the only law schools in the country to provide its faculty members with the support of trained statisticians to further empirical research. The Empirical Research Group (ERG) is a methodology-oriented research center that specializes in the design and execution of quantitative research in law and public policy, and enables faculty members to include robust empirical analysis in their legal scholarship. Articles and reports published by faculty members working with ERG have covered topics as diverse as bankruptcy, legal aid, pollution prevention, tax policy, gay rights, the living wage, and campaign finance disclosure. Articles, reports, working papers, and supporting data are posted on the ERG website. In addition to faculty scholarship, ERG trains law students as research assistants in empirical methods such as sampling, data collection, and statistics, and works closely with law students who conduct their own empirical research. ERG has received or facilitated more than $2.5 million in foundation support for specific projects, including a grant from the Pew Charitable Trusts to study state campaign finance disclosure.

ENTERTAINMENT AND MEDIA LAW AND POLICY PROGRAM

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

ENVIRONMENTAL LAW CENTER

The Environmental Law Center houses the school’s varied and interdisciplinary work related to environmental law and policy. It includes the Frank G. Wells Environmental Law Clinic, which offers excellent opportunities for students to obtain hands-on experience in environmental law, 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. In January 2008, the School of Law received a commitment to establish the Emmett Center on Climate Change and the Environment, which will work hand in hand with the Environmental Law Center. The Emmett Center will be dedicated to the study, research, and teaching of knowledge related to climate change and the environment.

EVAN FRANKEL ENVIRONMENTAL LAW AND POLICY PROGRAM

The Evan Frankel Environmental Law and Policy Program fosters informed analysis of timely and important issues involving governance and regulation in environmental policy. It supports ongoing work on public policy issues related to environmental governance and regulation through research publications, the timely placement of op-eds in influential mainstream publications, and by bringing together stakeholders and policymakers to work toward solutions to critical environmental problems. The program has recently worked on issues including catastrophe prevention and response, enforcing the California Endangered Species Act, pollution prevention mandates, addressing environmental impacts related to liquefied natural gas, and studying air pollution in microenvironments. Through its interdepartmental work with the UCLA Institute of the Environment, the program also participates in publishing the annual Environmental Report Card.

EXTERN PROGRAM

The school has one of the most extensive, best established, and most diversified student extern programs in the nation. Under supervision of experienced public interest and governmental lawyers and federal judges, students perform legal work in government offices, public interest law firms, nonprofit agencies, and the chambers of federal judges.

In the semester-long program, students develop legal skills in supervised settings and acquire perspectives about the lawyering process or the judicial decision-making process. They also participate in a faculty-led, law school-based seminar in which they reflect systematically in a classroom setting on their experiences in the placement. Students regularly report that the program is an excellent educational experience.

GLOBALIZATION AND LABOR STANDARDS PROGRAM

For students interested in labor and employment issues, UCLA has a Globalization and Labor Standards (GALS) Program that maintains a web-based library of
law review articles on all issues of international labor rights and global labor standards. GALS also publishes a monthly newsletter, organizes conferences, and hosts regular speaker programs. Student contributors are involved in every stage of the project.

**INTERNATIONAL AND COMPARATIVE LAW PROGRAM**

The International and Comparative Law Program is one of the best in the nation. Six 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.

**LAW AND PHILOSOPHY PROGRAM**

This year the school inaugurates an exciting new specialization in Law and Philosophy to take advantage of the faculty’s strength and depth in the subject and the school’s close relationship to the Department of Philosophy. The program is designed for students who, in addition to their other legal interests, want to supplement their studies by exploring more theoretical issues concerning the philosophical foundations of law. The program 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.

**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.

**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, pro bono programs, an externship program, extensive public interest advising and informational programming, and numerous student organizations. The Office of Public Interest Programs, the hub of the school’s public interest efforts, hosts a variety of career-oriented programs and relevant public interest forums and events in which students, faculty, alumni, and the broader community participate. The office also hosts the annual Southern California Public Interest Career Day, which attracts more than 110 public service employers and some 1,000 students from around the region. 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.

**RICHARD S. ZIMAN CENTER FOR REAL ESTATE**

Reflecting a growing interdisciplinary focus at UCLA, the School of Law formed a partnership in 2005 with the John E. Anderson Graduate School of Management to create the Richard S. Ziman Center for Real Estate. The center is firmly grounded in the scholarship and teaching missions of both schools and offers practical application principles that help real estate industry professionals, public officials, and business people alike make critical policy and business decisions. The center truly bridges the divide between research and practice and offers students a full range of coursework that provides a holistic view of real estate issues.

**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**

Courtney H. Lyder, Dean

UCLA
2-137 Factor Building
Box 951702
Los Angeles, CA 90095-1702

(310) 825-7181
fax: (310) 267-0330
http://www.nursing.ucla.edu

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 generic bachelor’s level, nurses are prepared as generalists with special skills in primary, secondary, and tertiary prevention and care within a population-based
context, leadership, and evidence-based practice. A program designed for associate degree or diploma nurses provides an opportunity to learn about community-based nursing care while providing a foundation for entering the advanced practice nurse master's degree program. At the master's level, nurses are prepared as generalists in hospital-based care or for advanced nursing practice as nurse practitioners, clinical specialists, or administrators in a variety of settings and specialized areas of healthcare. The Ph.D. program prepares scholars who do original research, generate new theories, and build the scientific basis for professional nursing practice. Research is both basic and applied.

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 a bachelor's degree in another discipline.

All School of Nursing bachelor's and master's programs have Board of Registered Nursing approval. In 2001 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 with the nurse and other health professionals in their care.

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 educative, administrative, and research arenas. While students have the right and responsibility to participate in their own learning, faculty members have the right and responsibility to structure the teaching/learning environment to facilitate learning. Individual academic counseling and a variety of one-on-one, small-group, and interactive learning formats assist students to meet program and individual learning goals.

**UNDERGRADUATE ADMISSION**

The School of Nursing admits new undergraduate students in Fall Quarter only. B.S. (Generic/Prelicensure) students are admitted at the freshman and junior levels, while B.S. (R.N. to B.S./Postlicensure) students are admitted with upper division standing and start their program courses in the summer prior to Fall Quarter entry. 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 the courses for a letter grade.

**SCHOOL REQUIREMENTS**

The School of Nursing has six requirements that must be satisfied for the award of the degree: unit, scholarship, academic residence, writing, quantitative reasoning, and general education.

**UNIT REQUIREMENT**

Students in the Nursing B.S. (Generic/Prelicensure) program must complete with a passing grade a minimum of 180 units. At least 83 of the 180 units must be upper division courses numbered 100 through 199. A maximum of 216 units is permitted. Students with advanced placement or international baccalaureate credit may exceed the unit maximum by the amount of that credit.

Students in the Nursing B.S. (R.N. to B.S./Postlicensure) program must complete with a passing grade a minimum of 180 units. At least 63 of the 180 units must be upper division courses numbered 100 through 199.

**SCHOLARSHIP REQUIREMENT**

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

**ACADEMIC RESIDENCE REQUIREMENT**

Students are in residence while enrolled and attending classes at UCLA as a major in the School of Nursing. Students in the Nursing B.S. (Generic/Prelicensure) program must complete 77 of the last 97 nursing course units in residence.

Students in the Nursing B.S. (R.N. to B.S./Postlicensure) program must complete 76 of the last 85 units in residence.

**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.

<table>
<thead>
<tr>
<th>School of Nursing Structure of a Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>University Requirements</strong></td>
</tr>
<tr>
<td>1. Entry-Level Writing or English as a</td>
</tr>
<tr>
<td>2. American History and Institutions</td>
</tr>
<tr>
<td><strong>School Requirements</strong></td>
</tr>
<tr>
<td>1. Unit</td>
</tr>
<tr>
<td>2. Scholarship</td>
</tr>
<tr>
<td>3. Academic Residence</td>
</tr>
<tr>
<td>4. Writing Requirement</td>
</tr>
<tr>
<td>5. Quantitative Reasoning</td>
</tr>
<tr>
<td>6. General Education</td>
</tr>
<tr>
<td>- Foundations of Arts and Humanities</td>
</tr>
<tr>
<td>- Foundations of Society and Culture</td>
</tr>
<tr>
<td>- Foundations of Scientific Inquiry</td>
</tr>
<tr>
<td><strong>Major Requirements</strong></td>
</tr>
<tr>
<td>1. Preparation for the Major</td>
</tr>
<tr>
<td>2. The Major</td>
</tr>
<tr>
<td>Courses that do not satisfy the University, school, or department requirements are referred to as electives and are used to meet the minimum unit requirement for graduation.</td>
</tr>
</tbody>
</table>
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 a letter grade, 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) within the first three terms of enrollment.

The Writing I requirement may also be satisfied by scoring 4 or 5 on one of the College Board Advanced Placement Tests in English or a combination of a score of 720 or higher on the SAT Reasoning Test Writing and Language Placement Tests, or 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 35 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 is satisfied by selecting a course from a faculty-approved list of courses published in the *Schedule of Classes* at [http://www.registrar.ucla.edu/soc/writing.htm](http://www.registrar.ucla.edu/soc/writing.htm) and available in the Student Affairs Office. The course must be completed with a grade of C or better (C– or a Passed grade is not acceptable) within the first six terms of enrollment. Most Writing II courses may also be applied toward general education (GE) requirements.

Beginning Fall Quarter 2008 Nursing B.S. (Generic/Prelicensure) transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum will have satisfied the Writing I and Writing II requirements.

Nursing B.S. (R.N. to B.S./Postlicensure) transfer students must complete a second English composition course with a grade of C or better (C– grade is not acceptable) to fulfill the Writing II requirement.

**QUANTITATIVE REASONING REQUIREMENT**

Nursing B.S. (Generic/Prelicensure) students must demonstrate basic skills in quantitative reasoning. The requirement can be satisfied by achieving an SAT Reasoning Test Mathematics Section score of 600 or higher, an SAT Subject Test in Mathematics score of 550 or higher, or by completing a college-level mathematics course with a grade of C or better (C– grade is not acceptable).

Nursing B.S. (R.N. to B.S./Postlicensure) students must take calculus to fulfill the quantitative reasoning requirement if the required chemistry courses are completed at UCLA.

**GENERAL EDUCATION REQUIREMENTS**

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

This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.

**Requirements for Generic/Prelicensure Students**

**FOUNDATIONS OF KNOWLEDGE**

General education courses are grouped into three foundational areas: Foundations of the Arts and Humanities, Foundations of Society and Culture, and Foundations of Scientific Inquiry.

Ten courses (48 units minimum) are required. A course taken to meet the Writing II requirement may also be applied toward a GE requirement. Preparation for the major courses may overlap with the foundation courses.

Students must meet with a counselor 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

**General Education Requirements**

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>1 Course</th>
<th>2 Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literary and Cultural Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Philosophical and Linguistic Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Visual and Performance Arts Analysis and Practice</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Foundations of the Arts and Humanities</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Historical Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Social Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Third course from either subgroup</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Foundations of Society and Culture</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Life Sciences</td>
<td>2 Courses</td>
<td></td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>2 Courses</td>
<td></td>
</tr>
<tr>
<td>Foundations of Scientific Inquiry</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Total GE</td>
<td>10 Courses/48 Units Minimum</td>
<td></td>
</tr>
</tbody>
</table>
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 one 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/.

Intersegmental General Education Transfer Curriculum

Beginning Fall Quarter 2008 Nursing B.S. (Generic/Prelicensure) transfer students from California community colleges must fulfill UCLA lower division GE requirements by completing the Intersegmental General Education Transfer Curriculum (IGETC) prior to transfer. The curriculum consists of a series of subject areas and types of courses that have been agreed on by the University of California and the California community colleges. Because of course sequencing and the rigor of the program, students must fulfill the general education requirements prior to transfer.

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

Requirements for R.N. to B.S./Postlicensure Students

Completion of the following prenursing/general education courses with grades of C or better (C– grades are not acceptable) prior to entering UCLA: human anatomy (one course), sociocultural anthropology (one course), humanities (one or more courses), introductory or general microbiology with laboratory (one course), introductory physics (one course or one year of high school physics with laboratory with a grade of B or better), human physiology (one course), introductory psychology (one course), introductory sociology (one course).

In addition, students are required to complete a block of 30 units of credit by examination administered by the Excelsior College Examination Service in Adult Nursing, Fundamentals of Nursing, Maternal and Child Nursing-AD, and Psychiatric/Mental Health Nursing (this lower division credit applies to the Nursing major only).

Major Requirements

The School of Nursing sets two types of requirements that must be satisfied for the award of the degree: (1) Preparation for the Major and (2) the Major. See the Curricula and Courses section of this catalog for details.

Policies and Regulations

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

Student Responsibility

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

Study List

The presentation of Study Lists by the students and their acceptance by the school evidences an obligation on the part of the students to faithfully perform the designated work to the best of their ability. Withdrawal from, or neglect of, any course entered on the Study List, or a change in program without the formal permission of the assistant dean of the school renders students liable to enforced withdrawal from the University or other appropriate disciplinary action.

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

Nursing B.S. (R.N. to B.S./Postlicensure) students may not enroll in more than four courses per term unless a petition is approved in advance by the assistant dean of Student Affairs.
MINIMUM PROGRESS

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

CHANGING A MAJOR

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

CREDIT LIMITATIONS

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

Advanced Placement Tests. Credit earned through the College Board Advanced Placement (AP) Tests may be applied toward the general education requirements. Portions of AP Test credit may be evaluated by corresponding UCLA course numbers (e.g., History 1C). If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation.

COUNSELING SERVICES

The School of Nursing gives direction and provides information to interested potential applicants to the B.S. programs through admissions information sessions. The schedule for these sessions, program information, and applications are available at http://www.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 Tuesday through Thursday, or contact the Student Affairs Office via e-mail at sonsaff@sonnet.ucla.edu.

On entry to the junior year, students are assigned a faculty adviser to aid in planning their total program. Advisers continue meeting with students each term to evaluate progress, to identify academic and personal needs and match them with available school and University resources, to confirm University and course requirements, and to maximize the students’ abilities to reach educational and professional goals. Due to the heavy course load that the school’s programs require, students are advised against working full time.

HONORS

School of Nursing undergraduate students who achieve scholastic distinction may qualify for the following honors:

DEAN’S HONORS

To receive Dean’s Honors in the School of Nursing, undergraduate students must have at least 12 graded units per term with a grade-point average of 3.75. The honor is posted on the transcript for the appropriate term. Students are not eligible for Dean’s Honors in any given term if they receive an Incomplete or a Not Passed (NP) grade, change a grade, or repeat a course.

LATIN HONORS

Latin Honors are awarded at graduation to undergraduate students with superior grade-point averages. The levels of honors and the requirements for each level are: summa cum laude, an overall average of 3.872; magna cum laude, 3.791; cum laude, 3.654. 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 specialties include acute care, family, gerontology, nursing administration, occupational and environmental health, oncology, and pediatrics.

The Ph.D. program prepares scholars who do original research, generate new theories, and build the scientific basis for professional nursing practice. Research is both basic and applied.

ADMISSION

Detailed information about the graduate academic programs offered by the School of Nursing is included in the UCLA School of Nursing Announcement, available from the Student Affairs Office, 2-137 Factor Building.

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

DEGREE REQUIREMENTS

For complete degree requirements, see Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.
The School of Public Affairs educates at the highest level of excellence the next generation of practitioners and academic researchers in the problem-solving professions—public policy, social welfare, and urban planning. The school provides relevant lifelong education in the form of executive education, career training, technical assistance, and public pedagogy. The school also produces outstanding basic and applied policy and practice research and provides balanced and timely policy advice to policymakers in the public, private, and nonprofit sectors.

DEPARTMENTS

The school combines three academic departments—Public Policy, Social Welfare, and Urban Planning—and faculty members from such diverse disciplines as economics, geography, history, law, management, and political science. The school trains policy professionals, planners, and social workers for public, private, and nongovernment service, conducts research on significant regional, national, and international issues with a strong interdisciplinary and cross-cultural focus, and acts as a convener and catalyst for public dialogue, engaging people locally, nationally, and internationally.

DEGREES AND PROGRAMS

The school offers the following degrees, in addition to undergraduate minors in Public Affairs and in Urban and Regional Studies: Public Policy (M.P.P.) Social Welfare (M.S.W., Ph.D.) Urban Planning (M.A., Ph.D.)

Concurrent Degree Programs


Obtain brochures about the school’s programs from the department offices, 3357 Public Affairs Building. The school also offers a wide array of undergraduate courses in public policy, social welfare, and urban planning. Enrollment in these courses is open to all undergraduate students.

ADMISSION

In addition to requiring that applicants hold a bachelor’s degree from an accredited U.S. institution or an equivalent degree or professional title from an international institution, each department in the school has limitations and additional requirements. Individuals interested in concurrent degrees must be admitted to both programs. Detailed information can be found in Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

DEGREE REQUIREMENTS

Requirements to fulfill each degree objective vary according to the degree and the department. For complete degree requirements, see Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

RESEARCH CENTERS

The school houses a number of research centers where faculty members from across the campus pursue issues of mutual interest. In addition to their focus on practical policy problems, the research centers also provide opportunities for student financial aid in the form of research assistant positions, grants, and fellowships.

CENTER FOR CIVIL SOCIETY

The Center for Civil Society (CCS) is the focal point for the school’s programs and activities in nonprofit leadership and management, community organizations and advocacy, international nongovernmental organizations, and philanthropy. The center coordinates teaching of nonprofit and civil society aspects, conducts research, convenes meetings and seminars, offers executive education, and contributes to a policy dialogue about the current and future role of nonprofit organizations, philanthropy, and civil society. See http://www.spa.ucla.edu/ccs/.
The increasing number of elderly and their families force us to confront the roles of government and the private sector in serving them. Rigorous policy research to governments seeking to make more empirically informed policy decisions. See http://www.healthpolicy.ucla.edu.

**Center for Health Policy Research**

Jointly sponsored by the School of Public Affairs and the School of Public Health, the Center for Health Policy Research conducts research on the national, state, and local levels, provides testimony, and conducts seminars and forums for government leaders and policymakers both public and private. Research activities emphasize a community- and population-based perspective to improve health outcomes. Current research areas and programs touch on such issues as access to health services, managed care, healthcare reform, women's health, disease prevention policy, cost issues, and the health policy-making process itself. See http://www.healthpolicy.ucla.edu.

**Center for International Science, Technology, and Cultural Policy**

The Center for International Science, Technology, and Cultural Policy facilitates interdisciplinary research on the influences of government policy on the development of the arts and sciences and their commercial and noncommercial expressions, including technology, the media, fashion/design, and other uses of the nation's knowledge capital. The center's mission is to improve the basis for policy decisions by conducting and supporting solid empirical research designed to examine alternative policy models, including the comparison of systems across countries as well as across substantive areas within the same country. Rigorous policy research on these topics requires discipline-based, but also interdisciplinary, research teams that are informed by social science theory. The center promotes dissemination of policy research to governments seeking to make more empirically informed policy decisions. See http://www.spa.ucla.edu/cistcp/.

**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.spa.ucla.edu/cpra/.

**Institute of Transportation Studies**

The UCLA Institute of Transportation Studies (ITS), one of the leading transportation policy research centers in the U.S., was created in 1993 to conduct research and provide professional education on the social, economic, environmental, and cultural aspects of transportation policy. Each year ITS faculty members, students, and research staff collaborate on a wide array of transportation policy and planning studies, ranging from an analysis of the travel trends and transportation needs of immigrants and low-income workers to the testing and evaluation of innovative fare programs to increase public transit use. See http://www.its.ucla.edu.

**Ralph and Goldy Lewis Center for Regional Policy Studies**

The Lewis Center for Regional Policy Studies was established in 1990 with a $5-million endowment from Ralph and Goldy Lewis to promote the multidisciplinary study, understanding, and solution of regional policy issues, with special reference to Southern California. Research projects include topics such as welfare reform, immigration, the environment, health insurance, labor and employment, and transportation. See http://lewis.spa.ucla.edu/index5.cfm.

**UCLA Policy Forum**

The UCLA Policy Forum bridges the academic mission of the school with the worlds of government, nonprofits, and business—in the Los Angeles region, nationally, and internationally. It serves as the school's principal outreach program by sponsoring speakers, events, and visiting fellows. Guest speakers have included former U.S. Vice President Al Gore, U.S. Senator Barbara Boxer, Nobel laureate Joseph Stiglitz, and Jack Kemp, former U.S. Congressman and former U.S. Secretary of Housing and Urban Development. The forum also provides planning and analytical services customized to meet the needs of public agencies, nonprofit organizations, and private firms. Services include data analysis and presentation, mapping analysis, website development, information system design, training, and conferences. The team brings to its projects an understanding of the underlying policy and planning issues that affect Los Angeles and Southern California with long-standing commitment to the topics of economic development, housing, homelessness, the environment, and community development. Key projects include Neighborhood Knowledge Los Angeles (NKLA), Living Independently in Los Angeles Partnership Project with the Westside Center for Independent Living (LILA), and Neighborhood Knowledge California (NKCA). See http://www.spa.ucla.edu/policyforum/.
This is an exciting time to study public health. The field is experiencing an unprecedented level of attention as the nation continues to better prepare itself for a variety of threats to its health and security. As a result, many new and exciting opportunities exist for students, faculty members, and graduates.

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

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

The UCLA School of Public Health is among the top public health schools in the country and offers superior public health training and real-world experience. The school’s classrooms and laboratories are under the same roof as the UCLA medical, dental, and nursing schools and just steps away from its science facilities and schools of engineering, law, management, and public affairs.

The school is enriched by its location in Los Angeles, where a melting pot of cultures, industries, environmental situations, and urban issues provides unparalleled opportunities for research, teaching, and service. Its location also provides students and faculty members with a unique opportunity to be involved with cutting-edge healthcare issues, as many of the health system changes have origins in Southern California.

School of Public Health students can look forward to working with acclaimed public health experts and innovators. Among its 200 faculty members are 12 members of the prestigious Institute of Medicine, three past presidents of the American Public Health Association, and two past and current presidents of the International Epidemiological Association.

The school’s 700 students are among the most talented and promising in the nation and are a culturally diverse group—one of the most diverse of all schools of public health—representing more than 35 countries and nearly every region of the U.S. Graduates continue to make an impressive impact on the field and can be found at the forefront of all major public health efforts.

DEPARTMENTS

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

See the Curricula and Courses section for further information on each department.

DEGREES AND PROGRAMS

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

- Biostatistics (M.S., Ph.D.)
- Environmental Health Sciences (M.S., Ph.D.)
- Environmental Science and Engineering (D.Env.)
- Epidemiology (M.S., Ph.D.)
- Health Economics (Ph.D.)
- Health Services (M.S., Ph.D.)
- Molecular Toxicology (Ph.D.)
- Preventive Medicine and Public Health (M.S.)
- Public Health (M.P.H., M.S., Dr.P.H., Ph.D.)

The M.S. and Ph.D. degrees in Public Health are offered through the Department of Community Health Sciences. New students are not being admitted to the M.S. in Preventive Medicine and Public Health at this time.

Articulated Degree Programs

The school offers three articulated degree programs:

- Public Health M.P.H./African Studies M.A.
- Public Health M.P.H./Latin American Studies M.A.
- Public Health M.P.H./Medicine M.D.
**Concurrent Degree Programs**

The school offers five concurrent degree programs:
- 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./Social Welfare M.S.W.

**PREVENTIVE MEDICINE RESIDENCY PROGRAM**

The School of Public Health offers an accredited residency in public health and general preventive medicine, a specialty recognized by the American Board of Preventive Medicine. The residency is designed to prepare qualified physicians for leadership roles in preventive medicine and public health practice, research, and teaching. The program is based on the academic strength of the School of Public Health in conjunction with the Geffen School of Medicine and outstanding UCLA-affiliated agencies such as the Los Angeles County Department of Health Services. For further information, call (310) 206-8531. See http://www.ph.ucla.edu/pmr/.

**ADMISSION**

Admission criteria established by the UCLA Graduate Division require a bachelor’s degree from a regionally accredited institution in standard and content to a bachelor’s degree from the University of California. A scholastic average of B (3.0 on a 4.0 scale) or better is required—or its equivalent if the letter grade system is not used—for the last 60 semester units or last 90 quarter units of undergraduate study and in any postbaccalaureate study. Further requirements for international students are explained in the Graduate Study section. See http://www.gdnet.ucla.edu/gasaa/admissions/admisinfo.html.

Applicants must also submit the application to the centralized School of Public Health Application Service (SOPHAS) at http://www.sophas.org. For additional admission requirements, see http://www.ph.ucla.edu/app_checklist.html.

**DEGREE REQUIREMENTS**

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

**RESEARCH CENTERS**

The field of public health addresses a wide range of issues, making it a natural for interdisciplinary collaboration. UCLA faculty members and students reach beyond traditional academic boundaries to promote cooperative exchange across disciplines. The following is a list of interdisciplinary centers sponsored by or associated with the UCLA School of Public Health.

**CENTER FOR ADOLESCENT HEALTH PROMOTION**

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

The center’s multidisciplinary faculty and staff members represent the fields of public health, medicine, social and clinical psychology, sociology, economics, political science, anthropology, education, sampling, statistics, and survey design. It is innovative in its approach to community service, partnering with ethnically and economically diverse communities in Los Angeles County to identify opportunities for it to provide technical support to community groups for program implementation and assessment. In addition, the center has partnerships with the Los Angeles Unified School District, Los Angeles County Department of Health Services, and other local groups. See http://www.rand.org/health/adol.html.

**CENTER FOR ENVIRONMENTAL GENOMICS**

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

**CENTER FOR HEALTH POLICY RESEARCH**

The Center for Health Policy Research was established in 1994 to apply the expertise of UCLA faculty members and researchers to meet national, state, and local community needs for health policy-related research and information and to accomplish three missions: (1) to conduct research on national, state, and local health policy issues, (2) to provide public service to policymakers and community leaders, and (3) to offer educational opportunities for graduate students and postdoctoral fellows.

Sponsored by the School of Public Health and the 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.

**CENTER FOR HEALTH PROMOTION AND DISEASE PREVENTION**

Established in July 1991, the Center for Health Promotion and Disease Prevention is a joint endeavor of the School of Public Health and the David Geffen
School of Medicine. Faculty members within the Geffen School of Medicine are involved in clinical activities and teaching, especially in the course on doctoring. Within the School of Public Health, they are engaged in teaching and research activities that are wide-ranging and involve studies on the quality of life for men with prostate cancer, manpower requirements for the care of those with HIV infections, community interventions for asthma control in Latino children, and systems for smoking cessation used by physicians caring for Latino patients. The center is also responsible for overseeing the Preventive Medicine Residency Program. See http://www.ph.ucla.edu/pmr/research.htm.

CENTER FOR HEALTHIER CHILDREN, FAMILIES, AND COMMUNITIES

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

Through a unique interdisciplinary partnership between UCLA departments, 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://healthychild.ucla.edu.

CENTER FOR HUMAN NUTRITION

Established in 1996, the Center for Human Nutrition is a joint endeavor of the School of Public Health and the David 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 OCCUPATIONAL AND ENVIRONMENTAL HEALTH

The California State Legislature mandated that the Center for Occupational and Environmental Health (COEH) be formed in 1978, when a group of chemical workers became sterile from exposure to the pesticide DBCP, a known carcinogen and reproductive toxin. With branches in the north and south of the state, COEH trains occupational and environmental health professionals and scientists, conducts research, and provides services through consultation, education, and outreach. The centers constitute the first state-supported institutions to develop new occupational and environmental health leadership in the U.S.

The COEH branch at UCLA is housed in the Center for the Health Sciences and involves the Schools of Public Health, Medicine, and Nursing. Specific COEH programs within the School of Public Health include environmental chemistry, occupational/environmental epidemiology, occupational/environmental medicine, occupational ergonomics, occupational hygiene, toxicology, gene-environment interactions, psychosocial factors in the work environment, occupational health education, and pollution prevention. See http://www.coeh.ucla.edu.

CENTER FOR PUBLIC HEALTH AND DISASTERS

The Center for Public Health and Disasters was established in 1997 to address the critical issues faced when a disaster impacts a community. The center promotes interdisciplinary efforts to reduce the health impacts of domestic, international, natural, and human-induced disasters. It facilitates dialog between public health and medicine, engineering, physical and social sciences, and emergency management. This unique philosophy is applied to the education and training of practitioners and researchers, collaborative interdisciplinary research, and service to the community. The multidisciplinary center staff and participating faculty members have backgrounds that include emergency medicine, environmental health sciences, epidemiology, gerontology, health services, social work, sociology, urban planning, and public health.

The center is one of 15 Academic Centers for Public Health Preparedness funded by the Centers for Disease Control. The goal of these national centers is to improve competencies of front-line workers in public health to respond to public health threats. See http://www.cphd.ucla.edu.

CENTER TO ELIMINATE HEALTH DISPARITIES

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 Center to Eliminate Health Disparities (CEHD) 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. CEHD is a collaborative center without walls that includes associates from academia, government, foundations, and private/nonprofit organizations. See http://ph.ucla.edu/cehd/.

DIVISION OF CANCER PREVENTION AND CONTROL CENTER RESEARCH

The Division of Cancer Prevention and Control Center Research (DCPCR) is a joint program of the School of Public Health and the David Geffen School of Medicine’s Jonsson Comprehensive Cancer Center. Since its inception in 1976, the DCPCR has been a recognized center of cancer prevention and control research at UCLA, throughout the Los Angeles community, and nationally. The DCPCR conducts rigorous peer-reviewed research in two major program areas—the Healthy and At-Risk Populations Program (http://www.ph.ucla.edu/hs/healthy.html) and the Patients and Survivors Program (http://www.ph.ucla.edu/hs/patients.html).

The Healthy and At-Risk Populations Program focuses on research in primary prevention and screening/early detection among healthy populations and persons at increased risk for developing cancer. The program’s research portfolio includes cancer epidemiology, gene-environment interaction, tobacco control, nutrition and exercise, and breast, cervix, prostate, and colon cancer screenings, as well as risk counseling and genetic testing of high-risk populations. The Patients and Survivors Program has as its major goal the reduction in avoidable morbidity and mortality among adult and pediatric patients with cancer and long-term survivors of cancer. See http://www.ph.ucla.edu/hs/prev_control.html or http://www.cancer.mednet.ucla.edu/research.

SOUTHERN CALIFORNIA ENVIRONMENTAL HEALTH SCIENCES CENTER

The Southern California Environmental Health Sciences Center (SCEHSC) was established through funding from the National Institute of Environmental Health Sciences (NIEHS). Researchers and professionals from UCLA and the University of Southern California have collaborated to create an interdisciplinary approach to the study and advancement of research in environmental health. As one of the newest of 19 centers across the nation, the SCEHSC primarily focuses on using epidemiologic methods to study effects of the environment on human health, especially with regard to the multiethnic populations of California and the Pacific Rim. The SCEHSC is organized into an administrative core, five research cores, and four service cores, with the overall goal to understand how environmental factors affect health and how personal factors modify response. Research cores include exposure assessment, respiratory effects, childhood cancer, adult cancer, and statistical methods, while the service cores include analytical chemistry, molecular biology, biological sample processing, and biostatistics. See http://hydra.usc.edu/scehsc/default.asp.

SOUTHERN CALIFORNIA INJURY PREVENTION RESEARCH CENTER

Injuries kill more people under the age of 45 than all other causes of death combined. The Southern California Injury Prevention Research Center (SCIPRC) is one of 10 centers in the U.S. that focus on the problem of intentional (homicide, suicide, abuse) and unintentional (motor vehicle crash, drowning, falls) injuries through three phases of injury control—prevention, acute care, and rehabilitation—addressed through its research, training, and community service components.

The theme of SCIPRC is to research intentional and unintentional injuries among disadvantaged persons and other underserved populations. Highly focused, multidisciplinary community-based research projects are undertaken in collaboration with professionals from public health, medicine, the social sciences, law, and biomechanics affiliated with UCLA, the University of Southern California, Harbor-UCLA Medical Center, Sharp Memorial Hospital, Rancho Los Amigos Medical Center, California State University (Los Angeles), the Los Angeles County Department of Health Services, the Los Angeles County Department of the Coroner, the California State Department of Health Services, the California Office of Traffic Safety, Cal/OSHA, and the California State Coroners’ Association. See http://www.ph.ucla.edu/sciprc/.

SOUTHERN CALIFORNIA NIOSH EDUCATION AND RESEARCH CENTER

The Southern California NIOSH Education and Research Center is one of 16 multidisciplinary centers in the U.S. supported by the National Institute for Occupational Safety and Health for education and research in the field of occupational health. The center is administratively housed in the Department of Environmental Health Sciences and supports academic programs in occupational medicine at UCLA and UCI, occupational health nursing, and industrial hygiene at UCLA.

For these programs the center provides student support (fees and stipends for U.S. citizens or permanent residents) and infrastructure support. The center supports approximately 40 graduate students in the field of occupational health. It also supports a continuing education and outreach program, hazardous substances training for hazardous waste workers and industrial hygiene students, and a Pilot Project Research Training Program for ERC trainees. The continuing education program is primarily for professionals in the occupa-
The Southern California Particle Center and Supersite (SCPCS) was established in 1999 through funding from the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (ARB) to study the nature and health effects of airborne particulate matter (PM). The SCPCS is one of five particulate research centers awarded grants as part of an EPA effort to learn more about the health problems caused by exposure to particle pollution. Based in the School of Public Health and the Institute of the Environment, the center includes faculty members from throughout UCLA, as well as researchers from the University of Southern California, University of California campuses at Riverside and Irvine, California Institute of Technology, and Rancho Los Amigos Medical Center. The major objective of the SCPCS is to identify and conduct the highest priority research for PM to ensure protection of the public health. The center seeks to better determine the sources of particulate pollution, probe the chemical nature of particles, and investigate the health effects of breathing particulates. The SCPCS has created a structure to ensure integration of research and to create a research dynamic where findings facilitate new research that deepens understanding of the mechanisms of particle-related toxicity. See http://www.scpcs.ucla.edu.

SCHOOL OF THEATER, FILM, AND TELEVISION

Robert Rosen, Dean

UCLA
102 East Melnitz Building
Box 951622
Los Angeles, CA 90095-1622
(310) 825-5761
fax: (310) 825-3383
e-mail: info@tft.ucla.edu
http://www.tft.ucla.edu

The School of Theater, Film, and Television consists of the Department of Theater and the Department of Film, Television, and Digital Media, recognized national centers for higher education in production and performance as well as history, theory, and criticism.

Whether exploring the ancient and sacred roots of theater or the latest secular rituals enacted by popular film, creating a dramatic character for the bare stage or a dramatic narrative on screen, writing scripts or scholarly articles, or making digital movies or designing websites, all students in the school study both the aesthetics and cultural significance of theater, film, and television.

Through an intensive, multidiscipline curriculum, the school defines the inherent differences of theater, film, television, and new media, affirms their similarities, and encourages their interaction. As expressive art forms, modes of communication, and cultural interventions, theater, film and television, and digital media have in common the ability and power to reflect and shape our perception of a complex, diverse, and ever-changing world. We believe—as artists and scholars—that we have an obligation to reflect on this power and to use it responsibly.

Situated in the diverse and culturally rich environment of Los Angeles and drawing on the many resources of the campus at large, including UCLA Live, Geffen Playhouse, and UCLA Film and Television Archive, the school provides the ideal setting for students to engage in the study and practice of art forms essential to a healthy and dynamic society.

DEPARTMENTS AND PROGRAMS

The Department of Theater and the Department of Film, Television, and Digital Media are essential components of the rich intellectual, cultural, and professional life of UCLA. Depending on the degree involved, the school’s programs are either strongly professional in nature or oriented toward advanced scholarly study and research in an atmosphere that recognizes and often draws on studio practice.

Students in undergraduate courses receive a broadly based, liberal education within the context of either theater or film and television.

The Master of Fine Arts degree programs prepare talented and highly motivated students for careers in the worlds of theater, film, television, and digital production. The M.A. and Ph.D. programs engage students in the critical study and research of these media, including their history, aesthetics, and theory, and prepare students for advanced research within the context of college and university teaching, as well as for writing and research in a variety of media-related professions.

In the Department of Theater, approximately 300 undergraduate and 100 graduate students interact with over 40 faculty members, outstanding guests of national and international standing, and a professional staff of 35 in an exciting artistic community of theater production and study. The theater and performance studies program offers C.Phil. and Ph.D. degrees for the advanced scholarly study of theater and performance. Resources include the four theaters of the Macgowan Hall complex, with the latest technologies needed for the creation, control, and integration of scenery, lighting, and sound. Specializations in the Master of Fine Arts program include acting, directing, playwriting, and design.

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 County Peace Officer’s Association, and the American Federation of Television and Radio Artists, Local 8.

The School of Theater, Film, and Television is recognized for education in production and performance as well as history, theory, and criticism of both established and new digital media.
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.)
- 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 undergraduates must satisfy in order to graduate: (1) Entry-Level Writing or English as a Second Language and (2) American History and Institutions. See Degree Requirements in the Undergraduate Study section for details.

School of Theater, Film, and Television students enrolled in English as a Second Language 33A, 33B, 33C must take the courses for a letter grade.

SCHOOL REQUIREMENTS

The School of Theater, Film, and Television has seven general requirements that must be satisfied for the award of the degree: unit, scholarship, academic residence, writing, foreign language, literature, and general education.

UNIT REQUIREMENT

Students must complete for credit, with a passing grade, no less than 180 units and no more than 216 units, of which at least 64 units must be upper division courses (numbered 100 through 199). No more than 8 units of freshman seminars and/or 8 units of 300-level courses may be applied toward the degree. Credit for upper division tutorials numbered 195 through 199 is limited to a maximum of 8 units in a single term and a maximum of 32 units total for a letter grade.

SCHOLARSHIP REQUIREMENT

A 2.0 (C) average is required in all work attempted at the University of California, exclusive of courses in UCLA Extension and those graded Passed/Not Passed. A 2.0 (C) average is also required in all upper division courses in the major taken at the University, as well as in all courses applied toward the general education and University requirements.
ACADEMIC RESIDENCE REQUIREMENT

Students are in residence while enrolled and attending classes at UCLA as a major in the School of Theater, Film, and Television. Of the last 45 units completed for the bachelor’s degree, 35 must be earned in residence in the School of Theater, Film, and Television. 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 a letter grade, 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) within the first three terms of enrollment.

The Writing I requirement may also be satisfied by scoring 4 or 5 on one of the College Board Advanced Placement Tests in English or a 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 Language Placement Examination (ESLPE).

Writing II. The Writing II requirement is satisfied by selecting a 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) within the first six terms of enrollment.

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.

FOREIGN LANGUAGE REQUIREMENT

Students may meet the foreign language requirement by (1) scoring 3, 4, or 5 on the College Board Advanced Placement (AP) foreign language examination in French, German, or Spanish, or scoring 4 or 5 on the AP foreign language examination in Latin, (2) presenting a UCLA foreign language proficiency examination score indicating competency through level three, or (3) completing one college-level foreign language course equivalent to level three or above at UCLA with a grade of Passed or C or better.

For transfer students from California community colleges, completion of the Intersegmental General Education Transfer Curriculum (IGETC) does not fulfill the school foreign language requirement. Students need to complete level three or above of a foreign language course at the community college with a grade of Passed or C or better to complete the requirement.

LITERATURE REQUIREMENT

Three courses (12 units minimum) in literature are required, at least one of which must be upper division. Any literature course taken in the original language can fulfill this requirement. A list of courses that satisfy this requirement is available in the Student Services Office. A course taken to meet the Writing II requirement may not also be applied toward the literature requirement.

GENERAL EDUCATION REQUIREMENTS

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

This entails the ability to make critical and logical assessments of information, both traditional and digital; deliver reasoned and persuasive arguments; and identify, acquire, and use the knowledge necessary to solve problems.

<table>
<thead>
<tr>
<th>School of Theater, Film, and Television General Education Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations of the Arts and Humanities</td>
</tr>
<tr>
<td>Literary and Cultural Analysis</td>
</tr>
<tr>
<td>Philosophical and Linguistic Analysis</td>
</tr>
<tr>
<td>Visual and Performance Arts Analysis and Practice</td>
</tr>
</tbody>
</table>

| 5 Courses |
| No more than two courses from any one subgroup. |
| Total = 25 units minimum |

| Foundations of Society and Culture |
| Historical Analysis |
| Social Analysis |
| Third course from either subgroup |

| 1 Course |
| 1 Course |
| 1 Course |
| Total = 15 units minimum |

| Foundations of Scientific Inquiry |
| Life Sciences |
| Physical Sciences |

| 1 Course |
| 1 Course |
| Total = 8 units minimum |

| 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. |
Requirements for Students Who Entered Fall Quarter 2004 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.

Ten courses (48 units minimum) are required. A course taken to meet the Writing II requirement may not also be applied toward a GE requirement.

Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories. GE courses may not be applied toward major requirements.

Foundations of the Arts and Humanities. Five 5-unit courses, with no more than two from any one subgroup:

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

The aim of courses in this area is to provide perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses provide the basic means to appreciate and evaluate the ongoing efforts of humans to explain, translate, and transform their diverse experiences of the world through such media as language, literature, philosophical systems, images, sounds, and performances. The courses introduce students to the historical development and fundamental intellectual and ethical issues associated with the arts and humanities and may also investigate the complex relations between artistic and humanistic expression and other facets of society and culture.

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

Historical Analysis
Social Analysis

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

Foundations of Scientific Inquiry. Two courses (8 units minimum), one from each subgroup:

Life Sciences
Physical Sciences

The aim of courses in this area is to ensure that students gain a fundamental understanding of how scientists formulate and answer questions about the operation of both the physical and biological world. The courses also deal with some of the most important issues, developments, and methodologies in contemporary science, addressing such topics as the origin of the universe, environmental degradation, and the decoding of the human genome. Through lectures, laboratory experiences, writing, and intensive discussions, students consider the important roles played by the laws of physics and chemistry in society, biology, Earth and environmental sciences, and astrophysics and cosmology.

Foundations Course Lists. Creating and maintaining a general education curriculum is a dynamic process; consequently, courses are frequently added to the list. For the most current list of approved courses that satisfy the Foundations of Knowledge GE plan, consult an academic counselor or see http://www.registrar.ucla.edu/ge/.

Requirements for Students Who Entered Prior to Fall Quarter 2004

For the approved list of courses, 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. All courses 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 Tests.** Credit earned through the College Board Advanced Placement (AP) Tests may be applied toward the school and general education requirements. If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation.

**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.

**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.

**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 3.879; *magna cum laude*, 3.845; *cum laude*, 3.773. 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://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm](http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm).

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

**Degree Requirements**

Requirements to fulfill each degree objective vary according to the degree and the department. For complete degree requirements, see *Program Requirements for UCLA Graduate Degrees* at [http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm](http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm).
Curricula and Courses

**COURSE LISTINGS**

Departments and programs are listed alphabetically with the College or school administering the program identified in the program heading. Curricula and courses are listed under each program. Every effort has been made to ensure the accuracy of the information presented. However, all courses, course descriptions, instructor designations, and curricular degree requirements described herein are subject to change or deletion without notice. Changes to course descriptions and undergraduate programs are posted online in the catalog updates pages at http://www.registrar.ucla.edu/catalog/updates/. 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://www.gdnet.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 requirements indicated in departmental requirements or the course description. Preparation generally includes at least one lower division course in the subject or two years of college work. With approval of the major department, graduate students may take 100-series courses toward satisfaction of master’s degree requirements.

**Undergraduate Seminars and Tutorials**

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

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 undergraduates. Courses are numbered as follows: 595/596, directed individual study or research; 597, preparation for master's comprehensive or doctoral qualifying examination; 598, master's thesis research and preparation; and 599, doctoral dissertation research and preparation. Courses numbered 501 are not individual study and research but are cooperative programs held in conjunction with USC. See individual departmental listings for specific limitations on 500-series courses.

Note: These definitions do not apply to the School of Law, which maintains its own course numbering system.

**Temporary Course Offerings**

Courses that are temporary in nature, such as one-term-only or one-year-only are not listed in the catalog. Their descriptions can be found in the online Schedule of Classes.

**Concurrent and Multiple Listings**

Concurrently scheduled courses (identified by a capital C before the course number) are pairs of courses, usually within a single department or program, for which credit is given at two levels—undergraduate and graduate. Concurrently scheduled courses are offered at the same time and place with the same instructor, but work levels and performance standards are evaluated differently for students at each level. (Concurrently scheduled courses as described here should not be confused with concurrent courses offered through UCLA Extension.)

Multiple-listed courses (identified by a capital M before the course number) are courses offered jointly by more than one department. They need not have identical course numbers, but all other aspects of the course must be the same, such as title, units, requisites, format, and level. For example, Language in Culture is offered by the Department of Anthropology (Anthropology M140) and the Department of Linguistics (Linguistics M146). The course is listed under both departments.

**UCLA Extension Courses**

In general, students may not attend UCLA Extension for degree credit if they are enrolled in UCLA regular session at the same time. However, certain Extension courses (numbered 1-199), prefixed by XL or XLC in the Extension course listings, yield credit toward the bachelor's degree. Graduate students may petition to apply up to two XLC courses toward the master's degree. For more details, see Concurrent Enrollment in the Academic Policies section of this catalog.
African Studies
Interdepartmental Program
College of Letters and Science

UCLA
10373 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
(310) 206-6571
fax: (310) 206-3555
e-mail: undergrads@international.ucla.edu
(idpgrads@international.ucla.edu (graduate)
http://www.international.ucla.edu/ids/p

Katrina D. Thompson, Ph.D., Chair
Faculty Advisory Committee
Edward A. Alpers, Ph.D., ex officio (History)
Andrew Aptel, Ph.D. (Anthropology, History)
Ruby A. Bell-Gam
Donald J. Coentino, Ph.D. (World Arts and Cultures)
Jacqueline Cogdell DjeDje, Ph.D. (Ethnomusicology)
Sondra Hale, Ph.D. (Anthropology, Women's Studies)
Thomas J. Hinnebusch, Ph.D., Emeritus (Linguistics)
Steven D. Nelson, Ph.D. (Art History)
Charlotte G. Neumann, M.D. (Community Health Sciences)
Richard L. Sklar, Ph.D., Emeritus (Political Science)
Brenda Stevenson, Ph.D. (History)
Dominic R. Thomas, Ph.D. (Comparative Literature, French and Francophone Studies)
Katrina D. Thompson, Ph.D., in Residence (Linguistics)

Scope and Objectives
The basic objective of the African Studies Program is an intellectual one — to provide interested students with the opportunity to engage in intensive study and research on Africa on an interdisciplinary basis. The program offers high quality African area courses in a wide range of fields, including the social sciences, humanities, and professional fields. While the Master of Arts is not a professional degree, students may enroll in courses in several professional schools on campus. An articulated degree program is also offered where students can work sequentially for the M.A. in African Studies and the Master of Public Health (M.P.H.).

Academic flexibility draws many students to the program. Because there are more than 50 active faculty members on campus with African interest and experience in many disciplines, students have multiple options to design individualized programs.

The program also offers the undergraduate African Studies minor that is designed primarily for students who plan to live and work in Africa or who are interested in government and public service careers involving African affairs. Students who plan to pursue graduate work related to Africa are also encouraged to add the minor to their major field of study.

Undergraduate Study
African Studies Minor
The African Studies minor can be taken jointly only with work toward a bachelor's degree, nor-

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.

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 6) 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 grading.

597. Preparation for M.A. Comprehensive Examination. (4) Tutorial, to be arranged. Limited to graduate African studies students. Normally taken only during term in which student is being examined. May not be applied toward minimum graduate course requirement. S/U grading.

598. Research for and Preparation of M.A. Thesis. (4) Tutorial, to be arranged. Limited to graduate African studies students. Normally taken only during term in which student intends to complete M.A. thesis. May not be applied toward minimum graduate course requirement. S/U grading.

AFRO-AMERICAN STUDIES
Interdepartmental Program
College of Letters and Science

UCLA
160 Haines Hall
Box 951545
Los Angeles, CA 90095-1545
(310) 825-9821, 825-3776, 825-7403
fax: (310) 825-5019
e-mail: idpstaff@bunche.ucla.edu
http://www.afro-am.ucla.edu

Brenda Stevenson, Ph.D., Chair
Faculty Advisory Committee
Andrew Aptel, Ph.D. (Anthropology, History)
Scott D. Brown, Ph.D. (History)
Devon Carbado, J.D. (Law)
Robert A. Hill, M.Sc., (History)
Edmond Keller, Ph.D. (Political Science)
Cheryl L. Keys, Ph.D. (Ethnomusicology)
Sheila Lane, Ph.D. (Education)
Ghislaine E. Lydon, Ph.D.

African Study Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The African Studies Program offers the Master of Arts (M.A.) degree in African Studies. An articulated degree program (African Studies M.A./Public Health M.P.H.) is also offered.

AFRO-AMERICAN STUDIES
Interdepartmental Program
College of Letters and Science

UCLA
160 Haines Hall
Box 951545
Los Angeles, CA 90095-1545
(310) 825-9821, 825-3776, 825-7403
fax: (310) 825-5019
e-mail: idpstaff@bunche.ucla.edu
http://www.afro-am.ucla.edu

Brenda Stevenson, Ph.D., Chair
Faculty Advisory Committee
Andrew Aptel, Ph.D. (Anthropology, History)
Scott D. Brown, Ph.D. (History)
Devon Carbado, J.D. (Law)
Robert A. Hill, M.Sc., (History)
Edmond Keller, Ph.D. (Political Science)
Cheryl L. Keys, Ph.D. (Ethnomusicology)
Sheila Lane, Ph.D. (Education)
Ghislaine E. Lydon, Ph.D. (History)
Required:

Preparation for the Major

The Afro-American Studies B.A. program is designed 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.

Undergraduate Study

Afro-American Studies B.A.

The Afro-American Studies B.A. program is periodically revised; check with the program office for changes and updates.

Preparation for the Major

Required: History M10A and the courses listed in one of the following concentrations, plus three courses from at least two additional concentrations (requisites for the courses listed must be completed before enrolling in a given course; this is especially important for the quantitative courses in economics and psychology): anthropology — Anthropology 7, 8, 9, 12; economics — Economics 1, 2; mathematics 3A, 31E (or 3A and 3B, or 31A and 31B); English — English Composition 3, English 4W, 10A, 10B, 10C (all must be taken in sequence); history — History 1A, 1B, 1C, 10B, 13A, 13B, 13C, and one course from 97A through 97O or 100; philosophy — Philosophy 4, 21, 22, 31; political science — Economics 1, Political Science 6, 20, 40, Sociology 1; psychology — Anthropology 7, Mathematics 2, Physics 10 (or 1A or 6A), Psychology 100A, 100B, one year of high school chemistry (or Chemistry and Biochemistry 2 or 20A); sociology — Afro-American Studies M5 or Anthropology 34, Anthropology 9, Mathematics 2, Sociology 1. Students are strongly urged to complete the required lower division courses within the first two years of the major.

Transfer Students

Transfer applicants to the Afro-American Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one civilization of Africa course and additional coursework in one of the areas of concentration.

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) Anthropology M164, English M104A or M104B or M104C, History M150B, M150C; (2) four upper division and/or graduate courses in Afro-American studies (or four departmental courses that are multiple-listed with Afro-American Studies); (3) six upper division electives within the department of concentration selected from the approved courses listed below; (4) two upper division electives outside the department of concentration selected from the approved courses listed.

Students may petition the committee that administers the degree program to have a course not on the approved list accepted for the major. In arranging a course of study, students should select a combination of courses that best meets their current and future educational and career goals. They must maintain an overall average of 3.5 or better.

Approved courses (recommended courses are indicated by an asterisk):

- English Composition 131A through 131D, 136A, 136B, 136C


Honors Option

Afro-American Studies majors with grade-point averages of 3.5 or better are eligible for the honors option which requires the completion of a senior thesis under the guidance of an Afro-American Studies faculty member. For more information, contact the student affairs officer of the Afro-American Studies Program.

Double Major Option

Some students elect to complete the requirements of both the Afro-American Studies major and one other major. Students interested in this option must maintain good academic standing and complete both majors within the unit maximum imposed by the College. Some courses used to satisfy the requirements for the principal major may also be used to satisfy the requirements for the secondary major, but no more than five courses may be common to both majors. Because of the complexity of the double major, students are encouraged to plan their curriculum early and to do so in consultation with the College counselors and the Afro-American Studies Program student affairs officer.

Afro-American Studies Minor

The Afro-American Studies minor is designed for students who wish to augment their major
program of study with courses from various disciplines germane to Afro-American studies. The minor exposes students to African American-studies-related coursework, research, and literature in a number of disciplines, such as anthropology, economics, English, history, political science, and sociology.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units, and file a petition in the program office, 153 Haines Hall. All degree requirements, including the specific requirements for this minor, must be fulfilled within the unit maximum set forth by the College of Letters and Science.

Required Lower Division Courses (8 units):
Afro-American Studies M5 and 6, with grades of C or better.

Required Upper Division Courses (24 units):

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to program approval; consult the student affairs officer before enrolling in any courses for the minor.

All minor courses must be taken for a letter grade, with 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://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The 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. (Same as Sociology M101.) Lecture, four and one-half hours; discussion, one hour; field trips. Analysis and interpretation of black communities, focusing on the development of black communities, competing theories, and research findings, defining characteristics and contemporary issues. Letter grading.

6. Trends in Black Intellectual Thought. (4) Lecture, three hours; discussion, one hour. Overview of the intellectual trends that have shaped ways in which Afro-American thinkers have interpreted experiences of blacks in U.S., drawing from such fields as history, philosophy, and literature. Letter grading.

M10A. History of Africa to 1800. (5) (Same as History M10A.) Lecture, three hours; discussion, one hour. Exploration of development of African societies from earliest times to 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 history of psychology, testing and intelligence, family, personality and motivation, racism and race relations, and community psychology, and future of Afro-American psychology. P/NP or letter grading.


M102. Culture, Media, and Los Angeles. (6) (Same as Asian American Studies M160H and Honors Colloquium 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.

M103A. African American Theater History: Slavery to Mid-1800s. (4) (Same as Theater M103A.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from slavery to mid-1800s. Letter grading.

M103B. African American Theater History: Minstrel Stage to Rise of American Musical. (4) (Same as Theater M103B.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from minstrel stage to rise of American musical. Letter grading.

M103E. African American Theater History: Depression to Present. (4) (Same as Theater M103E.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from Depression to present. Letter grading.

M104A. Early Afro-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 black 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, David Walker, Frances Harper, Frederick Douglass, Harriet Jacobs, Paul Laurence Dunbar, Charles W. Chesnutt, Booker T. Washington, and Pauline Hopkins. P/NP or letter grading.

M104B. Afro-American Literature from Harlem Renaissance to 1960s. (5) (Same as English M104B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of 20th-century black 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, Sterling Brown, Nella Larsen, Zora Neale Hurston, Richard Wright, Ann Petry, James Baldwin, and Ralph Ellison. P/NP or letter grading.

M104C. Afro-American Literature since 1960s. (5) (Same as English M104C.) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Introductory survey of diverse forms of Afro-American literary expression produced from rise of Black Arts Movement of 1960s to present by writers such as Amiri Baraka, Nikki Giovanni, Alice Walker, Etheridge Knight, Toni Morrison, Martin Luther King, Jr., Paulie Marshall, Ernest Gaines, Ishmael Reed, and Audre Lorde. P/NP or letter grading.

M107. Cultural History of Rap. (5) (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 its influence on cinema and popular culture. P/NP or letter grading.

M109. Women in Jazz. (4) (Same as Ethnomusicology M109 and Women's 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.

CM110A-CM110B. African American Musical Heritage. (5-5) (Same as Ethnomusicology CM110A-CM110B.) Lecture, four hours; discussion, one hour. Concurrently scheduled with courses CM210A-CM210B. P/NP or letter grading. CM110A. Sociocultural history and survey of African American music covering Africa and its impact on America; music of 17th through 19th centuries; minstrelsy and its impact on representation of blacks in film, television, and theater; religious music, including hymns, spirituals, and gospel; black music of Caribbean and Central and South America, and music of black Los Angeles. CM110B. Sociocultural history and survey of 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 work is thoughtful and for re-... keynote features of American life and so-... and Ghana (and West Africa more broadly) over time. Dependency state. Examination of cultural, intellectual, American and Ghana as part of larger discourse on... migration and ideological self-definition. P/NP or letter grading.

CM121E. African American Art. (4) (Same as Art History CM121E.) Lecture, three hours. Continuation of course CM112D, involving detailed inquiry into work of 20th-century African American artists. Com-... in that they have been applied and interpreted by African Americans. Debates and conflicts in black political thought, historical contest of Af-... American social movements, and relationship between black political thought and major trends in Western thought. 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 adver-... 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.

M114C. African American Political Thought. (4) (Same as Political Science M114C.) 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 thought as they have been applied and interpreted by African Americans. Debates and conflicts in black political thought, historical contest of Af-... through student-initiated programs, efforts, activities, and Chicana and Chicano Studies M118.) Lecture, three hours. Continuation of course CM212D. P/NP or letter grading.

M114D. African American Freedom Narratives. (4) (Same as Political Science M114D.) 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 M114E.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Analysis of black radi-... in mid-20th century, with special attention to contribution of Malcolm X and nationalization to Af-... American migration movement. P/NP or letter grading.

M115. Student-Initiated Retention and Outreach Issues in Higher Education. (4) (Same as American Indian Studies CM115 and Chicana and Chicano Studies M115.) Lecture, four hours. Exploration of issues in outreach and re-... American American cultural and political issues. P/NP or letter grading.

M120. Race, Inequality, and Public Policy. (4) (Same as Public Policy M120.) Lecture, three hours. 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.

C130A. Black Diaspora: Ghana and African Americans — Connections and Crosscurrents. (4) Lect-... three hours; fieldwork, one hour. Exploration of historic and cultural 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 Ghanaians who became African slaves. Consider-... of Ghana since trade ended, fol-... history as both colony of Britain and as in-... state. Examination of cultural, intellectual, and political environments for African American Ghanaians 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 Afri-... a century. Consideration of important intel-... of destiny of traditional West African cultures in black America. Did enslaved people from Africa arrive in North America completely devoid of their cultural attrib-... for some generations? Were all vestiges of Afri-... the United States? Did 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 Gha-... contemporary black diaspora. Consideration of development of racial catego-... er times 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) (Formerly numbered M195.) (Same as Asian American Studies M163.) Lecture, three hours. Role of investigative journalism in understanding in-... and alternative 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 sociocul-...tions among African Americans in U.S. by present-... and diasporic perspectives on Afro-... understanding origins and maintenance of particular patterns of adaptation among black Americans. P/NP or letter grading.


M167A-M167B. Interracial Dynamics in American Society and Culture. (5-5) (Same as Asian Ameri-...tions and Women's Studies M167.) Seminar, two hours. Not open to freshmen or students with credit for CE Clus-... and/or 20B. Examination of nature and meaning of race, racism, and intercultural dialogues in U.S. through various discip-...ory, language, and social func-...ers. Race as social and historical category that shapes contemporary American life. P/NP or letter grading. M167A. Enforced corequisite: attendance, but not enrollment, in GE Clusters 20A lecture; M167B. Enforced corequisite: attendance, but not enrollment, in GE Clusters 20B lecture.

M172. Afro-American Woman in U.S. (4) (Same as Psychology M172 and Women's Studies M172.) Lect-... impact on interpersonal relations-... of African-American women as members of large society and as members of their biological and ethnic group. P/NP or letter grading.

M158E. African American Nationalism in First Half of 20th Century. (4) (Same as History M150E.) Lect-... three hours; discussion, one hour (when sched-...ed). Designed for juniors/seniors. Critical examina-... of African American search in first half of 20th century for national/group cohesion through collective-...ly built institutions, associations, organized protest movements, and ideological self-definition. P/NP or letter grading.

C159P. Constructing Race. (4) (Same as Anthropology M159P and Asian American Studies M169.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Critical examina-... and social construction category, from anthropological perspec-...ion 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.

M145. Ellingtonia. (4) (Same as Ethnomusicology M145.) Lecture, three hours. Music of Duke Ellington, his life, and far-reaching influence of his efforts. Elling-...rnic; to sharpen students’ analytical skills. P/NP or letter grading.

M150C. Black Experience in Latin America and Caribbean. (4) (Same as Political Science M150C.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of musical genre known as "funk" which emerged in its popular form during late 1960s and reached popular high point, in black culture, during 1970s. Funk, fusion of gospel, blues, jazz, rhythm and blues, soul, rock, and many other musical forms and influences, overall window to re-... American history. P/NP or letter grading.

M154C. Black Experience in Latin America and Caribbean. (4) (Same as Political Science M154C.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Culture, history, politics, and identity of African Ameri-... and Caribbean. Enforced corequisite: attendance, but not enrollment, in GE Clusters 20B lecture.

M158A. Comparative Slavery Systems. (4) (Same as History M150A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of slavery experiences in various New World slave societies, with emphasis on outlining similarities and differences among legal status, treat-... and Latin American societies. P/NP or letter grading.

M158B-M158C. Introduction to Afro-Hispanic His-...ory. (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 of African American life: transition from Africa to New World; transition from slavery to freedom; and transition from rural to urban milieu. P/NP or letter grading.
M173. Nonviolence and Social Movements. (4) (Same as Chicana and Chicano Studies M173 and Labor and Workplace Studies M173.) Lecture, 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 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, development and underdevelopment, race-making institutions and evolution of race relations, nationalism and migration. P/NP or letter grading.

M179A. Topics in African-American Literature. (5) (Same as English M179A.) Seminar, four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in African-American literature. Topics involve Renaissance: Afro-American Literature in Nadir, 1890 to 1914; Contemporary Afro-American Fiction. May be repeated for credit. P/NP or letter grading.

179B. Special Studies: Comparative Literature: Caribbean Literature. (4) (Formerly numbered 197B.) Seminar, three hours. General introduction to literature of English-speaking Caribbean by reviewing its historical and geographical background. To analyze historical processes determinate in literature, following topics are included: (1) alienation and search 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 corequisite: course M194A. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M182B. Culture, Gender, and Human Development Ethnography (2) (Same as Education M182B.) Fieldwork, three hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M182C. Culture, Communications, and Human Development Ethnography (2) (Same as Education M182C.) Fieldwork, three hours. Enforced corequisite: course M194C. Students visit after-school site on weekly basis 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 Education M183C.) Fieldwork, six hours. Enforced corequisite: course M194C. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

188. Special Courses in Afro-American Studies. (4) Seminar, four hours. Program-sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit with topic change. P/NP or letter grading.


M194A. Language, Literacy, and Human Development Research Group Seminars (5) (Same as Education M194A.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182A or M183A. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationship between theories of development, culture, and language. May be taken independently for credit. Letter grading.

M194B. Culture, Gender, and Human Development Research Group Seminars (5) (Same as Education M194B.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182B or M183B. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationship between theories of development, culture, and gender. May be taken independently for credit. Letter grading.

M194C. Culture, Communications, and Human Development Research Group Seminars (5) (Same as Education M194C.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182C or M183C. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationship between theories of development, culture, and 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 or better. Limited to juniors/senior majors. 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.

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. P/NP or letter grading.

199. Directed Research or Senior Project in Afro-American Studies. (2 to 4) Tutorial, to be arranged with advisor for a student who submits for evaluation a 3.0 grade-point average in major. Limited to juniors/seniors. Supervised individual research or investigation of large project under guidance of faculty mentor. Culuminating paper or project required. Eight units may be applied toward major requirements. May be repeated for maximum of 16 units. Individual contract required. P/NP or letter grading.

Graduate Courses

M200A. Advanced Historiography: Afro-American. (4) (Same as History M200A.) Seminar, three hours. May be repeated for credit. S/U or 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 social classes and racial and ethnic groups in U.S. Presented in context that is at once comparative and international, seminar emphasizes sociological as well as political and economic conditions of African peoples elsewhere. S/U or letter grading.

M200C. Selected Problems in Urban Sociology. (4) (Same as Sociology M200C.) Seminar, three hours. S/U or letter grading.

M200D. Afro-American Sociolinguistics: Black English (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 points of view of their genesis, maintenance, and social functions. General problems and issues in fields of sociolinguistics examined through case study approach. Students required to conduct research in consultation with instructor and participate in group 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.


CM210A-CM210B. African American Musical Heritage. (S-S) (Same as Ethnomusicology CM210A-CM210B.) Lecture, four hours; discussion, one hour. Concurrently scheduled with courses CM110A-CM110B. S/U or letter grading. CM210A. Sociocultural history and survey of African American music covering Africa and its impact on America; music of 17th through 19th centuries; minstrelsy and its impact on representation of blacks in film, television, and theater; religious music, including hymns, spirituals, and gospel; black music of Caribbean and Central and South America; and music of black Los Angeles. CM210B. Sociocultural history and survey of African American music covering pre-1947 jazz styles, rhythm 'n' blues, soul, funk, disco, hip-hop, and symbolic relationship between recording industry and effects of cultural politics on black popular music productions.

CM212A. African American Music in California. (4) (Same as Ethnomusicology CM212.) 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 CM112A. S/U or letter grading.

CM212B. African American Art. (4) (Same as Art History CM212B.) Lecture, three hours. Detailed inquiry into work of 20th-century African American artists whose works provide insightful and critical commentary about major features of American life and society, including visits to various key African American art institutions in Los Angeles. Concurrently scheduled with course CM112B. S/U or letter grading.

CM212C. African American Art. (4) (Same as Art History CM212C.) Lecture, three hours. Continuation of course CM212B, involving detailed inquiry into work of 20th-century African American artists. Concurrently scheduled with course CM112C. Letter grading.

CM212D. Image Making Black Popular Culture. (4) (Same as Art History CM212D.) 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 CM112D. S/U or letter grading.

C230A. Black Diaspora: Ghana and African Americans: Connections and Crosscurrents. (4) Lecture, three hours; fieldwork, one hour. Exploration of historic and cultural 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 C230A. S/U or letter grading.

C230B. Black Cultural Diaspora: Question of African Cultural Retention, Extension, or Extinction Among Black Americans. (4) Lecture, three hours; fieldwork, one hour. Consideration of important intellectual question of destiny 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 generation? 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 Ghanian 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. S/U or letter grading.

M240. Assessment and Treatment of African American Families. (3) (Same as Psychiatry M240.) Seminar, two hours; discussion, one hour. Intensive role and research study of major and issues in various areas of African-American studies. S/U or letter grading.

241. Special Topics in Afro-American Studies. (4) Lecture, four hours; discussion, one hour. Intensive exploration and study of major 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 historical 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 in culture, representations of race in popular culture, instability of race revealed in passing and debates about multiracial 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. Research in and related to African American studies and applications of such research. Letter grading.


596. Directed Readings and Tutorials. (4) Tutorial to be arranged. Provides students with umbrella under which they can pursue specialized interests from which there is insufficient demand to warrant offering formal courses. S/U or letter grading.

597. Preparation for M.A. Comprehensive Examination. (4 or 8) Tutorial, to be arranged. Limited to graduate students. May not be applied toward M.A. course requirements. S/U grading.

598. Research for and Preparation of M.A. Thesis. (4 or 8) Tutorial, to be arranged. Limited to graduate students. May not be applied toward M.A. course requirements. S/U grading.

Scope and Objectives
Because UCLA possesses a substantial number of faculty members in the humanities and social sciences engaged in teaching and conducting research on American Indians, the nation’s first interdisciplinary M.A. program in American Indian Studies was established here. The Bachelor of Arts degree and the undergraduate American Indian Studies minor provide a general introduction for students who anticipate advanced study at the graduate level in American Indian studies, ethnic studies, and the traditional disciplines or careers in research, administration, public service, and community service related to American Indian communities.

The Master of Arts program draws primarily on existing courses in the participating departments, where research and research methodologies are of primary concern. Students are exposed to Indian-related research in a number of different disciplines; demonstration of research skills is required. Students graduate with the training they need to teach Native American studies or to serve in an administrative capacity in Indian programs or organizations. The M.A. program ranks among the top Indian studies programs in the country.

Undergraduate Study
American Indian Studies B.A.

The American Indian Studies B.A. program is designed to offer a coherent and comprehensive curriculum in American Indian cultures, societies, and contemporary issues in addition to valuable background in more traditional disciplines such as anthropology, art history, economics, education, history, law, linguistics, literature, sociology, and world arts and cultures. Students acquire a critical knowledge of the concepts, theories, and methods that have produced knowledge about American Indians in the traditional disciplines. Students are encouraged to develop a concentration — or special expertise — in these fields to accompany the major.

The curriculum encompasses the cultural, historical, political, and social experiences of Native Americans in the Americas. Through courses on Native American literature, languages, theater, and contemporary societies and through more culturally specific courses on California Indians, cultures of the Pueblo southwest, and so on, the major 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, Political Science 40, Statistics 12, Women's Studies 10. All courses must be completed with a grade of C or better.

Transfer Students

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

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

The Major

Requirements are distributed according to certain categories to create a breadth of knowledge. Students are required to take a research methods course to become familiar with scholarly techniques of knowledge production and to critically regard academic research, as well as a course in either ethnic/race/gender relations or comparative indigenous studies. Three additional electives 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.

Students must complete 15 upper division courses (60 units) as follows, with no more than 32 units from American Indian studies courses:


2. Three elective courses (12 units) in one of the following options: (a) history, law, and social sciences: two courses in those categories as listed above and one expressive culture course or (b) expressive culture: one social sciences course and two expressive culture courses

3. American Indian Studies C121 and C122SL (experiential service learning or supervised internship)

The 15 courses must fit one of the following regional emphasis patterns: (1) Native North America — eight courses, including those mentioned above 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.

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

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, (310) 206-7511. 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 (4 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, C178, Anthropology 113Q, 113R, 114P, 114Q, 114R, 158, 172R, History 149A, 149B, 157B, Sociology M161, Women's Studies 130; (3) three humanistic perspectives on language and expressive culture courses from American Indian Studies 180, Art History C117A, C117B, C117C, 118D, English 106, 180, Ethnomusicology 106A, 106B, Theater 103F.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to program approval; consult the interdepartmental adviser before enrolling in any courses for the minor. All minor courses must be taken for a letter grade, with 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://www.gdnet.ucla.edu/gasaalibrary/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The 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 African American Studies M118, Asian American Studies M168, and Chicana and Chicano Studies M118.) Lecture, four hours. Exploration of issues in outreach and retention of students in higher education, especially through student-initiated programs, efforts, activities, and services, with focus on UCLA as case. May be repeated twice for credit. Letter grading.

C120. Working in Tribal Communities: Introduc- tion. (4) (Formerly numbered 120.) Lecture, four hours. Through readings, discussion, and Native guest lecturers, students learn to participate within Native American communities engaged in political, social, and cultural processes of change and preservation. Development of proposal for Native nation-building project. Concurrently scheduled with course C220. Letter grading.

C122SL. Working in Tribal Communities: Service Learning. (4) Seminar, one hour; fieldwork, four hours. Enforced 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.


C140. 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. Introduction to topics on contemporary indigenous nations, social and cultural change and continuity, nation building, law and justice relations, economic development, education and socialization, international relations, comparative policy, colonization, migration, race, and social identity and other issues and social cultural processes, seen as distinct from ethnic-, 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 political development 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.


C168P. Perspectives on Health of Native North Americans. (4) (Same as Anthropology CM168P.) Seminar, three hours. Recommended preparation: some knowledge of medical anthropology and/or history and 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) (Formerly numbered 170.) Lecture, four hours. Introduction to overview of California Indian history, specific tribal communities, 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 C270. Letter grading.

C175. Cultures of Native Southern California. (4) (Formerly numbered 175.) 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 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 978 (California NAGPRA), American Indian Religious Freedom Act, National Environmental Policy Act (NEPA), and National Historic Preservation Act (NHPA), from applied standpoint. To understand goals and challenges of these laws, examination of series of cases from California sites. Concurrently scheduled with course C278. Letter grading.

C180. Introduction to and Practicum in Native American Languages. (4) Lecture, three hours; laboratory, one hour. Development of ability to converse, read, and write at elementary level in Native American languages. Introduction to both phonological and grammatical structures, vocabulary, and cultural patterns of using language as symbolic guide to culture. May be repeated with subject matter and approval of interdepartmental chair. Letter grading.

187. Special Topics in American Indian Studies. (4) (Formerly numbered 197.) Lecture, four hours. Variable lecture selection in a broad field of American Indian Studies. Ass.: Myths 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. Letter grading.

195. Community Internships in American Indian Studies. (4) Tutorial, two hours; fieldwork, eight hours. Requisite: course M10. Limited to juniors/seniors. Internship in supervised setting in community agency. Students meet on regular basis with instructor and provide periodic reports on their experience. Designed to integrate theory and practice through experiential learning to gain firsthand knowledge of diversity, complexity, and variety of needs and 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) (Formerly numbered 199.) Tutorial, three hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between student and advisor. As: readings and tangible evidence of mastery of subject matter required. May be repeated for maximum of 16 units. Individual contract required. P/NP or letter grading.

Graduate Courses

M200A. Advanced Historiography: American Indi- an 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 M206.) 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.

M200C. Contemporary Issues of American Indians. (4) (Same as Anthropology CM200 and Sociology M275.) 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 course M200A and cultural and expressive experience of American Indians presented in course M200B. Letter grading.

201. Topics in American Indian Studies. (4) Discussion, three hours. S/U or letter grading.
M202. Qualitative Research Design and Methodology for Indigenous Communities. (5) (Formerly numbered 202.) (Same as Health Services M202 and Nursing M221.) Seminar, three hours. Introduction to some key theoretical themes in American Indian studies and exploration of methods that can be used to incorporate them in research on American Indian cultures, societies, languages, and other issues. Quantitative methods (design, appropriate use), with emphasis on qualitative research methods, ethics, and special considerations in conducting research in American Indian country. Design of research and exploration of feasibility of researching topics. Letter grading.

C220. Working in Tribal Communities: Introduction. (4) Lecture, four hours. Through readings, discussion, and Native guest lecturers, students learn to participate within Native American communities engaged in political, social, and cultural processes of change and preservation. Development of proposal for Native nation-building project. Concurrently scheduled with course C120. S/U or letter grading.

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

C222SL. Working in Tribal Communities: Service Learning. (4) Seminar, one hour; fieldwork, four hours. Enforced prerequisite: 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.

M228. Seminar: Indian Law — Tribal Legal Systems. (4) (Same as Law M228.) Seminar, two hours (15 weeks). Study of historic and contemporary legal systems of selected tribes, with emphasis on relationships among law, religion, and social order. Letter grading.


M238. Indian Law Clinic: Legislation. (5) (Same as Law M428.) Lecture, three hours. Students provide nonlitigation legal assistance to Native American tribal nations, mostly in California. Clinic services include development and modification of tribal legal codes and constitutional provisions, development of tribal courts and other dispute resolution processes, and drafting of intergovernmental agreements. Cross-cultural representation, legislative drafting, and intergovernmental negotiation skills stressed. Letter grading.

C245. Contemporary Indigenous Nations. (4) Seminar, three hours. Introduction to topics on contemporary indigenous nations, including social movements, social and cultural change and continuity, nation building, law and justice relations, economic development, education and socialization, international relations, comparative policy, colonialism, migration, nationalism, and other issues and social cultural processes, seen as distinct from ethnic, race, class, and nation, with focus on indigenous communities that have maintained self-government, territory, and culture. Investigation and search for analytic and policy patterns that give greater understanding and knowledge about current conditions and social and cultural processes of indigenous nations. Concurrently scheduled with course C145. S/U or letter grading.

251. Comparative Indigenous Societies. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Investigation of detailed historical and contemporary ethnographic analyses of social change and cultural continuity within indigenous nations, primarily of U.S., but also elsewhere. Discussion of theories of comparative methodologies, and case materials. Letter grading.

M267. Indian Law. (5) (Same as Law M267.) Lecture, three hours (15 weeks). Special legal status of American Indians and Indian tribes and tension between moral/legal claims and political forces. Sources and scope of federal, state, and tribal powers in Indian reservations; property law concepts unique to Indian tribes and Indians; rights of American Indians in relation to federal, state, and tribal governments and federal trust relationship to Indians. Letter grading.

M267A. Federal Indian Law II. (3) (Same as Law M267A.) Lecture, three hours. Special topics in Indian country jurisdiction and issues of Indian property rights, including land, water, cultural property, and hunting and fishing, as well as tribal economic development. Consideration of international law treatment of indigenous rights. 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 CM168P. 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 departmental chair. Concurrently scheduled with course C170. 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 departmental 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 978 (California NAGPRA), American Indian Religious Freedom Act, National Environmental Policy Act (NEPA), and National Historic Preservation Act (NHPA), from applied standpoint. To understand goals and challenges of these laws, examination of series of cases from California sites. Concurrently scheduled with course C178. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual Study. (4 to 8) Tutorial, to be arranged. S/U or letter grading.


ANESTHESIOLOGY
David Geffen School of Medicine
UCLA
3325 Regent UCLA Medical Center
Box 957403
Los Angeles, CA 90095-7403
(310) 267-8693
fax: (310) 267-3524
http://www.anes.ucla.edu

Chairs
Patricia A. Kapur, M.D. (Ronald L. Katz, M.D., Endowed Professor of Anesthesiology), Chair
Randolph H. Stedman, M.D., Vice Chair, Education
Enrico Stefani, Ph.D., M.D., Vice Chair, Research
Barbara M. Van de Weele, M.D., Vice Chair, Clinical Affairs

Scope and Objectives
The medical student program in anesthesiology focuses on the delivery of peri-operative care to surgical patients. During their training in the department, students develop clinical skills of medical management of surgical patients, techniques of invasive line and monitor placement, and airway management skills. They are assigned to work with a specific attending anesthesiologist and/or anesthesiologist resident on a daily basis in one of the operating room locations and participate in the preoperative evaluation and preparation of their patients and development of anesthetic plan. Students then observe how to prepare for and execute their anesthetic plan. They have opportunity to perform procedures as their abilities and the situation permit. In addition, the department’s Human Patient Simulator provides students with a simulated operating room setting where a variety of clinical situations are initiated so they can practice their clinical skills. Students are also expected to attend clinically oriented lectures on a wide range of anesthesia topics, including physiology, pharmacology, and critical care.

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

Anthropology B.A.

Preparation for the Major

Required: Anthropology 7 or 12, 8, 9, 33. All courses must be taken for a letter grade, and students must maintain an overall 2.0 grade-point average.

Transfer Students

Transfer applicants to the Anthropology B.A. major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one human evolution course, one archaeology course, one sociocultural anthropology course, and one culture and communication course.
Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

The major is designed for students interested in an anthropological understanding of human behavior. One of the strengths of anthropology is its cross-cultural “holistic” and integrative 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. All courses must be taken for a letter grade, and students must maintain an overall 2.0 GPA.

Students must complete 13 courses (52 to 60 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
5. Three additional upper division anthropology courses
6. Two related fields courses that demonstrate cohesion, to be selected in consultation with the undergraduate adviser and approved by the department

Students are strongly encouraged to enroll in 3 to 4 units of 89 and/or 189 courses to gain small seminar experience. Ideally, at least one of the units should be at the upper division level.

Concentrations for the Major

Concentrations, although not required, may help define and structure an Anthropology major when students want emphasis in one of the four major fields. Whether or not they opt for a concentration, the requirements for the major must still be satisfied. It is possible to use courses within their specified concentration to fulfill overlapping requirements for the major. Exceptions to the requirements below are by petition only. More detailed information on the concentrations is available from the undergraduate adviser.

1. Archaeology: Two courses from Anthropology 110P, 111, 183; two field or laboratory methods courses from 115P, 117P, 117Q; one methods course from 115P or 129Q; one quantitative methods course — M186; two area courses from 112, 113P, 113Q, 113R, 114L, 114P, 114Q, 114R, C114S, 114T, M115A, M115B, 116, M119, 119P; one theory course from 120, 124, 150, 152, 153, 153P, 156, 158, 185A, 185B, or 186P
2. Biological Anthropology: Anthropology 120; one quantitative methods course — M186; one methods course from 115P, 117, 117P, 117Q, or 143; one human biology and behavioral ecology course from 124, 185A, 185B, or 186P; one paleoanthropology course from 121A, 121B, 121C, or both 12 and 129Q (credit is not granted for both courses 7 and 12); one human genetics course from Ecology and Evolutionary Biology 135 or Molecular, Cell, and Developmental Biology CM156; one primary behavior course from Anthropology 128A, 128B, or Ecology and Evolutionary Biology 129
3. Linguistic Anthropology: Anthropology 33, M140, Linguistics 20, Sociology M124A; two methods courses from Anthropology 141, 142A, 143, Linguistics 103; one ethnography course from Anthropology C144, M145, 146, or Linguistics 114; one course from Anthropology 133Q, 133R, 135A, 135B, 135C, Communication Studies 100, Linguistics 110, or 127; one term of a non-European language
4. Sociocultural Anthropology: Anthropology 130, 150; one primary course from three of the four subconcentrations listed below; two history, theory, and methods courses from 139, 182, M186, Sociology 101; one region and society course from M154Q, 158, 171, 172A, 172B, 172R, M172V, 173Q, 174P, 175Q, 175R, 175S, 175T, 175U, 175V, 176, or 177; two additional courses from one of the subconcentrations listed below:
   b. Ecological and Evolutionist Subconcentration: Primary course: Anthropology 153; additional courses: 128A, 128B, 158, M186, 186P; Geography 140
   d. Psychocultural and Medical Subconcentration: Primary courses: Anthropology 135A, 135B, 135C, 135T; additional courses: 135S, M168

Anthropology B.S.

Preparation for the Major

Required: Anthropology 7 or 12, 8, 9, 33; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, and 14CL, or 20A, 20B, 20L, 30A, and 30AL; Life Sciences 1, 2, 3, 4; Mathematics 3A, 3B, and 3C, or 31A and 31B; Physics 6A, 6B, and 6C, or 6AH, 6BH, and 6CH; Statistics 12. All courses must be taken for a letter grade, and students must maintain an overall 2.0 grade-point average.

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.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

The major provides an overview of human evolution and is designed to prepare students for careers in anthropology and the health sciences, including medicine, dentistry, public health, and nursing. All courses must be taken for a letter grade, and students must maintain an overall 2.0 GPA.

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
4. Two additional upper division anthropology courses

Students are strongly encouraged to enroll in 3 to 4 units of 89 and/or 189 courses to gain small seminar experience. Ideally, at least one of the units should be at the upper division level.

Honors Program

The honors program provides research-oriented students with opportunity to engage in original research and analysis under the close supervision of faculty members and culminates in an honors thesis. To be admitted students should have a cumulative grade-point average of 3.0 overall and a 3.5 cumulative GPA in their upper division anthropology courses. The application for admission must be submitted during Fall Quarter. Ideal candidates should have junior or senior standing and have completed at least two upper division anthropology courses. The proposal, research, analysis, and writing of the paper take place over four terms via Anthropology 191HA through 191HD.
Course 191HA is taken in Winter Quarter and 191HB in Spring Quarter. Research should be done in summer, and courses 191HC and 191HD are taken in Fall and Winter Quarters of the graduation year. Students should contact the departmental honors adviser early in their studies for more information.

Anthropology Minor
Students who wish to take a series of courses in anthropology, but major in another discipline, may be interested in the Anthropology minor. Students select courses from the four fields within anthropology (archaeology, biological anthropology, linguistic anthropology, sociocultural anthropology), although they are encouraged to focus the body of their coursework within one field.

To enter the minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (10 units):
Two courses from Anthropology 7 or 12, 8, 9, 33.

Required Upper Division Courses (20 units minimum):
Core course (Anthropology 111, 120, 130, M140, or 150) from one of the four anthropology fields listed above; four additional courses. Students are encouraged to concentrate their upper division coursework within one field and are required to consult with the undergraduate adviser in planning their program of study.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

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

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

8. Archaeology: Introduction. (5) Lecture, three hours; discussion, one hour; one field trip. Required as preparation for both bachelor's degrees. General survey of field and laboratory methods, theory, and major findings of archaeological anthropology, including case-study guest lectures presented by several campus archaeologists. P/NP or letter grading.

9. Culture and Society. (5) 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 the world illustrating basic principles of formation, structure, and distribution of human institutions. Of special concern is contribution and knowledge that cultural diversity makes toward understanding problems of modern world. P/NP or letter grading.


34. Introduction to Urban Speech Communities. (4) Lecture, three hours; discussion, one hour. Introductory to study of speech communities in metropolitan areas, with special focus on communities in Los Angeles. Emphasis on ways by 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 dialects, 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

111. Theory of Anthropological Archaeology. (4) Lecture, three hours. Requisite: course 8. Method and theory with emphasis on archaeology within context of anthropology. Themes include theoretical developments over last 50 years, structure of archaeological reasoning, and selective survey of work on problems of general anthropological interest. P/NP or letter grading.


113P. Archaeology of North America. (4) Lecture, three hours. Prehistory of North American Indians; evolution of Indian societies from earliest times to (at least including) contemporary Indians; approaches and methods of American archaeology. P/NP or letter grading.

113Q. Prehistory and Ethnography of California. (4) Lecture, three hours. Requisite: course 8 or 9. From earliest Californians through 10,000 years of history, study of diversity in California's original peoples. Aspects of technology, ideology, ecology, and social and political organization. Historic impacts on California Indians by Euro-Americans. P/NP or letter grading.

113R. Southwestern Archaeology. (4) Lecture, three hours. Examination of prehistory of American Southwest from 11,000 years ago to historic times. Emphasis on describing and explaining cultural variation and change, employing evolutionary perspective. Special attention to advent of farming and settled towns, large-scale interactive networks, abandonment of Four Corners area, and historic cultures. P/NP or letter grading.

114L. Archaeology of Chiefdoms. (4) Seminar, three hours. Enforced requisite: course 8. Examination of context of archaic sociocultural and sociopolitical developments within ranked or ranked-state societies. P/NP or letter grading.

114M. Pre-Hispanic and Conquest period native cultures of Mesoamerica. (4) Lecture, three hours. Archaeology of pre-Hispanic native cultures of Mesoamerica from late Pleistocene through Spanish conquest, with emphasis on forming sociopolitical systems, and early Spanish writing. P/NP or letter grading.

114N. Topics in Archaeology of Mesoamerica. (4) Lecture, three hours. Designed for juniors/seniors. Specialized consideration of particular regions or topics in archaeology of pre-Hispanic Mesoamerica. Specific topics vary but include archaeology and ethnohistory, ancient Mesoamerican religions, Olmec art and archaeology, and Maya. P/NP or letter grading.

114R. Ancient Civilizations of Andean South America. (4) Lecture, three hours. Requisite: course 8 or 9. Pre-Hispanic and Conquest period native cultures of Andean South America, as revealed by archaeology, and early Spanish writing. Includes and their predecessors in Peru, with emphasis on sociopolitical systems, economic patterns, religion, and aesthetic and intellectual achievements. P/NP or letter grading.

114S. Comparative Study of Ancient States. (4) Lecture, three hours. Comparative anthropological study of first complex societies in Near East, Mesoamerica, and Andes, including early Egyptian, Uruk, Teotihuacan, classic Maya, Wari, and Tiwanaku, with focus on political and economic structures of these societies and on causes of state development and collapse. Concurrently scheduled with course CM214S. P/NP or letter grading.

114T. Moche Civilization of Ancient Peru. (4) Lecture/demonstration, three hours. Requisite: course 114R. Moche civilization, which flourished on north coast of Peru between A.D. 100 and 800, as revealed by archaeology, iconography, ethnography, and early Spanish writing. Emphasis on Moche aesthetic, technological, and artistic achievements. Letter grading.

M115A-M115B. Historical Archaeology. (4) Same as History M102A-M102B. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

M115A, World Perspective. Historical archaeology requires appreciation of historical sources, archaeology, and material culture. Thematic emphasis, with exploration of breadth of discipline both in Old World and Americas. P/NP or letter grading.

M115B, American Perspective. Emphasis on historical archaeology in North America, particularly to some practical applications.
115P. Archaeological Field Training. (6 or 13) Lecture, two to three hours; fieldwork, to be arranged (nine hours minimum for 6 units, 50 hours minimum for 13 units). Requisite: course 8. Off-campus field archaeological course offered in either regular session or summer. Procedures of archaeological excavation, recording, mapping, surveying, and initial analysis of archaeological data. P/NP or letter grading.

C115R. Strategy of Archaeology. (4) Seminar, three hours. Designed for juniors/seniors. Introduction to problem formulation, theory, and method in archaeology, with emphasis on patterned research design. Focus on how archaeological research is conceived and planned, with consideration of differing viewpoints and their usefulness. Concurrently scheduled with course C215R. Letter grading.

116. Archaeology of South Asia. (4) Lecture, three hours. Archaeology of Harappan, early historic, and medieval periods in Indian subcontinent. Investigation of large-scale social movements such as Buddhism, as well as consideration of how past is interpreted in present. P/NP or letter grading.

117. Archaeological Laboratory Methods. (6) Lecture, three hours; laboratory, two to three hours. Requisite: course 8. Introduction to archaeological analysis of range of materials. Procedures of classification, analysis, data entry. Extensive laboratory work with lithic artifacts, vertebrate fauna, shellfish, plant remains, bone and shell tools, ceramics. P/NP or letter grading.

117P. Selected Laboratory Topics in Archaeology. (4) Lecture, three hours. Requisite: course 8. How archaeological research is furthered by specialized analysis of particular classes of cultural remains. Topics may include animal bones, plants, ceramics, rock art. Hands-on experience working with collections and data. May be repeated for credit with topic change. P/NP or letter grading.

117Q. Intensive Laboratory Training in Archaeology. (6) Lecture, three hours; laboratory, three hours. Requisite: course 8. Archaeologists with special expertise in specific analytical techniques and topics oversize intensive laboratory training on one of following topics: zooarchaeology, ethnobotany, lithic analysis, ceramic analysis, etc. May be repeated for credit with topic change. P/NP or letter grading.

118. Selected Topics in Archaeology. (4) Lecture, three hours. Study of selected topics in archaeology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

119P. Cities Past and Present. (4) Lecture, three hours. Requisite: course 8 or 9. Examination of ancient and modern cities to evaluate how urban form developed and continues to thrive as human social phenomena. Study of selected urban observations compared with archaeological case studies, including South America, Asia, Africa, and ancient Near East. Letter grading.


121A. Primate Fossil Record. (4) Lecture, three hours. Requisite: course 7 or 12. Introduction to method and theory of primate evolution, Cretaceous through Miocene. May be taken independent of credit. P/NP or letter grading.


121C. Evolution of Genus Homo. (5) Lecture, three hours; discussion, one hour. Requisite: course 7 or 12. Origin and evolution of genus Homo, including archaic sapiens and Neanderthals. Morphology, ecology, and behavior of these groups. Course ends with approaches to understanding and may be taken independently for credit. P/NP or letter grading.

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

121Q. Paleoanthropology in Review. (6) Lecture, three hours; seminar, three hours. Corequisite: course 12. Limited to juniors/seniors. Designed for advanced students with interest in human evolution, 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. Examination 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 know origins, insertions, and action of major muscles. How to sex and age skeletons and introduction to paleopathology. Letter grading.


124P. Evolution of Human Sexual Behavior. (4) Lecture, three hours; discussion, one hour. Recommended requisite: course 7 or 12. Examination of human sexual relations and social behavior from evolutionary perspective. Emphasis on theories and evidence for differences between men and women in their patterns of growth, maturity, fertility, mortality, parenting, and relations with members of opposite sex. Letter grading.

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


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


129Q. Paleopathology. (4) Lecture, three hours. Designed for juniors/seniors. Evidence of disease and trauma, as preserved in ancient remains of both early and modern human populations. Discussions of medical procedures (trepanation), health status, ethnic mutilation (cranial deformation, footbinding), cannibalism, and sacrifice and ritualistic activities that have played in human societies. Letter grading.

Cultural Anthropology

130. Study of Culture. (4) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 9. Designed for juniors/seniors. Twentieth-century elaboration and development of concept of culture. Examination of five major paradigms: culture as human capacity, as pattern, and products of behavior, as systems of meaning and cognition, as generative structure and semiotic system, as component in social action and reality construction. (Core course for cultural field.) P/NP or letter grading.

131. Culture: What Makes It All Work. (4) Lecture, three hours. Preparation: two lower division social sciences courses (may be from different departments). Examination of some basic questions addressed by anthropologists in their study of culture. Consideration of theories of culture and evolutionary origins of culture. Review of new analytic methods that allow students to begin to do quasi-experimental research into nature of culture and introduce to multigent simulation as framework for modeling how culture can be both supra-organic and embedded in minds of culture bearers. P/NP or letter grading.

133P. Visual Anthropology: Documentary Photography. (4) Lecture, three hours. Photographs in anthropology serve many purposes: as primary data, illustrations of words in books, documentation for disappeared cultures, evidence of fieldwork, material objects for museum exhibitions, and even works of art. Topics include relationships between subject and treatment of image, between art photography and ethnographic documentation, role of museum photographs and caption, social practice of taking pictures, and case study on photographing Middle East and North Africa. P/NP or letter grading.

133Q. Symbolic Systems. (4) Lecture, three hours. Recommended for juniors/seniors. Analysis of anthropological research and theory on cultural systems of thought, behavior, and communication expressed in symbolic modes (as distinct from discursive, instrumental, and causal modes). Methods for study of symbolic meaning, including experiential approach. P/NP or letter grading.


133S. Ethnomathematics and Anthropology of Numeration. (4) Lecture, three hours. Counting systems such as one, two, three, many or modern equivalent of one, two, three, infinity are widespread in human societies. Counting things is important part of everyday life. But indigenous thinking goes far beyond pragmatic notion of counting, as evident in cultural systems underling counting are integrated with concepts people have about themselves and their societies. Numeracy is product of social life and reflects one’s experience with physical world. Exploration of different ways that indigenous mathematical thinking is embedded in human societies and cultures, ranging from use of fractals in African art to algebra of kinship terminologies to cosmological systems formulated around concepts of numbers. P/NP or letter grading.

135B. Current Topics and Research. (5) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. 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, motivation, and emotion in different cultural settings. P/NP or letter grading.


135T. Psychoanalysis and Anthropology. (4) Lecture, three hours. Exploration of mutual relations between anthropology and psychoanalysis, considering both theory and method. History and current developments in psychoanalysis; anthropological critiques of psychoanalytic theory and method, toward a cross-cultural psychoanalytic approach. Letter grading.

136G. Laboratory for Naturalistic Observations: Developing Skills and Techniques. (4) Laboratory, three hours. Skills 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. Study of selected topics in cultural anthropology. 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-gathering through fieldwork in cultural anthropology. Emphasis on techniques, methods, and concepts of ethnographical research and how basic observational information is systematized for presentation, analysis, and cross-cultural comparison. Letter grading.

140. Linguistic Anthropology. (Formerly numbered 134) (Same as Linguistics 134.) Lecture, three hours; discussion, one hour; fieldwork, two hours. Requisite: course 33 or Linguistics 20. 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 relationship of linguistic anthropology to fields of biological, cultural, and social anthropology, as well as anthropology. (Course for linguistics field.) P/NP or letter grading.

141. Ethnography of Everyday Speech. (5) Lecture, three hours; fieldwork. Requisite: course 33. Designed for juniors/seniors. Course has two interrelated objectives: (1) understanding of the relationship between language and cultural behavior — description and analysis of situated communicative behavior — and sociocultural knowledge that it reflects and (2) to train students to recognize, describe, and analyze relevant linguistic, proxemic, and kinesic aspects of face-to-face interaction. Letter grading.

142A-142B. Microethnography of Communication. (4) Lecture, three hours. Three courses: 142A or Sociology 124A or course 142A is requisite to 142B. Students make primary records (sound tape, videotape, or film) of naturally occurring social interactions that are analyzed in class for interactive tasks, resources, and accomplishments displayed. Laboratory and fieldwork outside of class and minimal fees to offset costs of equipment maintenance and insurance required. P/NP or letter grading.

142R. Culture of Jazz Aesthetics. (4) Same as Ethnomusicology 130 and World Arts and Cultures M136.) Lecture, three hours. Requisite: 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 demonstrations. Musical origins and historical influence of jazz with focus on how jazz musicians combined with those interested in jazz as cultural tradition. P/NP or letter grading.

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

144. Native American Languages and Cultures. (4) Lecture, three hours. Requisite: 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 topics include both micro- and macro-sociolinguistic topics. Micro-sociolinguistic topics are comprised of such issues as multilingualism, cultural differences and degree of appropriateness of communicative behavior and variation within speech communities (e.g., male and female speech, baby talk, ceremonial speech, etc.). Macro-sociolinguistic considerations include language relationships, language change and language in American Indian education. Concurrently scheduled with course C243P. P/NP or letter grading.


146. Language and Culture of Polynesia: Past, Present, and Future. (4) Lecture, three hours. Requisite: course 33. Introduction to Polynesian cultures and languages, with particular emphasis on past and present sociocultural forms of language structure and language use, verbal art, language socialization strategies, and forms of cultural assimilation and resistance to European contact. Fieldwork on contemporary Polynesian cultures in U.S. urban areas. Letter grading.

147. Selected Topics in Linguistic Anthropology. (4) Lecture, three hours. Study of selected topics in linguistic anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

M148W. Talk and Body. (5) Formerly numbered M148.) (Same as Applied Linguistics and TESL M161W.) Lecture, four hours; discussion, one hour. Requisite: English Composition 3 or 3H or English as a Second Language 36. Relationship between language and human body hosts of interesting topics. New approaches to phenomena such as embodiment become possible when body is analyzed, not as isolated entity, but as visible agent whose talk and action are embedded within both personal and social interaction and rich settings where people pursue courses of action that count in their lives. Satisfies Writing II requirement. Letter grading.

149A. Language and Identity. (4) Lecture, three hours. Requisite: 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.


149C. Multilingualism: Communities and Histories in Contact. (4) Lecture, three hours. Requisite: course 33. Examination of communicative, political, and poetic aspects of use of two or more languages (multilingualism) in historical context. Broadens themes in social theory, anthropological inquiry, sociolinguistics, and literary studies in lectures to contextualize class readings. Letter grading.

149D. Language, Culture, and Education. (4) Lecture, three hours. Requisite: course 33. Examination of various ways in which culture and language in particular, influence not only educational processes and outcomes, but also very conceptions of what normal development processes and desirable educational outcomes are. Letter grading.

M149E. Language Socialization. (4) Same as Applied Linguistics and TESL M125.) Seminar, four hours. Exploration of process of socialization through language, and socialization to use language across lifespan, across communities of practice within single society, and across different ethnic and socioeconomical groups. Examination of ways in which verbal interaction between novices and experts is structured linguistically and culturally. Letter grading.

Social Anthropology


152. Politics: Tribe, State, Nation. (4) Lecture, three hours. Cross-cultural examination of politics and political organization. Law and maintenance of order; corporate groups; ideology. Relations of political institutions to other institutions of society and to issues of identity representation. P/NP or letter grading.

153P. Economic Anthropology. (4) Lecture, three hours. Requisite: course 9. Introduction to anthropological perspectives for interpretation of economic life and institutions. Economic facts to be placed in their larger social, political, and cultural contexts; examination of modes of production, distribution, and consumer goods and services in their relation to social networks, power structures, and institutions of family, kinship, and class. P/NP or letter grading.

M154P. Gender Systems: North America. (4) (Same as Women’s Studies M154P.) Lecture, three hours. Recommended preparation: prior anthropological or women’s studies courses. Designed for junior/senior social science majors. Comparative study of women’s lives and gender systems in North American cultures from anthropological perspective. Critical review of relevant theoretical and practical issues using ethnography, case study, and presentations. P/NP or letter grading.

M154G. Gender Systems: Global. (4) (Same as Women’s Studies M154G.) Lecture, three hours. Recommended preparation: prior anthropological or women’s studies courses. Designed for junior/senior social science majors. Comparative study of gender systems globally from anthropological perspective. Outline of material conditions of women’s lives in world—gender division of labor, relationship of gender to state, and colonialism and resistance movements. P/NP or letter grading.

M155. Women’s Voices: Their Critique of Anthropology of Japan. (4) (Same as Women’s Studies M155.) Lecture, three hours. Preparation: introductory sociocultural anthropology course. Anthropology of Japan has long viewed Japan as homogeneous whole. Restoration of diversity and contradiction in it by listening to voices of Japanese women in various historical contexts. P/NP or letter grading.

M155G. Women and Social Movements. (4) (Same as Women’s Studies M155G.) Lecture/discussion, three hours. Recommended preparation: prior women’s studies or anthropology courses. Comparative studies of social movements (e.g., nationalist, socialist, liberal/refugee), beginning with Russia and China and including Cuba, Algeria, Guinea-Bissau, Mozambique, Nicaragua, and Iran. Analysis of women’s participation in social transformations and centrality of gender interests. P/NP or letter grading.

156. Comparative Religion. (4) Lecture, three hours. Survey of various methodologies in comparative study of religious ideologies and action systems, including presented religions through descriptive and structural approaches, and identification of social and psychological factors that may account for variation in religious systems cross-culturally. P/NP or letter grading.

157. Selected Topics in Social Anthropology. (4) Lecture, three hours. Study of selected topics in social anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

158. Hunting and Gathering Societies. (4) Lecture, three hours. Requisite: course 9. Survey of hunting and gathering societies. Examination of their distinctive features from both ecological 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/NP or letter grading.

158P. Pastoral Nomads. (4) Lecture, three hours. Requisite: course 9 or 150. Survey of pastoral nomad societies. Consideration of environmental and social demands of livestock domestication and production. Focus on ecological features, cultural practices, and social organization, with special attention to historical interactions between pastoral nomads and settled peoples. Letter grading.

158Q. Past Societies and Their Lessons for Our Own Future. (5) (Same as Geography M153 and History M152.) Lecture, four hours; discussion, two hours. Examination of modern and past tribal and band societies (Amazonian Indians, Kalahari bushmen, and others) that met varying fates, as background to examination of how modern state societies are coping or failing to cope with similar issues. P/NP or letter grading.

159. Warfare and Conflict. (4) Lecture, three hours. Examination of conflict and violent confrontation as these have been treated in anthropological literature. Cross-cultural comparison of institutions such as raids, feuds, ritual warfare. Consideration of application of anthropology to study of modern warfare, and large-scale ethnic conflict. Letter grading.

M159P. Constructing Race. (4) (Same as Afro-American Studies M159P and Asian American Studies M168P.) 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.

Applied Anthropology


163. Selected Topics in Applied Anthropology. (4) Lecture, three hours. Study of selected topics in applied anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.


167. Urban Anthropology. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for junior/senior social sciences majors. Introduction to modern industrial cities and urban life. Examination of notion of urban space in context of social relations by drawing from historical and cross-cultural urban ethnographies. Urban space is created according to needs of capital and actions of urban subjects. Explo- ration of ways in which class, gender, race, and geography shape or contest perspectives and priorities on urban issues. P/NP or letter grading.

M168. Culture, Illness, and Healing. (4) (Same as Nursing M158.) Lecture, four hours. Medical anthropology is organized around holistic exploration of ways in which health, illness, and medical practices are socially and culturally mediated. Topics include comparing illness experiences, understanding about health and illness, patterns of care seeking, therapeutic practices, and medical systems in context of different social and cultural settings, including our own. P/NP or letter grading.

CM168P. Perspectives on Health of Native North Americans. (4) (Same as American Indian Studies CM168P.) Seminar, three hours. Recommended preparation: some knowledge of medical anthropological and/or history and contemporary situation of first peoples of North America. Examination of different perspectives related to health and healthcare of Native North Americans (within present boundaries of U.S. and Canada) in relation to cultural, social, political, and economic aspects of changing historical context. Concurrently scheduled with course CM268P. P/NP or letter grading.

C169R. Repatriation of Native American Human Remains and Cultural Objects. (4) Lecture, two hours; discussion, one hour. Native Americans have recently been successful in obtaining passage of federal and state laws repatriating human remains and cultural objects to them. Examination of this phenomenon. Concurrently scheduled with course C269R. Letter grading.

Regional Cultures

Africa

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

M171P. Culture Area of Maghrib (North Africa). (4) (Same as History M108C.) Lecture, three hours. Designed for juniors/seniors. Introduction to North Africa, especially Morocco, Algeria, and Libya, also known as Maghrib or Tamazgha. 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 space. P/NP or letter grading.

North America

172A. Native North Americans. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Consideration of diversity of Native American societies north of Mexico, including their origins, formation, and development. Particular attention to subsistence systems and their relationship to social institutions and cultural practices, especially religion. Letter grading.

172B. Change and Continuity among Native North Americans. (4) Lecture, three hours. Requisite: course 172A. Consideration of tremendous change Native American societies and cultures have undergone since European contact. Emphasis on patterns of adaptation and continuity as Native Americans confronted colonization and its implications. Letter grading.

172R. Cultures of Pueblo Southwest. (4) Lecture, three hours. Survey of ethnographic and ethnohistorical research of Pueblo Indians (Hopi, Zuni, Tanoan, 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.

M172V. Culture Change and Mexican People. (4) (Same as Chicana and Chicano Studies M172V.) Lecture, three hours. Requisite: course 9 or Chicana and Chicano Studies 10A or 10B. 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 ethnohistorical background of Mexican and Mexican American people to clarify social and cultural origins of modern habits and customs and, more importantly, understand various culture change threads of that experience. Topics include technology and evolution, Indian nation-states, miscegenation, peasantry, expansionism, industrialization, immigration, ethnicity, and adaptation. Field project on some aspect of culture change required. P/NP or letter grading.
Middle East

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 interpersonal 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 the diverse, complex cultures symptomatic of various 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 environment and economic adaptation, politics in traditional isolation and within framework of recent national integration, kinship, forms of marriage and status of women, religious and social order in Hindu/Buddhist culture contact zone, and current problems of modernization. P/NP or letter grading.

175S. Japan. (4) Lecture, three hours. Overview of contemporary Japanese society. General introduction, kinship, politics, economy, religion, 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 ideas and 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 contemporary 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 Chinese society, socialization, and transformation of these institutions on mainland China during the 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

176Q. Culture Area of 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.

176V. Ethnology 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 totemism, Frey, Hall, each culture area presented in context of their adaptive significance. 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 anthropology, 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 anthropological theory and practice. Letter grading.

183. History of Archaeology. (4) Lecture, three hours. Preparation: at least one upper division archaeology 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.

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. Study of major forms of data analysis in anthropology to aid honors students in analysis of their own research data. Letter grading.

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


193P. Journal Club Seminars: Human Complex Systems. (1) Seminar, one hour. Limited to undergraduate students. Discussion of current readings in discipline. May be linked with speaker series. May be repeated for credit with topic change. P/NP grading.

194. Research Group Seminars: Anthropology. (1) Seminar, one hour. Limited to undergraduate students who are part of research group or internship. Discussion of research methods and current literature in discipline 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 member 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.

M186. Formal Modeling and Simulations in Social Sciences. (4) Same as Honors Colloquium M150 and Human Complex Systems M150P, three hours. Exploration of different approaches to modeling empirical phenomena of concern to social sciences. Topics include utility models, learning models, decision models, group competition models, and evolutionary models. Use of multigene computer simulations and group exercises to explore emergent behaviors among individuals interacting according to models for behavior. Discussion of advantages and drawbacks of more traditional mathematical modeling. Review of alternative forms of formal representations of hypothesized processes and issues related to verification of simulations. P/NP or letter grading.

Graduate Courses

200. Proseminar: Practice of Anthropology. (4) Seminar, three hours. Preparatory seminar for new graduate students. Discussion of anthropology as a field discipline and interconnections among major fields. Practice of anthropology as exemplified through faculty presentations of how research is conceived, formulated, and executed. Students develop individual research proposals. Letter grading.

200P. Cultural Anthropology Field Preparation. (4) Seminar, three hours. Requisite: course 200. Follows course 200 as field preparation for summer research for cultural anthropologists. Students develop specific research methods and present them in seminars. Practical issues (visas, community entry, health concerns) also addressed. S/U or letter grading.

M201A-M201B. Graduate Core Seminars: Archaeology. (6-6) (Same as Archaeology M201A-M201B.) Seminar, three hours. Course M201A is required of anthropology students in archaeological field. Seminar discusses fully selected list of 30 to 40 major archaeological works. Core seminars provide students with foundation in breadth of knowledge required of professional anthropologists. Archaeological historiography, survey of world archaeology, and theoretical frameworks. Emphasis on appreciation of multidisciplinary background of modern archaeology and relevant interpretative strategies. May be repeated for credit with consent of adviser. S/U or letter grading.

201. Theory and Method in Prehistory. (4) Seminar, three hours. Topics in current prehistory. Emphasis on research methods and present them in seminars. Discussion of research designs. Focus on how archaeological research is conceived and planned, with consideration of differing viewpoints and their usefulness. Concurrently scheduled with course C115S. S/U or letter grading.

201. Classification in Archaeology: Method and Theory. (4) Seminar, three hours. Limited to graduate anthropology and archaeology students. Discussion of methods and theory 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 specific pottery and ceramic examples. Review of relationship between classification, style, and function. S/U or letter grading.

212P. Selected Topics in Hunter/Gatherer Archaeology. (4) Seminar. Three hours. Prehistory and ethnography of hunter/gatherer peoples. Consideration of range of issues, including but not limited to technological innovations, exchange systems, settlement and mobility, and social change. May be repeated for credit. S/U or letter grading.

M212S. Selected Laboratory Topics in Archaeology. (4) (Same as Archaeology M202A.) Lecture, three hours. Focused on selected list of 30 to 40 major archaeology works. Laboratory experience with collections and data. May be repeated for credit with topic change. S/U or letter grading.

212T. Intensive Laboratory Training in Archaeology. (6) (Same as Archaeology M205B.) Lecture, two 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.

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 focus of seminar. May be repeated for credit. S/U or letter grading.

215. Field Training in Archaeology. (6 or 12) Lecture, two to three hours; fieldwork, eight or more hours (12 units). Properly scheduled with course C115S. S/U or letter grading.

217. Explanation of Societal Change. (4) Lecture, three hours. Examination of processes of societal evolution emphasizing understanding of variety of explanatory models from general systems theory, ecology, anthropology, and other sciences. Specific research questions vary with each course offering. May be repeated for credit. S/U or letter grading.

217A. Archiving and Discourse. (4) Seminar, three hours. Evaluation of cities as most complex form of human population, using both archaeological and modern examples. Observations about material culture and space enable assessment of social dynamics as cities are constructed and lived in by various ethnic groups and groups. Letter grading.

218. Style and Ethnicity. (4) Seminar, three hours. How stylistic variation in material culture informs on and mediates shape, boundaries, and interrelations of ethnic groups. Aimed primarily toward anthropologists 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 current research in biological anthropology (specific topics to be announced). Emphasis on nature of hypotheses and their testing in ongoing student and faculty research. May be repeated for credit. S/U or letter grading.


222. Graduate Core Seminar: Biological Anthropology in Review. (6) (Formerly numbered 1295.) Seminar, three hours. Enforced corequisite: attendance, but not enrollment, in course 7 lecture. Requisite of all graduate anthropology students who need foundational background in biological anthropology. Seminar discussion based on basic evolutionary principles, behavior of nonhuman primates, hominid evolutionary history, and contemporary human variation. Letter grading.

Cultural Anthropology


230Q. Themes of Culture. (4) Lecture, three hours. Exploration of aspects within core theory: emergence of culture with modes of production, discovery of culture, and “cultural capital” and cultural change. Investigation of production of culture and transformations 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.
233R. Symbolic Anthropology. (4) Seminar, three hours. Requisite: course 133R. Nature of symbolic re-
lations (as distinguished from other referential ones), significance of symbiotic 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 con-
cerning visual aesthetic phenomena in their rela-
tionships with sociocultural context examined in
depth. May be repeated for credit. S/U or letter
grading.

233R. Anthropology and Media Theory. (4) Semi-
inar, three hours. Limited to graduate students. Ex-
amination 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
programming. S/U or letter grading.

234. Seminar: Psychocultural Studies and Medi-
cal Anthropology. (4) Seminar, three hours. Devoted
to present social and psychological aspects of
human health. Survey of work in child development and socializa-
tion, personality, psychology, transcultural psychia-
try, deviance, learning, perception, cognition, and
psychocultural perspectives on change. S/U or letter
grading.

M234P. Transcultural Psychiatry. (4) (Same as Psychiatry M222.) Lecture, three hours. Consider-
ation of psychiatric topics in cross-cultural perspec-
tive, such as studies of drug use, deviance, suicide,
homicide, behavioral disorders, “culture specific” syn-
dromes, non-Western psychiatry, and questions of
identity. May be repeated for credit. S/U or letter
grading.

M234Q. 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) (Same as Psychiatry M272.) Lecture, three hours. Whether and how culture and thought shape each other historically and contempo-
rary and controversial topic. Focus on work challenging prevai-
ing implicit acceptance of theoretical separation be-
tween study of mind and study of culture. S/U or letter
 grading.

M234T. Anthropology of Human Body. (2 to 4) (Same as Psychiatry M282.) Seminar, three hours. Exploration of how sociocultural and political dynam-
ics shape perceptions of and understandings about
human body, and how, reciprocally, those perceptions and understandings influence social processes. In-
cludes materials from both non-Western and Western
societies. Letter grading.

235. Individual in Culture. (4) (Formerly numbered M235.) Seminar, three hours. Designed for graduate
students. Letter grading.

M236P. Cross-Cultural Studies of Socialization and
Children. (4) (Same as Psychiatry M214.) Lecture,
two hours; discussion, two hours. Examination of
various techniques for collecting and analyzing ethnog-
ographic field data. S/U or letter grading.

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

Linguistic Anthropology

M240. Social Foundations of Language. (4) (Same as Applied Linguistics and TESL M260.) Seminar,
four hours. Requisite: Applied Linguistics and TESL
Basic grounding in sociolinguistic theory and methodol-
y. Introduction to current issues in study of tested behavior, in-
cluding varied ways scholars visualize relation between
language and social context. S/U or letter grading.

M241. Topics in Linguistic Anthropology. (4) (Same as Linguistics M246C.) Lecture, three hours. Problems in relations of language, culture, and soci-
ety. May be repeated for credit. S/U or letter grading.

M242. Ethnography of Communication. (4) (Same as Linguistics and TESL M207.) Lecture, three hours. Designed for graduate students. Seminar
devoted to examining representative scholarship from
fields of sociolinguistics and ethnography of communica-
tion. Particular attention to theoretical develop-
ments including relationship of ethnography of commu-
nication and anthropology; ethnography of language,
linguistics, and sociology. Topical foci include style and
strategy, speech variation, varieties of nonconventional
speech genres, languages and ethnicity, and nonver-
bal communication. S/U or letter grading.

243A. Language Ideologies: Political Economy of Language Beliefs and Practices. (4) Lecture, three hours. Language ideological research problematizes fundamental assumptions about speakers’ use of lan-
guage and communicative practices. (1) speakers’ awareness of these structures and processes and (2) relationship of this consciousness to speakers’ politi-
cal economic perspectives and to actual communica-
tive conduct. Letter grading.

C243P. Native American Languages and Cultures. (4) Lecture, three hours; seminar, two hours. Prepara-
tion: prior coursework in either anthropology, linguistics,
or American Indian studies. Introduction and com-
parative analysis of sociocultural aspects of lan-
guage use in Native North American Indian speech communities. Specific foci include both micro- and
macro-sociolinguistic topics. Micro-sociolinguistic top-
ics are comprised of such issues as multilingualism,
cultural differences regarding appropriate communicative
behavior and variation within speech communi-
ties. (2) Macro-sociolinguistic topics: (a) language and
varieties of nonconventional speech genres, languages and ethnicity, and nonver-
bal communication. Letter grading.

243A. Language Ideologies: Political Economy of Language Beliefs and Practices. (4) Lecture, three hours. Language ideological research problematizes fundamental assumptions about speakers’ use of lan-
guage and communicative practices. (1) speakers’ awareness of these structures and processes and (2) relationship of this consciousness to speakers’ politi-
cal economic perspectives and to actual communica-
tive conduct. Letter grading.

243Q. Afro-American Sociolinguistics: Black English. (4) (Same as Afro-American Studies M200G.) Lecture, three hours. Basic information on Black American English, one important minority dia-
lect in U.S. Social implications of minority dialects ex-
amined from perspectives of their genesis, mainte-
nance, and social functions. General problems and is-
ues in fields of sociolinguistics examined through
case study approach. Students required to conduct
research in consultation with instructor and partici-
pate in group discussion. S/U or letter grading.

244. Field Methods in 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; in-
troduction to skills and strategies pertinent to morpho-
logical, syntactic, and pragmatic analysis. Practice with native speakers of non-Indo-European languag-
es is 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 disciplinary methods and theoretical frameworks. Among
objectives of course are following: to assess knowledge im-
portance of speech variation in anthropological lingu-
istics research, to critically assess broad and repre-
sentative sample of modern scholarship devoted to study of intra-individual and intercultural variation, and to evaluate utility and potential applicability of re-
cent linguistic models to anthropological linguistics and
anthropological theoretical frameworks. S/U grading.

M246A. Grammar and Discourse. (4) (Same as Applied Linguistics and TESL M272.) Seminar, four hours. Requisite: Applied Linguistics and TESL C201. Survey of grammar- and discourse-based approach-
s to study of language, and to the role of linguistic sys-
tems within grammatical and indexical categories, refer-
tial and social indexicality, relation of syntax to se-
manics and pragmatics, markedness, universals, cultural and cognitive implications of language struc-
ture and use. S/U or letter grading.

M246B. Grammar and Discourse Practicum. (4) (Same as Applied Linguistics and TESL M273.) Sem-
inar, four hours. Requisite: course M246A. Survey of advanced topics in grammar and discourse, including
preicates, arguments and grammatical relations, noun phrase categories, case marking, verbal catego-
ries, topic marking devices, and speech vari-
eties, including speech acts. Text in discourse. Presentation and analysis of data from range of languages. S/U or letter grading.

247. Topics in Semantics and Pragmatics. (4) (Same as Applied Linguistics and TESL M276.) Seminar,
four hours. Requisite: Applied Linguistics and TESL
C201. Detailed examination of specialized top-
ics in semantics and pragmatics. Topics vary from year to year and may include metaphor, theories of
reference and denotation, honorific speech, evidenti-
ality, reported speech, etc. May be repeated for credit with topic change. Letter grading.

groups. Ways in which verbal interaction between
novices and experts is structured linguistically and culturally. S/U or letter grading.

M249A-M249B. Ethnographic Methods in Dis-
course Analysis I, II. (4-4) (Same as Applied Lim-
guistics and TESL M270A-M270B.) Seminar, four hours. Two-term sequence on ethnographic ap-
proaches to recording and analyzing communicative
events and practices in their sociocultural context, in-
volving student-initiated fieldwork in community set-
ting. Emphasis on hands-on activities within theoreti-
cal frameworks that consider language as social and
cultural practice. M249A. Requisite: course M242 or Sociology 244A. Devoted to skills related to collecting socially and culturally meaningful data. Letter grading.

M249B. Requisite: course M249A. Devoted to pro-
duction of ethnographic analysis, including how to
present analysis in form of conference talk and how to
develop analysis into grant or dissertation proposal.
S/U or letter grading.

M249P. Ethnographic Technologies Laboratory I. (4) (Same as Applied Linguistics and TESL M270P) Laboratory, four hours. Corequisite: course M249A or Applied Linguistics and TESL M270A. Hands-on mentorship in entering communities, obtaining in-
formed consent, interviewing, note-taking, and video-
recording verbal interaction. S/U grading.

M249Q. Ethnographic Technologies Laboratory II. (4) (Same as Applied Linguistics and TESL M270Q) Laboratory, four hours. Corequisite: course M249B or Applied Linguistics and TESL M270B. Hands-on mentorship in editing ethnographic video footage, in-
corporating video frame grabs into transcript and
analysis of verbal interaction, writing grant proposals, and assembling conference presentations. S/U grad-
ing.
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 social inequality and their relationship to social stratification. S/U or letter grading.

252Q. Anthropology of Resistance. (4) Lecture, one hour; discussion, two hours. Preparation: at least one upper division sociocultural anthropology course. Exploration of recent works in anthropology and other disciplines that address practice and resistance, as part of effort to understand processes that have shaped modern and postcolonial society and culture. Letter grading.

M252S. Constructing Race. (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 that race has been imagined and continues to have concrete impact in U.S. Exploration of range of topics, including role discipline of anthropology has played in construction of race, representations of race in popular culture, instability of race revealed in passing and debates about multiracial identity, construction of whiteness, and emergence of identity politics. S/U or letter grading.

253. Economic Anthropology. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

254. Kinship. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

255. Comparative Political Institutions. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

255P. Political Economy. (4) Seminar, three hours. Designed for graduate 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 war and institutions associated with large-scale or ongoing conflict in variety of settings. Particular consideration to roots of violence, violent manifestations and cross-cultural misunderstandings, and nature and content of armed confrontation. S/U or letter grading.

257. Space, Place, and Identity. (4) Seminar, three hours. Recent rise of “space/place” in humanities and social sciences seems to relate to crisis of modernity in global capitalism. Designed to explore this theoretical theme and 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 from economy and occupational structure based on manufacturing to one based on services. Shift has been accompanied by increasing polarization of jobs by class, with stratospheric compensation at top and poverty-level wages at bottom, with loss of middle-income jobs, leaving U.S. 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) (Formerly numbered 263P) (Same as Women’s Studies M263P) Seminar, three hours. Current theoretical developments in understanding gender systems cross-culturally, with emphasis on relationship between systems of gender, economy, 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 interrelationships between society, culture, ecology, health, and illness. Bases for written critical analysis and class discussion provided through key theoretical works. S/U or letter grading.

M264. Latin America: Traditional Medicine, Shamanism, and Folk Illness. (4) (Same as Community Health Sciences M264 and Latin American Studies M264.) Lecture, three hours. Recommended preparation: Community Health Sciences 132, bilingual English/Spanish skills. Exploration 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 audiocassette. Letter grading.

M265. Anthropology of Genetic Knowledge. (2 to 4) (Same as Psychiatry M282.) 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.

M266. Health and Culture in Americas. (4) (Same as Community Health Sciences M260 and Latin American Studies M260.) Lecture, three hours. Recommended requisite: Community Health Sciences 132. Health issues throughout Americas, especially indigenous/Mestizo Latin American populations. Historical approach covering politics, economics, history, geography, human rights, maternal/child health, culture. Letter grading.

CM268P. Perspectives on Health of Native North Americans. (4) (Same as American Indian Studies 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 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 is constructed and enacted in everyday activities, shapes human reproductive behavior. Case materials from diverse cultures illuminate how competing interests within households, communities, states, and institutions influence reproductive arrangements in society. Letter grading.

C269R. Repatriation of Native American Human Remains and Cultural Objects. (4) Lecture, two hours; discussion, one hour. Native Americans have recently become successful in using 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. Problematic issues in Africa in light of classical anthropological literature and recent work by anthropologists and other fieldworkers in Africa, with cases from eastern and southern Africa. S/U or letter grading.

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

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

M276. Japan in Age of Empire. (4) (Same as Asian M292 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 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 select literature and current developments in field of Chinese socio-cultural anthropology. Main topics include family and kinship, interpersonal relations, social differences, local elite and state, rituals and beliefs, popular culture, consumerism, and cultural globalization. S/U or letter grading.

History, Theory, and Method

281. Selected Topics in History of Anthropology. (4) Lecture, three hours. Particular problems in history of anthropology as dictated by interests of students and faculty. May be repeated for credit. S/U or letter grading.

282. Research Design in Cultural Anthropology. (4) Lecture, three hours. Primarily designed for graduate students preparing for fieldwork. Unique position of anthropology among sciences and resulting problems for scientific research design. Review of typical research problems and appropriate methods. Students prepare their own research designs and present them for class discussion. S/U or letter grading.

283. Formal Methods of Data Analysis in Anthropology. (4) Seminar, three hours. Current topics and issues related to formal analysis of data and representation of cultural constructs: formal models of kinship terminologies, structural models of cognitive systems, graph theoretic models of networks, models of decision-making, hierarchical information systems, stability in complex adaptive systems. S/U or letter grading.

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 health care. Letter grading.
284P. Anthropological Methods and Data Analysis. (4) Seminar, three hours. Limited to graduate students. Recommended preparation: research design course. Hands-on approach to qualitative methods used in anthropological research and techniques for analysis of qualitative data. Particular methods depend on and are appropriate to research questions and designs students bring to class. S/U or letter grading.

285S. Schools, Domains, and Strategies in World Archaeology. (4) Seminar, three hours. Comparative examination of theoretical methods and models of world archaeology, contrasting their respective databases, research strategies, and relations to allied intellectual disciplines. Archaeologists from all departments are welcome, as are students interested in history or philosophy of science. Letter grading.

285R. Selected Topics in Anthropological/Archaeological Theory. (4) Seminar, three hours. Designed for graduate students. Variable content course on important theoretical subjects in anthropological archaeology. Topics include early village societies, specialization and cultural complexity, ethnography for archaeologists, power and hierarchy in intermediate socio-political formations, feminist 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. Requisite: course 190. Applications of computer simulations and/or models to specific problem areas of interest to anthropologists. Problem areas rotate with each offering and include cognitive ecological, 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 concepts of culture, narrative, ethnographic writing, reflexivity, politics of representation, history, 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 Native Americas 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.


M293S. Culture, Brain, and Development. (4) (Same as Applied Linguistics and TESL M233, Education M285, Neuroscience M236, and Psychology M247.) Seminar, nine hours. Designed for graduate students. Integration of knowledge across different disciplines to understand interrelations of culture, brain, and development, where development includes both human ontology and human phylogeny. S/U or letter grading.

294. Human Complex Systems Forum. (1) Seminar, 90 minutes every other week. Interdisciplinary seminar series to provide students with exposure to current research in understanding nature of human societies from complexity and multiagent perspective. May be repeated for credit. S/U 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.

485. 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 equivalent 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. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.


508. Teaching Practicum. (2 to 12) Tutorial, to be arranged. S/U grading.

Professorships

Lyle F. Bachman, Ph.D.
Susan R. Curtiss, Ph.D.
Frederick D. Erickson, Ph.D.
Charles Goodwin, Ph.D.
Marjorie Harness Goodwin, Ph.D.
Nina M. Hyams, Ph.D.
Shoichi Iwasaki, Ph.D.
Edward L. Keenan, Ph.D.
Paul V. Koskrosky, Ph.D.
Reynaldo F. Macias, Ph.D.
Pamela L. Munro, Ph.D.
Elinor Ochs, Ph.D.
Susan J. Flann, Ph.D.
Emanuel A. Schlegoff, Ph.D.
John H. Schumann, Ed.D.
Hongyin Tao, Ph.D.
Noreen M. Webb, Ph.D.
Olga T. Yokoyama, Ph.D.

Professors Emeriti

Marianne Celoe-Murcia, Ph.D.
Evelyn R. Hatch, Ph.D.
Earl J. Rand, Ph.D.

Lecturers

M. Elizabeth Galvin, M.A.
Janet M. Goodwin, M.A.
Linda Jensen, M.A.

Scope and Objectives

UCLA is a dynamic place to study applied linguistics. The Department of Applied Linguistics and Teaching English as a Second Language offers a Ph.D. in Applied Linguistics and a Master of Arts in Applied Linguistics and Teaching English as a Second Language. Three areas have been identified as integral to a thorough understanding of the field of applied linguistics: language acquisition, language assessment, and discourse and grammar analysis. Program participants are encouraged to study themes within these areas from a variety of perspectives.

Departmental faculty members, as well as professors in the Anthropology, Asian Languages and Cultures, Education, Linguistics, Neurobiology, Psychology, and Sociology Departments, among others, represent a wide range of expertise and experience in language-related research. Their guidance and collaboration with students result in substantial research findings in the areas of specialization within the program, and their participation reinforces the interdisciplinary nature of applied linguistics research. Graduates pursue academic and professional careers at the highest level of service and inquiry.

The goal of the Ph.D. program in Applied Linguistics is to prepare students to investigate language-related problems and issues in the everyday world. This can best be achieved by providing students with a broad background of knowledge about the nature of language and language use as situated in social, discursive, and interactional contexts, along with the skills needed for teaching and conducting research at the university level. The program is designed to foster the mentorship relationship between students and faculty, as students are assigned.

APPLIED LINGUISTICS AND TEACHING ENGLISH AS A SECOND LANGUAGE

College of Letters and Science

UCLA
3300 Rolfe Hall
Box 951531
Los Angeles, CA 90095-1531
(310) 825-4631
fax: (310) 206-4118
e-mail: ngov@humnet.ucla.edu
http://www.appling.ucla.edu

Olga T. Yokoyama, Ph.D., Chair

Professors

Lyle F. Bachman, Ph.D.
Susan R. Curtiss, Ph.D.
Frederick D. Erickson, Ph.D.
Charles Goodwin, Ph.D.
Marjorie Harness Goodwin, Ph.D.
Nina M. Hyams, Ph.D.
Shoichi Iwasaki, Ph.D.
Edward L. Keenan, Ph.D.
Paul V. Koskrosky, Ph.D.
Reynaldo F. Macias, Ph.D.
Pamela L. Munro, Ph.D.
Elinor Ochs, Ph.D.
Susan J. Flann, Ph.D.
Emanuel A. Schlegoff, Ph.D.
John H. Schumann, Ed.D.
Hongyin Tao, Ph.D.
Noreen M. Webb, Ph.D.
Olga T. Yokoyama, Ph.D.

Professors Emeriti

Marianne Celoe-Murcia, Ph.D.
Evelyn R. Hatch, Ph.D.
Earl J. Rand, Ph.D.

Lecturers

M. Elizabeth Galvin, M.A.
Janet M. Goodwin, M.A.
Linda Jensen, M.A.
language, with how language users produce and interpret assessment results. The fairness of the uses that are made of language is related to communication of the ways in which performance on language assessments is evaluated in terms of the neural underpinnings of language as well as the neural basis for perception, attention, memory, and emotion.

Language Acquisition
Language acquisition research seeks to (1) describe interlanguage systems, (2) examine underlying cognitive mechanisms that could account for these systems, (3) examine the social, affective, and neurobiological factors that influence second language development, and (4) explore the effect of instruction on the process. Additional areas of inquiry include comparisons between native and nonnative linguistic systems and how speakers use them in natural discourse, and explanations for variable success in second language acquisition in terms of the neural underpinnings of language as well as the neural basis for perception, attention, memory, and emotion.

Language Assessment
Language assessment is concerned with the empirical investigation of theoretical issues on the one hand, and with providing useful tools for assessment in applied linguistics on the other. Language assessment research has as its goals the formulation and empirical investigation of theories of language assessment performance and use, the empirical investigation of the ways in which performance on language assessments is related to communicative language use in its widest sense, and the fairness of the uses that are made of language assessment results.

Discourse and Grammar Analysis
Discourse and grammar analysis is concerned with how language users produce and interpret language in context. Discourse analysts research the linguistic structures of speech acts, conversational sequences, speech activities, oral and literature registers, and stance (among other constructs) and seek to relate these constructs to social and cultural norms, preferences, and expectations. The field articulates how lexico-grammar and discourse systematically vary across social situations and at the same time help to define those situations. Discourse analysis may be carried out as an end in itself or a tool contributing to research in language acquisition or language assessment.

Undergraduate Study
Language, Interaction, and Culture Minor
The Language, Interaction, and Culture minor is designed to train students in the naturalistic study of discourse in everyday interaction. To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed 80 quarter units, and file a petition with the minor adviser, 3300A Rolfe Hall, (310) 825-4631.

Required Lower Division Courses (8 units):
Two courses from the following, with each course from a different group: group 1 — Anthropology 33 or 34; group 2 — Sociology 3 or 24; group 3 — Linguistics 1 or 2 or 20.

Required Upper Division Courses (28 units):
Applied Linguistics and Teaching English as a Second Language M194 and six courses from the following, with at least one course from each group: group 1 — Anthropology M140, 141, 142A, 143, 144, M145, 146; group 2 — Sociology M124A, M124B, CM125, 126, M176; group 3 — Applied Linguistics and Teaching English as a Second Language 100, 116, 121, M125, M161W, 170, Chicana and Chicano Studies 160, 161, 162, Japanese M120, CM122, Linguistics 114, 170.

No more than two upper division elective courses may be applied toward both this minor and a major or minor in another department or program. All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Teaching English as a Second or Foreign Language Minor
The Teaching English as a Second or Foreign Language minor provides students with an overview of current second language pedagogical theories and practices; the experience of observing the second language acquisition process both in and out of the classroom; a supervised practicum experience in a variety of second language classroom settings; and an opportunity to reflect on the interaction of theory and practice in the teaching of English as a second or foreign language.

English as a Second Language
English as a second language (ESL) courses are only for students whose native language is not English. Placement in these courses is established on the basis of the UCLA English as a Second Language Placement Examination (ESLPE). The ESLPE is required of all entering UCLA students whose first language is not English and who have not otherwise satisfied the English as a Second Language (ESL) requirement. 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 ESLPE.

The following nonnative-speaking students are exempt from the ESLPE: (1) first-year undergraduate students exempted based on their performance on the Analytical Writing Placement Examination (see Entry-Level Writing in the Undergraduate Study section of this catalog), (2) undergraduate transfer students exempted 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 a country where the official language is English and in which English is the spoken...
Official, specific degree requirements are detailed in "Program Requirements for UCLA Graduate Degrees," available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees


Applied Linguistics

Graduate Courses

501. Cooperative Program, (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA program advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

506. Directed Individual Study, (4 to 8) Tutorial, to be arranged. Limited to Ph.D. students. Independent study in one area of applied linguistics. Up to 8 units may be applied toward Ph.D. course requirements. May be repeated for credit. S/U or letter grading.

507. Preparation for Ph.D. Candidacy Examination, (4 to 8) Tutorial, to be arranged. Preparation: completion of at least 10 courses of 32-unit requirement for Ph.D. May not be applied toward 32-unit requirement. May be repeated for credit. S/U grading.

509A. Research and for Preparation of Ph.D. Dissertation, (4 to 16) Tutorial, to be arranged. Preparation: advancement to Ph.D. candidacy. Required of all Ph.D. candidates each term they are registered and engaged in dissertation preparation. May be repeated for credit but may not be applied toward Ph.D. course requirements. S/U grading.

Applied Linguistics and Teaching English as a Second Language

Lower Division Course

30. Language and Society, (5) Seminar, four hours. Examination of range of topics related to study of language and society, particularly how language affects social lives and how social organization affects language use of language in society (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.

40W. Language and Gender: Introduction to Gender and Stereotypes, (5) Formerly numbered M40W. Lecture, four hours; discussion, two hours. Enforced requirement: English Composition 3 or 3H or English as a Second Language 36. Not open to students with credit for former course M40W or M40W. Prior knowledge of foreign languages not required. Introduction to language from sociological perspective of gender. Use of research and examples in English and other languages to explore nature of male and female "genderlects" and gendered language, as reflected in lexicon, language behavior, phonetics and intonation, language acquisition, and linguistic change. Satisfies Writing II requirement. Letter grading.

80. Language in Globalizing World: Second Language Interaction in Everyday Life and Academia, (8) Seminar, four hours. Enforced requirement: English Composition 3. Introduction to language and social interaction, with specific emphasis on second language communication. Second or foreign language is considered important for 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 in first half of course 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 in second half of course. Letter grading.

Upper Division Courses

100. Discourse and Society, (4) Lecture, four hours; discussion, two hours. Important contemporary perspectives for study of language in its social and cultural matrix. Topics include conversational organization, narrative, repair and grammatical organization, language in cultural settings, language socialization, and language impairment and institutional discourse. Focus on analysis of audio and video recordings of talk in variety of natural settings. P/NP or letter grading.

101W. Introduction to Language Learning and Teaching, (5) Lecture, four hours; discussion, one hour. Enforced requirement: English Composition 3 or 3H or English as a Second Language 36. Not open to credit students with credit for former 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 requirement: English Composition 3 or 3H or English as a Second Language 36. Exploration of learning via examination of second language acquisition. All normal children acquire language of their family and community (i.e., first language acquisition is ubiquitous). Success in second language acquisition is radically variable, and many learners, in spite of significant effort and ability, achieve proficiency that falls 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 through autobiographies of second language learners. Satisfies Writing II requirement. Letter grading.


C211. Writing for Second/Foreign Language Education, (4) Lecture, four hours. Requirement: course 101W or C110. Survey of theoretical and methodological issues related to second language written discourse and composition for second 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 Language 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 paradigms and classroom materials. Concurrently scheduled with course C212. P/NP or letter grading.

C113. Phonetics for Second/Foreign Language Education. (4) Lecture, four hours. Requisite: Linguistics 20. Examination of phonological structure of contemporary English, with emphasis on appropriate teaching techniques in ESL/ELF settings, including critical examination of classroom materials and overview of methods of evaluating student pronunciation. Concurrently scheduled with course C213. P/NP or letter grading.

C114. Listening and Speaking for Second/Foreign Language Education. (4) Lecture, four hours. Requisite: course 101W or C110. Survey of theoretical and methodological issues related to second/foreign language spoken discourse, including critical examination of research paradigms and classroom materials. Concurrently scheduled with course C214. P/NP or letter grading.

C115A. Media for Second/Foreign Language Education. (4) Lecture, four hours. Requisite: course 101W or C110. Rationale and pedagogical application for using media equipment in a second/foreign language classroom. Training in standard classroom media equipment operation, basic materials preparation, and production techniques, and review of published media materials, with focus on their application to second/foreign language instruction. Concurrently scheduled with course C215A. P/NP or letter grading.

C115B. Computer-Enhanced Language Teaching and Learning. (4) Lecture and fieldwork, four hours. Requisite: course 101W or C110. Designed for students interested in computer-enhanced language learning in second/foreign language environments. Web-based teaching (basic skills of creating and maintaining class websites), designing computer-enhanced teaching materials (e.g., PowerPoint presentations), managing classroom data (e.g., Excel grade calculation), and creating electronic teaching portfolios, with focus on pedagogical rationale for classroom instruction and on professionalizing current second/foreign 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 or grading.


C118A. Fundamentals of Second/Foreign Language Teaching. (4) Seminar, four hours. Requisite: course 101W or C110. Designed for students interested in microcomponents of effective second/first language teaching. In-depth examination of decision-making processes and implementation of lessons. Provides structured environment in which to hone fundamental teaching skills such as conducting warm-up activities, managing student dynamics, eliciting student contributions, correcting errors, sequencing lesson components, and transitioning between them. Concurrently scheduled with course C218A. P/NP or letter grading.

C118B. Second/Foreign Language Teaching Practicum. (4) Seminar, three hours; fieldwork, four hours. Requisites: courses C101W or C110, C116. Theoretical and practical concerns related to second/foreign 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 C218B. P/NP or letter grading.


C119A. Seminar, four hours; C119B. Seminar, two hours.

121. Language Learning and Immigrant Experience. (4) Seminar, four hours. Exploration of value and relevance of linguistic anthropological, ethnomethodological, sociocultural, pragmatic, and sociolinguistic approaches to study of immigration and second/foreign language learning. Readings from language learning memoir provide literary account of immigrant experience that illustrates intimate relationship between language and culture in second language learning. Letter grading.

M125. Language Socialization. (4) Same as Anthropology M149E. Seminar, four hours. Exploration of process of socialization through language, and socialization to use language across lifespans, across communities of practice within single society, and across different ethnic and socioeconomic groups. Examination of ways in which verbal interaction between novices and experts is structured linguistically and culturally. Letter grading.


C155. 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 C202. Letter grading.


M161W. Talk and Body. (5) Formerly numbered M161. (Same as Anthropology M48W and Communication Studies M212W) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Relationship between language and human body raises host of interesting topics. New approaches to phenomena such as embodiment become possible when body is analyzed, not as isolated entity, but as visible agent whose talk and action are lodged within both processes of human interaction and cultural settings where people pursue courses of action that count in their lives. Satisfies Writing II requirement. Letter grading.

M165SL. Taking It to Street: Spanish in Community. (3) Lecture, three hours; fieldwork, 10 hours. Requisite: Spanish 25 or 27. Service learning course to give students opportunity to use cultural and linguistic knowledge acquired in Spanish classes in real-world settings. Students required 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 recording and analyzing communicative events and practices in their sociocultural context, involving student-initiated fieldwork in community settings. Emphasis on hands-on activities with theoretical frameworks that consider language as social and cultural practice. Letter grading.

197. Individual Studies in Applied Linguistics. (4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study for undergraduate students who desire more advanced or specialized treatment of issues in applied linguistics and/or teaching English as a second/foreign language beyond those covered in current course offerings. Scheduled meetings to be arranged between faculty member and student. As signed reading and tangible evidence of mastery of subject required. May be repeated for credit. Individual contract required; see Graduate student advisor. Letter grading.

Graduate Courses


C204. Foundations of Language Assessment. (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.

C205. 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.
C218B. Second/Foreign Language Teaching Practicum. (4) Seminar, three hours; fieldwork, four hours. Requisite: course 218A. Designed for student interested in the practical applications of Second/Foreign language teaching. In-depth examination of decision-making process underlying planning and implementation of lessons. Provides structured environment in which to test fundamental teaching skills such as conducting warm-up activities, managing student dynamics, eliciting student contributions, correcting errors, sequencing lesson components, and transitioning between them. Concurrently scheduled with course C118A. S/U or letter grading.

C219A-C219B. Current Issues in Second/Foreign Language Education. (4-2) (Formerly numbered C219.) Requisite: course 219A. Specialized topics in language and education. Emphasis on current topics of theoretical concern in field of second/foreign language education. May be repeated for credit with topic change. Concurrently scheduled with courses C119A-C119B. Additional assignments required of graduate students. S/U or letter grading. C219A. Seminar, four hours; C219B. Seminar, two hours.


221. Experiential Seminar: Second Language Learning. (4) Seminar, four hours. Requisite: course 220A. Students learn one uncommonly taught language with use of authentic language materials (video and audio recordings and print materials). Discussion of experience in terms of issues in language learning and teaching, S/U or letter grading. 222. Discourse-Centered Language Learning. (4) Seminar, four hours. Requisite: course 220B. Case study and project-based research seminar on classroom language learning with authentic discourse input (usually in form of video and audio recordings of natural spoken discourse). Development of theoretical and technical tools to be able to model what can be learned from such recordings and how this learning might be facilitated, based on second current second language acquisition research. Letter grading.

223. Topics in Psycholinguistics. (4) Seminar, four hours. Requisite: course 220B. 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 learning. May be repeated for credit with topic change. Letter grading. 224. Language Socialization. (4) Same as Anthropology 248A. 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 socioeconomic groups. Ways in which verbal interaction between novices and experts is structured linguistically and culturally. S/U or letter grading.

229. Current Issues in Language Acquisition. (4) Seminar, four hours. Requisite: course 220B. Designed to explore current issues in language acquisition from both theoretical and applied research perspectives and to provide actual experience in addressing current topical. Specific topics vary according to trends in field. May be repeated for credit with topic change. Letter grading. 230. Advanced Seminar: Intercultural Analysis. (4) Seminar, four hours. Requisite: course 220. Analysis of interlanguage from various points of view (e.g., topic-comment structure, tense, aspect, modality, thematic structure of utterances), with an 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 research that is cross- or universal (i.e., crosslinguistically valid) mechanisms of language development. May be repeated for credit with topic change. Letter grading.
M232. Culture, Brain, and Development Forum. (4) (Same as Anthropology M293, Education M295, 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 relationships between culture, brain, and development. S/U grading.

M233. Culture, Brain, and Development. (4) (Same as Anthropology M293S, Education M286, 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; fieldwork/research, eight hours. Research in neurobiology 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.


242. Experimental Design and Statistics for Applied Linguistics. (4) Seminar, four hours. Requisite: course C204. Specializes 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 findings, and presentation of results. May be repeated for credit. S/U or letter grading.

249. Current Issues in Language Assessment. (4) Seminar, three 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, 241. 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.

258. Assessment Laboratory. (4) Laboratory, four hours. Collaborative coursework, with focus on specific theoretical and practical issues in development of innovative language assessment procedures for use in real-world settings. Specific projects determined by research being conducted by working group in language assessment. Activities include designing and developing measurement instruments, gathering and analyzing data, and interpreting and reporting results. May be repeated for credit. S/U or letter grading.

M262. Topics in Communicative, Cognitive, and Functional Approaches to Linguistic Analysis. (4) (Same as German M264.) Seminar, three hours. Requisite: German C172 or C238. Readings, discussion, analyses, and validation procedures within sign-based linguistics, cognitive grammar, and discours functions to language. Consideration of impact of grammaticalization theory on various nonformal approaches to synchronic linguistics. Discussion of work by Contini-Morava, Diver, Garcia, Goldberg, Jansen, Lakoff, Langacker, and Verhagen, as well as Bybee, Traugott, Hopper, and others. S/U or letter grading.

263. Crosslinguistic Topics in Functional Grammar I: Typology. (4) Seminar, four hours. Survey of particular linguistic area from typological perspective within functional grammar framework. Topics include tense/mood/aspect, nominal reference, word order. May be repeated for credit with topic change. S/U or letter grading.


265. Topics in Functional Grammar. (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. 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, evidentiary, reported speech, etc. May be repeated for credit with topic change. Letter grading.

267. Talk and Body. (4) Seminar, four hours. Requisite: course M206 or M207 or M208. 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 emerging talk, projection, gaze, gesture, participation frameworks, narrative as embodied multi-party activity, integration of semiotic structure in environment within organization of talk-in-interaction, and organization of aphasias in discourse. Student 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 thesis, 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 topics of theoretical and practical concern in field. May be repeated for credit with topic change. Letter grading.

M270A-M270B. Ethnographic Methods in Discourse Analysis I, II. (4-4) (Same as Anthropology M249A-M249B.) Seminar, four hours. Two-term sequence in ethnographic methods to recording and analyzing communicative events and practices in their sociocultural context, involving student-initiated fieldwork in community setting. Emphasis on hands-on activities within theoretical frameworks that consider language as social and cultural practice. M270A. Requisite: Anthropology M242 or Sociology 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 analysis in form of conference talk and how to develop analysis into grant or dissertation proposal. S/U or letter grading.

M270P. Ethnographic Technologies Laboratory I. (4) (Same as Anthropology M249P.) Laboratory, four hours. Corequisite: course M270A or Anthropology M249A. Hands-on mentorship in entering communities, obtaining informed consent, interviewing, note taking, and video recording 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 clips into transcript and analysis of verbal interaction, writing grant proposals, and assembling conference presentations. S/U grading.

271. Advanced Seminar: Cohesion Analysis of English Structure. (4) Seminar, four hours. Requisite: course C216. Investigation in depth of selected linguistic features of oral and written texts that go beyond sentence level and thus signal cohesion. Study of structures to determine their function in a variety of English texts representing several discourse types. Letter grading.

M272. Grammar and Discourse. (4) (Same as Anthropology M249A.) Seminar, four hours. Requisite: course C201. Survey of grammar- and discourse-based approaches to study of language as meaningful form. Topics include grammatical and indexical categories, referential and social indexicity, 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 M249B.) Seminar, four hours. Requisite: course M272. Survey of advanced topics in grammar and discourse, including predicates, arguments 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 oral and written texts to determine when and why they occur. Beginning with frequency and distribution of form(s), exploration of meaning and function of form(s). 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 or letter grading.
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. Requirements: 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. Requirements: 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. Requirements: 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.

35. Approaches to University Writing for ESL Students. (5) Lecture, four hours. Requirements: 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 key to clear and effective writing, stylistic mechanics of writing, and practice with major forms of academic writing. Additional emphasis on academic reading skills. Completion of course with grade of C or better satisfies Entry-Level Writing requirement. Letter grading.

36. Composition, Rhetoric, and Language for ESL Students. (5) Lecture, four hours. Requirements: course 35 or proficiency demonstrated on English as a Second Language Placement Examination. Focus on academic argumentation and rhetorical techniques found in academic writing. Special attention to individual research, grammatical structures, and style. Satisfies Writing I requirement. Letter grading.

37. English Grammar and Style for Academic Purposes. (4) Lecture, four hours. Requirements: course 33B (may be taken concurrently) or proficiency demonstrated on English as a Second Language Placement Examination. Review of form and use of common grammatical structures found in academic discourse. Analysis of stylistic function of certain structures and practice in self-editing strategies. P/NP (undergraduates), S/U (graduates), or letter grading.

38A. Pronunciation: Stress and Intonation in English. (4) Formerly numbered 38.) 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. Focus on three important aspects of pronunciation: stress, rhythm, and intonation. P/NP (undergraduates), S/U (graduates), or letter grading.

38B. Pronunciation: Sound System of English. (4) Formerly numbered 106.) Lecture, four hours. Requirements: course 33B or 33C or 35 or proficiency demonstrated on English as a Second Language Placement Examination. Delineated and systematic study of sounds of American English and way in which they are put together in connected speech, applied to improvement of student’s own accent. 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 discourse, and improvement of accuracy of pronunciation and spoken grammar. Use of specialized pronunciation software in computer laboratory. P/NP (undergraduates), S/U (graduates), or letter grading.

39B. Communication Strategies for International Teaching Assistants. (4) Lecture, four 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 help nonnative speakers of English communicate effectively as teaching assistants, with focus on pre-sessional skills, classroom discourse fluency and pronunciation accuracy. P/NP (undergraduates), S/U (graduates), or letter grading.

39C. 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. P/NP (undergraduates), S/U (graduates), or letter grading.
ARCHAEOLOGY
Interdepartmental Program
College of Letters and Science
UCLA
A210 Fowler Building
Box 951510
Los Angeles, CA 90095-1510
(310) 825-4169, 825-8064
fax: (310) 206-4723
e-mail: evgenia@ioa.ucla.edu
http://www.ioa.ucla.edu/grad_prog/ap.html
Monica L. Smith, Ph.D., Chair

Faculty Advisory Committee
Jeanne E. Arnold, Ph.D. (Anthropology)
P. Jeffrey Brantingham, Ph.D. (Anthropology)
Aaron A. Burke, Ph.D. (Near Eastern Languages and Cultures)
Elizabeth F. Carter, Ph.D. (Near Eastern Languages and Cultures)
Susan B. Downey, Ph.D. (Art History)
Ioanna Kakoulli, D.Phil. (Materials Science and Engineering)
Richard G. Leslie, Ph.D. (Anthropology)
Kathryn J. McDonnell, Ph.D. (Classics)
Sarah P. Morris, Ph.D. (Classics)
John K. Papadopoulos, Ph.D. (Classics)
Gregson T. Schachner, Ph.D. (Anthropology)
Monica L. Smith, Ph.D. (Anthropology)
Charles S. Stanish, Ph.D. (Anthropology)
Lothar von Falkenhausen, Ph.D. (Art History)
Willemina Z. Wendrich, Ph.D. (Near Eastern Languages and Cultures)

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 between 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://www.gdnet.ucla.edu/gasaalibrary/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 Archaeology Program offers Master of Arts (M.A.) 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


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 C210. P/NP or letter 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/NP or letter grading.

C180. Ancient and Historic Metals: Corrosion, Technology, and Microstructure. (6) Seminar, four hours; laboratory, four hours. Overview of technology of ancient metals, aspects of extraction and alloying, corrosion that ancient metals undergo, and how this impacts their preservation. Exploration of knowledge and research work of last two decades that has substantially advanced understanding of processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure. Laboratory work in preparation and examination of metallic samples under microscope, as well as lectures on technology of metallic works of art. Discussion of phase and stability diagrams of common alloying systems and environments.

Graduate Courses

M201A-M201B. Graduate Core Seminars: Archaeology. (6-9) Same as Anthropology M201A-M201B. Seminar, three hours. Repeatable for credit with topic change. Core seminars are designed to acquaint students with key aspects of research and practice, including the methods and theoretical perspectives used to interpret archaeological data. Topics include the history of archaeology, archaeological theory, regional archaeology, and current research, with the specific content of each course chosen by the advisor. Open to all students. P/NP grading.

M201C. Archaeological Research Design. (4) Same as Ancient Near East M201. Seminar, three hours. Design of research projects. Repeatable for credit with topic change. Core seminars are designed to acquaint students with key aspects of research and practice, including the methods and theoretical perspectives used to interpret archaeological data. Topics include the history of archaeology, archaeological theory, regional archaeology, and current research, with the specific content of each course chosen by the advisor. Open to all students. P/NP grading.
M205A. Selected Laboratory Topics in Archaeology. (4) (Same as Anthropology M212S.) Lecture, three hours. Designed for graduate students in archaeology or in other departments. Specialized analysis of particular classes of cultural remains. Topic may be one of following: zoological archaeology, 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.


M214. Comparative Study of Ancient States. (4) (Same as Anthropology CM214S.) Lecture, three hours. Comparative anthropological study of chiefdom, 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.

C220. Special Topics in Archaeology. (2 or 4) (Formerly numbered 220.) 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.

C239. Fieldwork in Archaeology. (2 to 12) (Formerly numbered 239.) 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 C139. S/U or letter grading.

M265. Depositional History and Stratigraphic Analysis. (4) (Same as Ancient Near East M265.) Lecture, two hours. Theoretical understanding of depositional processes ("laws") which lead to site formation and of stratigraphic procedures to be used in recovery of 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.

M280. Ancient and Historic Metals: Corrosion, Technology, and Microstructure. (6) Seminar, four hours; laboratory, four hours. Overview of technology of ancient metals; aspects of extraction and alloying, corrosion that ancient metals undergo, and how this impacts their preservation. Exploration of knowledge and research work of last two decades that has substantially advanced understanding of processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure. Laboratory work in preparation and examination of metallic samples under microscope, as well as lectures on technology of metallic works of art. Discussion of phase and stability diagrams of common alloying systems and environments. Metallographic study samples represent Bronze Age Europe, Renaissance Europe, China from Warring States to Tang dynasty, Japanese swordmaking, Indian high-tin bronze alloys, bronzes, Peruvian, Colombian, Costa Rican, and Panamanian copper and gold-copper alloys. Concurrently scheduled with course C180. Letter grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Individual Studies for Graduate Students. (2 to 12) Tutorial, to be arranged. May be repeated for credit with consent of adviser. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Preparation: completion of formal coursework, passing of language examinations before enrollment. May be repeated for credit with consent of adviser. S/U grading.

598. M.A. Paper Preparation. (2 to 12) Tutorial, to be arranged. May be repeated for credit with consent of adviser. S/U grading.


ARCHITECTURE AND URBAN DESIGN
School of the Arts and Architecture
UCLA
1317 Perloff Hall
Box 951467
Los Angeles, CA 90095-1467
(310) 825-0525, 825-7857
fax: (310) 825-8959
e-mail: info@aud.ucla.edu
http://www.aud.ucla.edu

Hitoshi Abe, Ph.D., Chair

Professors
Hitoshi Abe, Ph.D.
Dana Cuff, Ph.D.
Diane G. Favro, Ph.D.
Craig E. Hodgetts, M.Arch.
Sylvia Lavin, Ph.D.
Robin S. Liggott, Ph.D.
Greg S. Lynn, M.Arch., in Residence
Mark Mack, M.Arch.
Thom Mayne, M.Arch.
Barton Myers, M.Arch.
Ben J. Refuerzo, M.Arch.
Diagmar E. Richer, M.Arch.
Richard S. Weinstein, M.A.

Professors Emeriti
Marvin Adelson, Ph.D.
Samuel Aron, Ph.D.
Baruch Givoni, Ph.D.
Thomas S. Hines, Ph.D.
F. Eugene Kupper, M.Arch.
Jurg Lang, Dipl.-Arch.
Murray A. Milne, M.Arch.
George Rand, Ph.D.
Richard Schoen, M.Arch.
Thomas R. Vreeland, Jr., M.Arch.

Associate Professor
Neil M. Denari, M.Arch., in Residence

Assistant Professors
Mark W. Lee, M.Arch.
Heather L. Roberge, M.Arch.

Adjunct Professor
Alan Locke, M.Sc.

Adjunct Associate Professor
Roger Sherman, M.Arch.

Adjunct Assistant Professor
Jason K. Payne, M.Arch.

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.

The B.A. in Architectural Studies is a two-year program, with focus on the built environment. The curriculum visualizes architecture as a cultural, creative, and technical practice and a discipline with direct social impact. Within the context of a liberal arts education, a finely balanced set of architecture and urban design courses, ranging from the history and theory of design to contemporary building technologies, provides students with a diverse foundation of knowledge in the field of architecture and prepares them for graduate school and/or careers in a wide range of fields.

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 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 authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: Bachelor of Architecture and Master of Architecture. A program may be granted a five-year, three-
Architecture and Urban Design

Lower Division Courses


10B. History of Architecture and Urban Design: Baroque to Contemporary Moment. (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history from baroque to contemporary moment that covers significant buildings, spaces, artifacts, and theories of modernism. Architecture performs as reflection of cultural, sociopolitical, philosophical, and technological transformations in world history. Stylistic genres, applied terminology, seminal texts, and alternative historiographies that apply to design of built domain that range in scale from details to cities. While canonic of Western tradition remains overall focus, weekly thematic categories provide variety of conduits for addressing architectural 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 series of contemporary case studies for what each reveals about new possibilities for shaping world in which we live. With emphasis on how architecture extends to cities, roads, books, and films. Consideration of historical context and cultural genealogy of particular buildings and environments, material and economic conditions of building, and more. P/NP or letter grading.

Upper Division Courses

102. Introduction to Representation. (2) Studio, four hours; outside study, 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. Techniques of repetition, variation, order, scale, and rhythm. Use of case-study analysis to uncover disciplinary issues within design problems and production of individual solutions to problems. Offered in summer only. Letter grading.

121. Studio I. (6) Studio, eight hours; outside study, 10 hours. Limited to Architectural Studies majors. Introduction to basic architectural design principles and problem solving: how to control point, line, surface, and volume to shape spaces for human use. Visual analysis as tool for discussing and understanding organization. Techniques of repetition, variation, order, scale, and rhythm. Use of case-study analysis to uncover disciplinary issues within design problems, as well as to produce individual solutions to those problems. Letter grading.


123. Studio III. (6) Studio, eight hours; outside study, 10 hours. Enforced requisites: courses 121, 122. Limited to Architectural Studies majors. Introduction to 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 accessibility and egress as systems of movement. Structure as serial component that relates to site, construction, topography, climatology, accessibility, and their mutual interaction. Letter grading.

M130. Space and Place. (4) (Same as World Arts and Cultures M130.) Lecture, three hours. Survey of array of spaces and places from cross-cultural or comparative perspective and with performance emphasis, with focus on mutual interaction of human beings and their created environments. Emphasis on common, ordinary, anonymous, and vernacular nonbuilt environments, that are used and built 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 set of spatial, economic, political, and social discourses. From development of cities to new formal languages in architecture, consequences of fact that great percentage of our lives is spent in controlled designed environments, including role that research and interdisciplinary play today in influencing design ideas and processes, as well as how design is influenced by technology and new urban conditions. Letter grading.

132. Domestic Architecture: Critical History. (5) Lecture, three hours; outside study, 12 hours. Limited to Architectural Studies majors. Investigation of relationship between culture and design through medium of domestic architecture, from communal living arrangements of antiquity to functional and automated ideals of modern movement. Exploration of how design of domestic interior has evolved to express and accommodate corresponding developments in lifestyle and taste. Letter grading.

133. Modernism and Metropolis. (5) Lecture, three hours; outside study, 12 hours. Limited to Architectural Studies majors. Introduction to emergence of contemporary metropolis through series of comparative urban explorations that begin in Los Angeles and extend to engage range of cities, including key examples from Asia to South America. Modern project can be seen in myriad forms across globe, so that city and suburb, taken together, exist in complex commingling of aesthetic, political, spatial, economic, technological, and social issues. Letter grading.
M201. Theories of Architecture. (4) Same as Urban Planning M201.) Lecture, three hours. Exploration of conceptual and historical structures that shape current issues in architectural theory. Readings in primary texts serve as framework for understanding nature of speculative inquiry in architectural context. Letter grading.

220. Introduction to Computers. (2) Lecture, 90 minutes; laboratory, 90 minutes; outside study, three hours. Introduction to basic concepts, skills, and theoretical aspects of computer-aided architecture design microcomputer skills. Applications selected are commonly found in professional offices. Two- and three-dimensional representation (i.e., painting, drafting, multimedia, hypermedia, and modeling). Letter grading.


226D. Design and Building Models. (4) Lecture, three hours; outside study, nine hours. Concepts of three-dimensional space, modeling, and virtual reality; file formats; modeling, rendering, and animation programs; video conference. Letter grading.

226C. Computer Visualization. (4) Lecture, three hours. Designed for graduate students. Concept and theoretical values, as well as specific aesthetic and iconographic content. S/U or letter grading.

227A. Programming Computer Applications in Architecture and Urban Design. (4) Same as Design I Media Arts CM241.) Lecture, three hours; outside study, nine hours. Introductory course in logic of computing through experiments in computer graphics programming. Introduction of both procedural and object-oriented paradigms. S/U or letter grading.

227B. Introduction to Geometric Modeling. (4) Same as Design II Media Arts CM242.) Lecture, three hours; outside study, nine hours. Requires: 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.

227C. User Interaction Techniques in Design. (4) Same as Design III Media Arts CM243.) Lecture, three hours; outside study, nine hours. Requires: 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, abstraction, structuring. Logical structure of design information. Development of knowledge used in areas of design, how it can be identified, analyzed, and structured. Letter grading.

2267A. Introduction to Sustainable Architecture and Community Planning. (4) Lecture, three hours. Examination of architectural and urban design. Multidisciplinary approach leading to consideration to programming, symbolism, and view. May be repeated for credit with consent of adviser. S/U or letter grading.

2267B. Introduction to Geometric Modeling. (4) Lecture, three hours. Designed for graduate students. Concept and theoretical values, as well as specific aesthetic and iconographic content. S/U or letter grading.

229A-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 on perception of architectural and urban environments and its relationship to environmental psychology. Letter grading.

231. Theory of Architectural Programming. (4) Lecture, three hours. Exploration of concepts and methods of architectural programming and its interrelation to design process; planning of design process; various techniques for determination of program contents, basic conditions, resources, and constraints; identification of solution types for given situations. S/U or letter grading.

232. Politics, Ideology, and Design. (4) Same as Urban Planning M232.) Lecture, three hours. Exploration of cultural and political context of architecture and planning work. Examination of theory and practice from variety of perspectives applied to set of varied physical environments and to set of current spatialized concepts. Consideration of theoretical propositions that are shaping present urban and architectural debate and concrete case studies where politics and ideology shape design process. Letter grading.

234. Roman Architecture and Urbanism. (4) Lecture, three hours. Examination of architectural and urban developments during Roman Empire period, from archaic period to late Empire. Built environments of ancient world investigated from various perspectives, with consideration to programming, symbolism, and viewing, as well as to technological, aesthetic, and political factors. S/U or letter grading.

235. Renaissance Architecture and Urbanism. (4) Lecture, three hours. Examination of architectural developments from 15th to 17th century. Primary focus on Italian peninsula, and extending to entire Mediterranean basin. Analysis of individual structures, cities, and landscape designs to reveal changing cultural and theoretical values, as well as specific aesthetic and iconographic content. S/U or letter grading.

236. Elements of Urban Design. (4) Seminar, three hours. Orientation for Ph.D. students to tradition of architectural theory, scholarship, and research and to current research directions and questions, through intensive reading and critical discussion. Letter grading.

237. Teaching Apprenticeship Practicum. (1 to 4) Seminar, to be arranged. Preparation: 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. Advanced Topics Studio. (6) Studio, 12 hours; outside study, six hours. Preparation: satisfactory completion of intermediate-level studios (courses 412, 413, 414) or M.Arch. II student. Students may choose (through lottery) from several different projects focusing on special topics in architectural and urban design to be offered by faculty members. May be repeated for credit. Letter grading.
402. Final Advanced Topics Studio. (6) Studio, 12 hours; outside study, six hours. Preparation: satisfactory completion of intermediate- and advanced-level studios for M.Arch II students. Satisfactory completion of advanced-level studios and fourth-term standing for M.Arch II students. Students may choose (through lottery) from several different advanced studio projects focusing on architectural and urban design to be offered by faculty members. Exit document (analytic paper with graphic component that critically examines final student design work) required at completion of course. Letter grading. 403A-403B-403C. Research Studios. (2-2-6) For courses 403A, 403B: seminar, three hours; outside study, three hours; for course 403C: studio, 12 hours; outside study, six hours. Preparation: satisfactory completion of intermediate-level studios (courses 412, 413, 414, 415) or M.Arch II. Letter grading. 403C is requisite to 403B, which is requisite to 403C. In-depth research phase (courses 403A, 403B) and advanced studio project (course 403C), with focus on number of different special topics in architecture and urban design. In Progress (403A, 403B) and letter (403C) grading. 404. Joint Planning/Architecture Studio. (4) (Same as Urban Planning M404.) Lecture, one hour; discussion, one hour; studio, four hours. Opportunity to work on joint planning/architecture project for client. Outside study; field trips. Examples of past projects include Third Street Housing, Santa Monica; New American House for nontraditional households; Pico-Altos Housing, Boyle Heights; working with resident leaders at Los Angeles City public housing developments. S/U or letter grading. 411. Introductory Design Studio. (6) Studio, 12 hours; outside study, six hours. Introduction to sketching, drawing, perspectives, CAD. Architectural composition is initially studied in terms of its separate elements. After each is studied by means of manipulative exercise that allows for experimentation of its intrinsic parts. Students undertake series of closely controlled exercises dealing with combining elements and then design small buildings. Letter grading. 412. Building Design Studio. (6) Studio, 12 hours; outside study, six hours. Requisite: course 411. Concentration on basic skills, leading to projects exploring architectural program in relation to design process and, particularly, implications of program on architectural form. In second phase, introduction of structural elements to fulfill program requirements and to support and further develop intended forms and concepts. Letter grading. 413. Building Design with Landscape Studio. (6) Studio, 12 hours; outside study, six hours. Requisite: course 412. Introduction to theoretical and technical issues such as site planning, urban design, landscape design, building typology. Building design and site planning in relation to weather, landforms, and plants in natural light, heat, and ventilation. Letter grading. 414. Major Building Design Studio. (6) Studio, 12 hours; outside study, six hours. Requisite: course 413. Designed for second-year graduate students. Introduction to issues such as programming and program manipulation, site planning, urban design, and integration of technical systems and architectural expression. Emphasis either on treatment in breadth of large-scale projects or exploration in depth and detail of smaller-scale projects. Students learn to integrate structural and environmental control and to present their ideas in graphic or model form. Letter grading. 415. Comprehensive Studio. (6) Studio, 12 hours; outside study, six hours. Requisite: course 414. Culmination of core sequence (courses 411 through 414), with focus on development phase. Technical concerns such as lighting, material innovation, sustainability, construction documents, and building envelopes to be considered critical to generation of architectural form, integrated in design of single building project. Letter grading. 416. Architectural Practice. (4) Lecture, three hours. Preparation: basic algebra, geometry, trigonometry. Introduction to structural behavior and structural systems. Optimization with forces and factors, both algebraically and graphically. Equilibrium of force systems; polygon of forces and funicular polygon. Internal actions; axial force and bending moment. Reactions, stability, and statics of determinate frames. Plane trusses; analysis and design. S/U or letter grading. 417. Structures II. (4) Lecture, three hours. Requisite: course 413. Mechanics of structures and structural elements. Elastic materials: stress, strain, and stress-strain relations. Theory of bending: curvature, stress and strain distributions, centroid, moments of inertia, resisting and plastic moments. Design of beams for bending, shear, and deflections. Torsion members. Instability 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. 418. Structures III. (4) Lecture, three hours. Requisite: course 413. Introduction to statically indeterminate analysis. Structural materials and loads. Wind loads; distribution with height, design for comfort, structural behavior under lateral loads. Steel construction and concepts for high-rise structures. Structural case studies in timber and steel. Introduction to earthquakes; seismology, magnitude, intensity, history. Seismic design. Case studies of recent earthquakes and damage. Earthquake design concepts and seismic code requirements. S/U or letter grading. 419. Introduction to Building Construction. (2) Laboratory, two hours; outside study, four hours. Introduction to construction techniques. Study of physical principles and materials for making architecture through series of exercises and field trips. Letter grading. 420. Building Construction. (4) Laboratory, four hours; outside study, eight hours. Principles of structure and enclosure, with focus on production and material research. Exploration of building elements for formal and functional properties; in addition, design development of project in previous studio may be developed in detail with integration of range of technical systems. Letter grading. 421. Environmental Control Systems. (4) Lecture, four hours. Design of mechanical systems necessary for functioning of large buildings: air handling, fire and life safety, plumbing, vertical and horizontal circulation. Communication and electrical power distribution, analysis of interaction of these systems and their integrated effects on architectural form of building. S/U or letter grading. 422. Building Climatology. (4) Lecture, four hours. Preparation: basic physics. Design of buildings that specifically respond to local climate; utilization of natural energies, human thermal comfort; sun motion and control devices; use of plant materials and landform to modify microclimate. S/U or letter grading. 423. Architectural Practice. (4) Lecture, three hours. Historical development of profession; role of architect in contemporary society, current forms of practice and emerging trends. Contractual relationships, ethical responsibility, office management and promotion. Case studies of practical process. S/U or letter grading. 424. Special Projects in Architecture. (2 to 8) Tutorial, to be arranged. Projects initiated either by individual students or student teams and directed by faculty member. May be repeated for credit. S/U or letter grading. 425. Special Projects in Urban Design. (2 to 8) Tutorial, to be arranged. Projects initiated either by individual students or student teams and directed by faculty member. May be repeated for credit. S/U or letter grading. 426. Comprehensive Examination Seminar. (4) Seminar, three hours; outside study, nine hours. Seminar intended to begin process of developing independent proposal with related research and documentation that moves toward production of final document or book for each project. S/U grading. 501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading. 596. Directed Individual Research and Study in Architecture and Urban Design. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U grading. 597. Preparation for Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U grading. 598. Preparation in Architecture/Urban Design for Master's Thesis. (2 to 8) Tutorial, to be arranged. Limited to doctoral students. May be repeated for credit. S/U grading. 599. Ph.D. Dissertation Research in Architecture. (2 to 8) Tutorial, to be arranged. Limited to doctoral students. May be repeated for credit. S/U grading.

ART

School of the Arts and Architecture
UCLA
2275 Broad Art Center
Box 951615
Los Angeles, CA 90095-1615
(310) 825-3281
fax: (310) 206-6676
e-mail: artinfo@arts.ucla.edu
http://www.art.ucla.edu

Russell Ferguson, M.A., Chair
Professors
Jennifer Bolande, B.F.A.
Barbara Drucker, M.F.A.
Russell Ferguson, M.A.
Roger R. Herman, M.F.A.
Mary Kelly, M.A.
Barbara Kruger
Catherine S. Opie, M.F.A.
Lari G. Pittman, M.F.A.
Charles R. Ray, M.F.A.
Adrian A. Saxe, B.F.A.
James Welling, M.F.A.
Patricia A. Wickman, M.F.A.

Professors Emeriti
Samuel Amato, B.F.A.
Raymond B. Brown, M.A.
Christopher L. Burden, M.F.A.
Elliot J. Elgart, M.F.A.
Henry T. Hopkins, M.A.
Paul D. McCarthy, M.F.A.
Nancy J. Rubins, M.F.A.

Associate Professors
Andrea Fraser
Hirsch Perelman, B.A.

Lecturer
Don D. Suggs, M.F.A.

Scope and Objectives
The Department of Art offers professional art training that emphasizes experimentation and encourages students to draw from many disciplines in their creative processes. The department provides a strong background in theory and criticism to support contemporary studio practice. Bachelor of Arts degree coursework and Master of Fine Arts degree specializations include painting and drawing, new genres, photography, sculpture, and ceramics. An interdisciplinary studio option is offered within the
M.F.A. program. All programs have access to the art resources at UCLA and in the Los Angeles community.

The Department of Art reserves the right to hold for exhibition purposes examples of any work done in classes and to retain for the permanent collection of its galleries such examples as may be selected.

Additionally, the Department of Art reserves the right to use documentation and reproductions of student art work from studio courses, student exhibitions, and other records of creative work in publications including, but not limited to, the undergraduate and graduate brochures and publications, department and school websites, and presentations and events related to student recruitment and outreach.

Undergraduate Study

Art B.A.


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, 150, 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 119E or C140A through C180C, and 15 units of art electives.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnets.uclal.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 Art offers the Master of Arts (M.A.) and Master of Fine Arts (M.F.A.) degrees in Art.

Art

Lower Division Courses

1A. Drawing. (4) Studio, eight hours; five hours arranged. Course in basic drawing skills intended as preparation for work in variety of media. P/NP or letter grading.

1B. Sculpture. (4) Studio, eight hours; five hours arranged. Introduction to concepts and forms of contemporary sculpture to become familiar with tools and material to enable students to visually manifest their individual ideas. Presentation of work of contemporary artists. P/NP or letter grading.

11A. Painting. (4) Studio, eight hours; five hours arranged. Basics of painting: Introduction to technical procedures, tools, and materials. Discussion of fundamental conceptual and formal concerns. P/NP or letter grading.

11B. Photography. (4) Studio, eight hours; five hours arranged. Fundamentals of technique, with emphasis on individual projects. Variety of printmaking 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.

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, intermediary, 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 thought on art and society from mid-19th through early-20th centuries. Exploration of origins, development, theories, and practice of modernism in Europe and U.S. Letter grading.

31B. Modernism. (5) Lecture, three hours; discussion, one hour; field trips, three hours. Requisite for Art majors: course 31A. Continuation of impact of modernist ideas through mid-20th century, with focus primarily on work made from 1920s to 1960s. Letter grading.

31C. Modernism. (5) Lecture, three hours; discussion, one hour; field trips, three hours. Requisite for Art majors: courses 31A, 31B. Continuation of impact of modernist ideas through latter part of 20th century, covering shift from modernist to postmodernist practices and theories, with focus on work made from 1960s to present. Letter grading.

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 art theory, at least one course from each of the following areas: art criticism, art history, art theory. Letter grading.

130. Advanced Drawing. (5) Studio, eight hours; seven hours arranged. Requisite: course 1A. Drawing as both independent expressive medium and as means of visualization. May be repeated for maximum of 20 units. Letter grading.

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 on 1940s to present. Specific topics may vary. May be repeated for maximum of 20 units. Letter grading.

133. Advanced Painting. (5) Studio, eight hours; seven hours arranged. Requisite: course 11A. Varied media and subjects to further develop students' technical and expressive means to implement their ideas. May be repeated for maximum of 20 units. Letter grading.

137. Advanced New Genres. (5) Studio, eight hours; seven hours arranged. Requisite: course 11D. Emphasis to be selected by faculty members from one or more of following media: installation, performance, video, film, other nontraditional media and processes. May be repeated for maximum of 20 units. Letter grading.

140. Advanced Printmaking. (5) Studio, eight hours; seven hours arranged. Requisite: course 11C. Selected studies in fine printmaking, historical and contemporary: etching, 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 1B. Selected studies in sculpture, historical and contemporary: modeling, 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' artwork. Studio emphasis with special topics in theory and critical analysis. May be repeated for maximum of 20 units. Letter grading.

148. Advanced Ceramics. (5) Studio, eight hours; seven hours arranged. Requisite: course 11E. Selected 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, 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. (4) Studio/museum visits, eight hours; four hours arranged. Limited to junior/senior Art majors. 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. Letter grading.

C180. Seminar: Art. (4) Seminar, three hours. Limited to junior/senior Art majors. Advanced topics in critical theory and study of contemporary art, with emphasis on individuals, issues, and methodologies. Possible areas of study from structuralism, deconstruction, feminist and psychoanalytic theory, contemporary philosophy, and postmodernism and gender. May be repeated for credit. Concurrently scheduled with course C280. Letter grading.

C181. Exhibition and System. (4) Seminar, four hours; field trip, two 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 work of art museums. Concurrently scheduled with course C282. Letter grading.

C183. Special Topics in Art. (2 or 4) Seminar, six hours (2-unit course) or 12 hours (4-unit course). Preparation: at least one course from 100 through 150. Selected topics in art explored through variety of approaches that may include projects, readings, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for credit. Concurrently scheduled with course C283. Letter grading.

M18A. Chicana Art and Artists. (4) Same as Chicana and Chicano Studies M175 and World Arts and Cultures M128. Lecture, four hours. Introduction to Chicana and artists. Examination of Chicana aesthetic, Chicana artists have used the experience and identity as artists and Chicanas. 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; corequisite: course M186A, M186B, or M186C. Examination of public monuments in U.S. as basis for cultural insight and critique of American values from perspective of artist. Use of urban art to unlock critical aspects of public space issues such as who is “public,” what is “public space” at end of 20th century, what defines neighborhoods, and do different ethnic groups 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. Examination 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.

M186AL-M186BL-M186CL. Beyond Mexican Mural: Muralism and Community. (4-4-2) (Same as Chicana and Chicano Studies M186AL-M186BL-M186CL and World Arts and Cultures M125AL-M125BL-M125CL.) Course M186AL is required to M186BL. Mural and Digital Laboratory is art studio housed at Social and Public Art Resource Center in Venice, CA, where students work in community-based setting. Open to students during scheduled hours with laboratory tech support. It offers instruction as students independently and in collaborative teams research, 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, M186B, M186C. Corequisite: course M186CL. Advanced. Laboratory, two hours. Corequisite: course M186C.

M186B. Beyond Mexican Mural: Intermediate Muralism and Community Development. (4) (Same as Chicana and Chicano Studies M186B and World Arts and Cultures M125B.) Studio/lecture, six hours. Requisites: courses M186A, M186AL. Corequisite: course 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 through states of production to full scale and community approval. P/NP or letter grading.

M186C. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) (Same as Chicana and Chicano Studies M186C and World Arts and Cultures M125C.) Studio/lecture, six hours. Requisites: courses M186B, M186BL. Corequisite: course M186CL. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through installation, documentation, and production, with work on more advanced independent projects. P/NP or letter grading.

C187. Contemporary Art Collections in Los Angeles. (2) (Seminar) Three hours; outside study, three hours. Limited to junior/senior Art majors. Exploration of critical issues regarding concept of collections and collecting. Visits to institutions and collections and discussion of vision, goals, 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 introduce students undertaking supervised studio projects or 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 maximum of 4 units. P/NP grading.

193. Journal Club Seminars: Current Topics in Art. (1) Seminar, three hours. Limited to junior/senior Art majors. Discussion of selected current exhibitions, visiting artist lectures, screenings, and readings in field. May be repeated for credit. P/NP grading.

195. Community Internships in Art. (2) Tutorial, six hours. Limited to juniors/seniors. Internship in 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.


198. Honors Research in Art. (2 to 4) Tutorial, to be arranged. Preparation: 3.0 grade-point average overall or major. Corequisite: Honors 190. Limited to junior/senior Art majors. Investigation of muralism and/or painting. Both projects or mastery of subject matter required. May be repeated for maximum of 8 units. Individual contract required. Letter grading.

Graduate Courses

271. Graduate Painting. (2 to 8) Studio, eight hours. Study in painting and associated media. May be repeated for credit with consent of adviser. Letter grading.

272. Graduate Printmaking. (2 to 8) Studio, eight hours. Studies in traditional and experimental printmaking. Selected studies in intaglio, lithograph, woodcut, silk screen, photodrinking, and mixed media. May be repeated for credit with consent of adviser. Letter grading.

273. Graduate Sculpture. (2 to 8) Studio, eight hours. Studies in sculpture with specific attention to original, expressive, social, and humanistic values of art. May be repeated for credit with consent of adviser. Letter grading.

274. Graduate Photography. (2 to 8) Studio, eight hours. Studies concentrating on development of individual students’ artwork. Studio emphasis with studies in theoretical and critical analysis. Specific attention to original, expressive, social, and humanistic values of art. May be repeated for credit with consent of adviser. Letter grading.

275. Graduate New Genres. (2 to 8) Studio, eight hours. Studies in alternative media, including installation, performance, video, film, and other nontraditional media and processes. May be repeated for credit with consent of adviser. Letter grading.

277. Graduate Ceramics. (2 to 8) Studio, eight hours. Studies in ceramics and art with investigation of traditional and experimental processes and intellectual approaches to ceramics. Emphasis on development of significant body of original work reflecting student’s expressive and theoretical concerns. May be repeated for credit. Letter grading.

278. Interdisciplinary Studio. (2 to 8) Studio, eight hours. Tutorial focused on directed research, studio visits, and group discussions of recommended readings. May be repeated for credit. S/U or letter grading.

C280. Seminar: Art. (4) (Formerly numbered 280.) Seminar, three hours. Advanced topics in critical theory and study of contemporary art, with emphasis on individuals, issues, and methodologies. Possible areas of study from structuralism, poststructuralism, feminist and psychoanalytic theory, commodification, and censorship. May be repeated for credit. Concurrently scheduled with course C180. Letter grading.

C281. Exhibition and System. (4) Seminar, four hours. Examination of temporary exhibitions and its associated field of publications as intertextual system of meaning, beginning with individual works and proceeding to on-site analysis of current exhibitions. May be repeated for credit. Concurrently scheduled with course C181. Letter grading.

C282. Exhibitions and Public Programs. (4) Seminar, four hours. Introduction to principles of program planning and community development in relation to visual arts and work of art museums. May be repeated for credit. Concurrently scheduled with course C182. Letter grading.

C283. Special Topics in Art. (2 to 4) Seminar, six hours (unit course) or 12 hours (4-unit course). Selected topics in art explored through variety of approaches that may include projects, readings, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for credit. Concurrently scheduled with course C183. Letter grading.

C287. Contemporary Art Collections in Los Angeles. (2) Seminar, three hours; outside study, three hours. Exploration of critical issues regarding concept of collections and collecting. Visits to institutions and collections and discussion of vision, goals, and scope of collections, as well as current trends. Concurrently scheduled with course C187. 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 gain guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400A-400B. Visiting Artists Studio. (2-2) Studio, six hours. Studied by M.F.A. students. Introduction to visiting artists in their area of study, with focus on one-on-one critiques with wide range of practitioners. In Progress (400A) and S/U (400B) grading.

400C. Visiting Artists Studio. (4) Studio, 12 hours. Limited to graduate art students. Introduction to visiting artists in their area of study, with focus on one-on-one critiques with wide range of practitioners. S/U grading.

495. Teaching Assistant Training Practicum. (2) Seminar, three hours; outside study, three hours. Forum for first-year teaching assistants for discussion and exploration of teaching pedagogy and classroom mechanics. Problems and practices of teaching art at college level, as well as role of teaching assistants within department. Designed to help new teaching assistants develop teaching skills and to orient them to department and University policies and resources. May not be applied toward degree requirements. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.
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/adm_tr.htm for up-to-date information regarding transfer selection for admission.

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.

It is recommended that students have each term’s program approved by the departmental adviser.

Honors Program

The honors program is designed for Art History majors who are interested in carrying out an independent research project that culminates in a departmental honors thesis of approximately 30 pages. The program gives qualified students the opportunity to work closely with individual professors on an in-depth supervised research and writing project.

All junior and senior Art History majors who have completed a minimum of four 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 undergraduate counselor one term prior to beginning the honors program.

To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper division courses in the department and an overall GPA of 3.0 or better, and (3) complete Art History 198A and 198B with grades of A– or better.

To qualify for graduation with highest honors, students must (1) complete all requirements for the major, (2) have a cumulative GPA of 3.85 or better in upper division courses in the department and an overall GPA of 3.65 or better, and (3) complete courses 198A and 198B with grades of A.

Art History Minor

The Art History minor is designed for students who wish to augment their major with a series of courses that analyze the history, theory, and criticism of diverse visual traditions in world culture. On the lower division level, the minor exposes students to overviews of these traditions in broad time periods from ancient to modern, from the regional to the global, as well as to courses that trace the historical significance of art in the context of specific thematic and media concerns. Upper division courses offer more specialized content that explores crucial episodes or areas with more intense and rigorous theoretical and methodological strategies.

To enter the minor students must be in good academic standing with an overall grade-point average of 2.0 or better, have completed 45 units, and file a petition in 100 Dodd Hall. Students are advised to declare the minor early and meet with the student affairs officer (310-825-3992) to plan a coherent program.

Required Lower Division Courses (15 units):
Three courses selected from Art History 50, 51, 54, 55A, 55B, 56A, 56B, 57.
Required Upper Division Courses (20 units):

<table>
<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
</table>

Art History 127 (4 units) may be taken as one of the five upper division courses required for the minor. No more than one course may be applied toward both this minor and a major or minor in another department or program. By petition, one upper division course with substantial art historical content and methodology applied toward the students’ majors may also be applied toward this minor.

One course may be taken on a Passed/Not Passed basis; all other minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of 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.

51. Medieval Art. (5) Lecture, three hours; quiz, two hours. Early Christian, Byzantine, Islamic, Carolinian, Ottoman, Romanesque, and Gothic art and architecture. P/NP or letter grading.

54. Modern Art. (5) Lecture, three hours; quiz, one hour; museum field trips. Social history of modern art from period of French Revolution to circa 1968. Artists and their works treated from perspective of sociopolitical and broad cultural developments. 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. 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.

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.

88A-88Z. Lower Division Seminars. (4 each) 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.

88A. Buddhist Life and Teachings in Art, Texts, and Worship. (4) Seminar, three hours. Limited to freshmen. Development of Buddhist art in India through Buddha’s teachings, expressed in art, architecture, texts, and ritual. Re-creation of Buddha’s life by analyzing art and reading Buddhist texts of his life. P/NP or letter grading.

Upper Division Courses

100. Art Historical Theories and Methodologies. (4) Seminar, three hours. 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. Egyptian Art and Archaeology. (4) Formerly numbered 101A. (Same as Ancient Near East M101A.) Lecture, three hours. Study of art and architecture, sculpture, painting, and minor arts during Predynastic period and Old Kingdom. P/NP or letter grading.

M101B. Egyptian Art and Archaeology of Mide and New Kingdoms. (4) Formerly numbered 101B. (Same as Near Eastern Languages M101B.) Lecture, three hours. Requires: course 50. Study of architecture, sculpture, painting, and minor arts during Middle and New Kingdoms. P/NP or letter grading.

M102A. Minoan Art and Archaeology. (4) (Same as Classics M153A.) Lecture, three hours. Requires: course 50 or Classics 10. 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. 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. 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. Study of development of art and architecture of Greek world from approximately 490 through 350 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. Study of development of art and architecture of Greek world from approximately 350 through 300 B.C. P/NP or letter grading.

M102F. Etruscan Art. (4) (Same as Classics M153F.) Lecture, three hours. Requires: course 50 or Classics 20. Arts of italic peninsula from circa 1000 B.C. to end of Roman Republic. P/NP or letter grading.

105E. Byzantine Art. (4) Lecture, three hours. Requisite: course 51. Theory and development of Byzan- tine art from iconoclastic controversy to 1453 and dif-fusion of Byzantine art in Armenia, Georgia, Cauca- sus, and Russia. P/NP or letter grading.


108B. Northern Renaissance Art. (4-4) Lecture, three hours. Requisite: course 57. Course 108A is requisite to 108B. Painting and sculpture in North- ern Renaissance. P/NP or letter grading.

109C. European Art of 18th Century. (4) Lecture, three hours. Requisite: course 109A. Baroque art and architecture of Northern Europe, 16th to late 17th century. P/NP or letter grading.


C117D. Aztec Art. (4) Lecture, three hours. Requi- site: course 55B or C117A. Painting, sculpture, archi- tecture, and other arts from ancient civilizations of central Mexico in centuries before Spanish con- quest, with emphasis on their social and historical context and major scholarly debates. Concurrently scheduled with course C216A. P/NP or letter grading.

117E. Colonial Latin American Art. (4) Lecture, three hours. Hybrid visual cultures created in after- math of this cultural collision in Mexico, former Vice- royality of New Spain, from 16th to 18th century. Top- ics include theories of conquest and colonization; role of art and architecture in conquest, conversion, and colonization; indigenous artistic responses and cre- ation of hybrid visual practices in featherwork, manu- scripts, paintings, 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; proessional 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 re- ligious imagery. Letter grading.

118A. Arts of Oceania. (4) Lecture, three hours. Requisite: course 55A. Survey of arts of major island groupings of Pacific, emphasizing style-regions and broad historical relationships. P/NP or letter grading.

118B. Arts of Sub-Saharan Africa. (4) Lecture, three hours. Critical examination of key themes in art and architecture of Africa, with emphasis on ways vi- sual arts and built environment function with respect to larger social and cultural issues. P/NP or letter grading.

118D. Arts of Native North America. (4) Lecture, three hours. Requisite: course 55A. Survey of paint- ing, sculpture, and other arts from Eskimo to peoples of Caribbean and Southwestern U.S. P/NP or letter grading.

118E. Advanced Studies in Non-Western Art. (4) Lecture, three hours. Requisite: course 118A or 118C or 118D. Selected topics in arts of non-Western peo- ples that reflect interests of individual regular and visit- ing faculty members. P/NP or letter grading.

119C. Contemporary Arts of Africa. (4) Lecture, three hours. Survey of African visual practices since mid-20th century, with special emphasis on changing meaning of art object, status of “African” artist, global reception of contemporary African art, and very defini- tions of “contemporary African art.” Concurrently scheduled with course C261A. P/NP or letter grading.

119G. Art in Modern China. (4) Lecture, three hours. Concentrated look at major schools and mas- ters of Chinese art from turn of 20th century to pres- ent, with focus on interaction with foreign cultures and issues of self-identity, assimilation, modernity, tradi- tion, and continuity. Consideration of recent develop- ments in Chinese art in global context. Concurrently scheduled with course C261B. P/NP or letter grading.

117A. Pre-Columbian Art of Mexico. (4) Lecture, three hours. Requisite: course 55B. Study of art of se- lected 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 se- lected Maya-speaking cultures of southern Meso- america from circa 2000 B.C. to Conquest, with par- ticular emphasis on history and iconography. Concur- rently 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 emphasis on history and iconography of art of Peru. Concurrently scheduled with course C218C. P/NP or letter grading.

C140C. History of Korean Buddhist Art. (4) Lec- ture, three hours. Requisite: course 114E. History of Korean Buddhism from Three Kingdoms period to Choson dynasty, with special emphasis on Buddhist sculpture, painting, and architecture. Concurrently scheduled with course C242C. P/NP or letter grading.

C140D. Selected Topics in Korean Art. (4) Lec- ture, three hours. Requisite: course 114E. Variable topics in Korean art that reflect interests of individual regular and/or visiting faculty members. Concurrently scheduled with course C242D. P/NP or letter grading.

1417. Modern Art, 1900 to 1950. (4) Lecture, three hours. Inquiry into 20th-century modernism from Fau- vism to abstract expressionism. Topics include prami- tivism, gender, and sexuality in modernist art; origins of abstraction, collage, photomontage, and ready- made; rise of avant-garde and chance procedures; art, utopia, and political revolution; antimodernism and fascism; mass culture, machine paradigm, and work of art in age of mechanical reproduction. Con- currenty scheduled with course C247. P/NP or letter grading.


1419B. Surrealism, 1924 to 1939. (4) Lecture, three hours; discussion, one hour (when scheduled). Study of art, literature, and film associated with surrealist movement in France, with special attention to dissid- ent surrealism of writer and philosopher Georges Bataille, as well as to challenge to art history posed by surrealism’s engagement with lessons of psychoanaly- sis. Concurrently scheduled with course C249B. P/NP or letter grading.

1520A. Contemporary Art, 1940s to 1950s. (4) Lecture, three hours. Requisite: course 54. Study of major artistic and cultural trends following World War II in U.S. and Europe, covering abstract expression- ism to pop art. Concurrently scheduled with course C250A. P/NP or letter grading.


1520C. Contemporary Art, 1980s to Present. (4) Lecture, three hours; discussion, one hour. Requisite: course 54. Study of politics of representation at end of century, covering dominant strategies and trends in postmodernist art. Concurrently scheduled with course C250C. P/NP or letter grading.

150D. Selected Topics in Contemporary Art. (4) Lecture, three hours. Requisite: course 54. Changing topics in contemporary art (post-1945) that reflect inter- ests of individual regular and/or visiting faculty members. May be repeated once for credit. P/NP or letter grading.


C171A-C171B-C171C. History of Painting. (4- 4-4) Lecture, three hours. Concurrently scheduled with courses C271A-C271B-C271C. P/NP or letter grading.
M172. Armenian Painting, 17th to 20th Century. (4) (Same as Armenian M172.) Lecture, three hours. Overview of development of modern Armenian painting out of its matrix in 17th and 18th centuries. P/NP or letter grading.

M173. Medieval Armenian Miniature Painting. (4) (Same as Armenian M173.) Lecture, three hours. Examination of cultural and historical impact of Armenian miniature paintings. P/NP or letter grading.

C180A. 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 C280A. Letter grading.


C180C. Modern and Contemporary South Asian Art. (4) Lecture, three hours. Topics in modern and contemporary South Asian art from 1900 to present. Concurrently scheduled with course C280C. Letter grading.

195. Museum Studies Internship. (2) Tutorial, four hours; laboratory, one hour. Requisite: course C103A or C103B. Limited to junior/senior Museum Studies minors. Internship in supervised setting at participating host museum at UCLA or in greater Los Angeles area. Participation in ongoing museum projects and operations, with specific work to be determined by host institution in consultation with faculty mentor. Curatorial, educational, communications, public relations, and development work may be included, as well as assistance at public programs and related events. Students meet on regular basis with faculty mentor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty mentor required. P/NP grading.

197. Individual Studies in Art History. (2 to 4) (Formerly numbered 199.) Tutorial, to be arranged. Preparation: 3.0 grade-point average in major. Limited to seniors. Individual intensive study for majors, with scheduled meetings to be arranged between faculty member and student. Designed reading and research for seniors who may be required to write a thesis. May be repeated for maximum of 8 units. Eight units may be applied toward major. Individual contract required. P/NP or letter grading.

198A-198B. Honors Research in Art History. (4-4) (Formerly numbered 195A-195B.) Tutorial, to be arranged. Preparation: completion of minimum of four upper division art history courses with 3.5 departmental grade-point average and overall 3.0 grade-point average. Limited to junior/senior Art History and History/Art History majors. Two-term independent research project under supervision of appropriate faculty member, culminating in departmental honors thesis of approximately 30 pages. Individual contract required. In Progress (198A) and letter (198B) grading.

199. Directed Research in Art History. (2 to 4) Tutorial, two hours. Limited to juniors/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

200. Art Historical Theories and Methodologies. (4) Seminar, three hours. Critical examination of history of discipline of art history, with studies of various theoretical, critical, and methodological approaches to visual arts from antiquity to present. May be repeated for credit with consent of adviser. S/U or letter grading.

201. Topics in Historiography of Art History. (4) Seminar, three hours. Critical examination of historiographic traditions of specific areas and fields within discipline of art history, concentrating on particular time periods, geographical areas, artistic traditions, or work of one or more authors. May be repeated for credit with consent of adviser. S/U or letter grading.

202. Recent Topics in Art History. (4) Seminar, three hours. Focused discussions of specific theoretical and critical traditions within art history, concentrating on particular issues, authors, or methodologies. Concurrently scheduled with course C203A. Letter grading.

203A-C203B. Museum Studies. (4-4) Concurrently scheduled with courses C103A-C103B. S/U or letter grading.

C203A. Museum Studies Practicum. (2 to 4) Lecture, three hours. Requisites: courses C203A, C203B. On-site examination and discussion of selected works, exhibitions, and associated published and distributed materials, and of museum and gallery institutions, practices, and policies. Concurrently scheduled with course C103C. Letter grading.

C203D. Selected Topics in Museum Studies. (4) Seminar, three hours. Changing topics in museological, curatorial, and exhibition practices that reflect interests of regular and visiting faculty members. S/U or letter grading.

C203E. Issues in Materials Preservation. (4) Lecture, three hours. Designed for anthropology, archaeology, and art history graduate students. Introduction to preservation of cultural heritage materials, including what should be preserved and why, as well as who should be involved in decision-making process. Discussion of issues of preservation and restoration of these cultural heritage materials both in museum and field 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 techniques related to sites, buildings, monuments, and collections. Ethical and contextual aspects with reference to changing values, illustrating how cultural materials may have been treated differently according to those values. Concurrently scheduled with course C103D. S/U or letter grading.

M203F. Materials and Techniques of Archaeological Wall Paintings, Rock Art, and Mosaics. (4) (Same as Conservation M250 and Materials Science M212.) Seminar, two hours; laboratory, three hours. Designed for graduate conservation and art history students. Study of techniques and materials used for rock art and ancient cultural and historical impact of ancient experience in replicating ancient paintings and pigment preparation (synthesis) based on scientific data and ancient treatises. Letter grading.


M204A. Digital Imaging and Documentation for Art and Archaeology. (4) (Same as Conservation M215.) Seminar, two hours; laboratory, three hours. Discipline of art history, concentration, and art history students. Introduction to techniques and methods in digital photo-documentation and diagnostic imaging to enhance descriptive documentation, including photogrammetry and laser scanning. Letter grading.

205. Studies in Prints. (4) Seminar, two hours. Critical studies in history and connoisseurship of graphic arts in Western world. May be repeated for credit with consent of adviser. S/U or letter grading.

226. 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 certain paradigmatic texts in field of African art history with critical fluency. S/U or letter grading.

C209A. Baroque Art. (4) Lecture, three hours. Art and architecture of Spain or Italy, 16th to late 17th century. Concurrently scheduled with course C109A. S/U or letter grading.

210. Egyptian Art. (4) Seminar, two hours. Requisites: courses M101A, M101B, M102A. Art in Egypt during New Kingdom period and Graeco-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 photography 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 provide insightful and critical commentary about major features of American life in the 20th century. Open 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.

235. Northern Renaissance Art. (4) Seminar, two hours. Preparation: knowledge of German. Emphasis on selected topics (e.g., particular artist, trend, or problem). Research papers and oral reports required. May be repeated for credit with consent of adviser. S/U or letter grading.

240. Baroque Art. (4) Seminar, two hours. Emphasis on selected topic (e.g., particular artist, trend, or problem). Research papers and oral reports required. Language requirements depend on area of focus. May be repeated for credit with consent of adviser. S/U or letter grading.

M241A-M241B. Seminars: Modern European History. (4-4) (Same as History M230A-M230B) Seminar, three hours. Course M241A is requisite to M241B. May be repeated for credit with consent of adviser. In Progress (M241A) and S/U or letter (M241B) grading.

242A. History of Korean Painting. (4) Lecture, three hours. Requirement: 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.

C242B. History of Korean Ceramics. (4) Lecture, three hours. Requirement: course C140A. 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. Requirement: 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 C140C. S/U or letter grading.

C242D. Selected Topics in Korean Art. (4) Lecture, three hours. Requirement: course 114E. Variable topics in Korean art that reflect interests of individual regular and/or visiting faculty members. Concurrently scheduled with course C140D. S/U or letter grading.

243. Selected Topics in Korean Art. (4) Lecture, three hours. Studies of Korean art under different art-historical perspectives, methods, and theories. Individual studies, with emphasis on professional presentation. Group studies may be linked to exhibition projects. May be repeated with consent of instructor. S/U or letter grading.

244. Topics in European Art, 1700 to 1900. (4) Seminar, two to three hours. May be repeated for credit with consent of adviser. S/U or letter grading.

245. European Art, 1700 to 1900. (4) Seminar, two hours. May be repeated for credit with consent of adviser. S/U or letter grading.

C247. Modern Art, 1900 to 1950. (4) Lecture, three hours; discussion, one hour. Inquiry into 20th-century modernism from Fauvism to abstraction expressionism. Topics include primitivism, gender, and sexuality in modernist art; origins of abstraction, collage, photomontage, and ready-made; rise of automatism and Dada avant-garde in its various geographical locales; modernism and historical avant-garde of early 20th century, tracing in detail emergence of Dada avant-garde in its various geographical locales during World War I. Visual art, literature, film, and performance addressed, with special attention to invention of series of avant-garde strategies crucial to Dada: ready-made, chance procedures, mechanical drawing, and photomontage. Concurrently scheduled with course C147. S/U or letter grading.

C249A. Dada, 1915 to 1923. (4) Lecture, three hours; discussion, one hour (when scheduled). Introduction to modernism and historical avant-garde of early 20th century, tracing in detail emergence of Dada avant-garde in its various geographical locales during World War I. Visual art, literature, film, and performance addressed, with special attention to invention of series of avant-garde strategies crucial to Dada: ready-made, chance procedures, mechanical drawing, and photomontage. Concurrently scheduled with course C149A. S/U or letter grading.
C249B. Surrealism, 1924 to 1939. (4) Lecture, three hours; discussion, one hour (when scheduled). Study of art, literature, and film associated with surrealist movement in Europe. With special attention to dissen- dent surrealism of writer and philosopher Georges Bataille, as well as to challenge to art history posed by surrealism's engagement with lesions of psycho-analysis. Concurrently scheduled with course C149B. S/U or letter grading.

C250A. Contemporary Art, 1940s to 1950s. (4) Lecture, three hours. Requisite: course 54. Study of major artistic and cultural trends following World War II in U.S. and Europe, covering abstract expression- ism to pop art. Concurrently scheduled with course C150A. S/U or letter grading.

C250B. Contemporary Art, 1960s to 1970s. (4) Lecture, two hours; course 54. Study of ambitions and contexts of pop art, minimalism, con- ceptual art, feminist art, performance, land art, and more. Concurrently scheduled with course C150B. S/U or letter grading.


251. Contemporary Art. (4) Seminar, three hours. Selected topics in contemporary art, criticism, and theory. S/U or letter grading.

253. Modern Art. (4) Seminar, two hours. Changing topics in modern art (including illustration and other popular forms) that reflect interests of particular faculty members. 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.

C254. Latin American Art of 20th Century. (4) Lecture, three hours; discussion, one hour (when sched- uled). Modern and contemporary art and architecture of selected Latin American countries, in- cluding both modernist and postmodernist forms, considered in context of social and political concerns, both national and international. May be repeated for credit with consent of adviser. Concurrently sched- uled with course C110H. S/U or letter grading.

255. American Art. (4) Seminar, two hours. Requi- site: course C112A or C112B or C112C, depending on topic. Topics in American art from Colonial period to present. Discussion of weekly readings, student oral presentations, and papers. May be repeated for credit with consent of S/U 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 adviser. Concurrently scheduled with course C115G. S/U or letter grading.

265. Fieldwork in Archaeology. (2 to 8) Fieldwork, to be arranged. Participation in archaeological exca- vations or other archaeological research under super- vision of staff. May be repeated for credit with consent of adviser. S/U or letter grading.

M270. Art Law. (4) (Same as Law M301.) Lecture, three hours. Knowledge of fine arts, arts manage- ment, or international law desirable. Limited enroll- ment; management and art history students may cross-register with consent of instructors. Legal is- sues related to fine arts. Consideration of U.S. do- mestic law as well as international treaties and foreign law in addressing such controversial issues as interna- tional trade in art, art in public places, and moral rights. Distinguished guest speakers and one field trip. S/U or letter grading.

C271A-C271B-C271C. History of Photography. (4- 4-4) Lecture, three hours; discussion, one hour. Con-currently scheduled with courses C171A-C171B- C171C. S/U or letter grading. C271A. 1839 to 1910. Study of origin, social functions, and development of photography in 19th and early 20th centuries, from Niépce to Atget. C271B. 1910 to Present. History of photography in 20th century, with special attention to photography’s entrance into project of avant-garde and its role in formation of postmodern aesthetic. C271C. Selected Topics. Variable topics in history of photography that reflect interests of individual regular and/or visiting faculty members.


C280A. Art and Empire. (4) Lecture, three hours. Examination of relationship between art and imperial ideology and visual culture of turn of 20th century in colonial studies and postcolonial criticism. Concurrently scheduled with course C180A. Letter grading.
Arts and Architecture

Lower Division Course

10. Arts Encounters: Exploring Arts Literacy in 21st Century. (5) Lecture, four hours; discussion, one hour; field trips, three hours; outside study, seven hours. Through series of direct encounters with art and artists across global range of practices, course equips students with kinds of critical skills that enhance their understanding of, and sharpen their appetite for, wide range of artistic practices. Attendance at performance/art events outside normal class schedule is mandatory. P/NP or letter grading.

Upper Division 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, research papers, and oral presentations. Topics announced in advance. May be repeated for maximum of 8 units. P/NP or letter grading.

101. Aesthetics of Multimedia. (4) Lecture, three hours; laboratory, one hour; outside study, eight hours. Arts stand at expressive center of new forms of digital expression described as “multimedia.” Historical roots of this new expression traced over 1,500 years of world culture as preparation for collaborative multimedia student projects. Letter grading.

102SL ArtsBridge. (Formerly numbered 102.) (4) Seminar, three hours; site and peer school visits, three hours; outside study, six hours. Limited to ArtsBridge Program students. Community learning course with focus on arts education in inner-city settings. Study of core issues in creativity and social justice as students develop, implement, and assess original community learning projects in inner-city schools. Collaboration with partner schools in planning, teaching, and evaluation of arts education programs in dance, visual arts, architecture, design/media arts, and ethnomusicology. Limited to UCLA’s ArtsBridge Program that mentors students to partner with community schools through arts. May be repeated for maximum of 8 units. P/NP or letter grading.

192SL ArtsBridge Undergraduate Practicum. (4) Seminar, three hours; practicum, three hours; outside study, six hours. Enforced requisite: course 102SL. Limited to juniors/seniors. Training and supervised practicum in advanced undergraduate students participating in School of Arts and Architecture ArtsBridge Program. Students implement and evaluate original arts education programs under guidance of faculty members in small course settings. May be repeated for maximum of 8 units. P/NP or letter grading.

Scope and Objectives

The Asian American Studies Department promotes the study of Asian Americans and Pacific Islanders in the U.S. from several disciplines. An undergraduate major leading to a B.A. degree is available for those students who wish to pursue their studies about Asian Pacific Americans in more depth, while the graduate program leads to the M.A. degree. Students enrolled in an organized undergraduate major other than Asian American Studies may pursue a minor in the field.

A major goal of the department is to communicate the experiences of Asian Pacific Americans as an ethnic group. Courses examine the important issues and concerns of Asian Pacific Americans, including their history, community, and culture.

Asian American studies is a specialized field of intellectual inquiry in higher education that examines the diverse experiences of Asian American and Pacific Islander Americans, including their histories, communities, cultures, socio-economic mobility, and political participations, and their relationships with ancestral homelands and other Asian diasporas.

Interdisciplinary scholarship has from the outset been the cornerstone of the field, but Asian American studies also seeks to interrogate disciplinary boundaries by adopting comparative and cross-disciplinary or multidisciplinary perspectives to study racial and ethnic relations in America, diasporic and transnational communities, U.S.-Asian relations, and globalization.

The department recognizes its vital historical and continuing linkage with the struggle for the civil rights and social justice of people of color and other disadvantaged social groups. Faculty members are committed to offering a curriculum that embraces the historical and contemporary realities of Asian Americans and Pacific Islanders, supporting research that promotes equality, encouraging community services, and making higher education more inclusive and responsive to American diversity.

The department also aims to be enhanced by its connection to and interaction with the Asian American Studies Center. Established in 1969, the center has been widely recognized as one of the world’s top Asian American studies institutions.

The undergraduate and graduate programs aim to enhance and infuse the UCLA curriculum with an interdisciplinary understanding of the Asian American experience to promote innovative research and cutting-edge scholarship in Asian American studies, provide leadership training to individuals interested in working in Asian American communities, and prepare students for advanced study in the humanities, social sciences, and professional disciplines.

Undergraduate Study

Asian American Studies B.A.

The B.A. program in Asian American Studies provides a general introduction for students who anticipate advanced work at the graduate level or careers in research, public service, and community work related to Asian Pacific Americans. An overall grade-point average of 2.0 or better is required for admission to the major.

Preparation for the Major

Required: Asian American Studies 10 or 10W, and 20.

Transfer Students

Transfer applicants to the Asian American Studies major with 90 or more units must complete as many of the following courses as possible prior to admission to UCLA: two lower division Asian American studies courses or two...
courses that focus on Asian Americans, and one year of proficiency in an Asian language. Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: A total of 13 upper division courses, including one research methods course, two Asian American theme courses, two Asian American or Pacific Islander populations and communities courses, and five Asian American studies elective courses. In addition, three upper division courses (12 to 15 units) must be taken from disciplines outside Asian American studies, including (1) one race, ethnicity, or interethnic relations course, (2) one gender and/or sexuality course, and (3) one non-language course on the history, culture, political, and/or social institutions of Asia. The three additional courses must be selected from the approved list of courses available in the Student Advising Office each term or at http://www.asianam.ucla.edu.

Students must also (1) demonstrate proficiency equivalent to the completion of an elementary one-year course of study in an Asian language prior to graduation or (2) take one of the following writing courses: Asian American Studies 101, English Composition 100W, 129A through 129D, 131A through 131D, 152A through 152D.

No more than 12 graded units of Asian American Studies 195, 197, 199 may be applied toward the minor. Courses 192 and 196 may not be applied toward the minor. Only courses in the department or those multiple-listed with the department may be taken to fulfill requirements for the minor.

All minor courses must be taken for a letter grade (courses offered only on a P/NP grading basis are acceptable), with an overall grade-point average of 2.0 or better, and each must be at least 4 units. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in official research journals, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Asian American Studies offers the Master of Arts (M.A.) degree in Asian American Studies. Two concurrent degree programs (Asian American Studies M.A./Public Health M.P.H. and Asian American Studies M.A./Social Welfare M.S.W.) are also offered.

Asian American Studies Lower Division Courses

10. History of Asian Americans. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 10W. Multidisciplinary examination of history of Asians and Pacific Islanders in U.S. P/NP or letter grading.

10W. History of Asian Americans. (5) Lecture, three hours; discussion, two hours. Enforced prerequisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 10. Multidisciplinary examination of history of Asians and Pacific Islanders in U.S. Satisfies Writing II requirement. Letter grading.

20. Contemporary Asian American Communities. (5) Lecture, three hours; discussion, one hour. Multidisciplinary introduction to contemporary Asian American populations and communities in U.S. Topics include contemporary immigration, demographic trends, sociocultural, economic, and political issues, and interethnic relations. P/NP or letter grading.

30. Asian American Literature and Culture. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 30W. Multidisciplinary introduction to Asian American literature and cultural production, with examination of some combination of novels, short stories, poetry, drama, and intertextual relations. P/NP or letter grading.

30W. Asian American Literature and Culture. (5) Lecture, three hours; discussion, two hours. Enforced prerequisite: English Composition 3 or 3H or English as a Second Language 36. 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, and/or new media. P/NP or letter grading.

30Y. Asian American Literature and Culture. (5) Lecture, three hours; discussion, one hour. Open for credit to students with credit for course 30Y. Multidisciplinary introduction to Asian American literature and cultural production, with examination of some combination of novels, short stories, poetry, drama, performance, film, and/or new media. P/NP or letter grading.

Upper Division Courses

101. Academic Writing in Asian American Studies. (4) Lecture, three hours. Requisite: courses 10 or 10W, and 20. Designed for advanced junior/senior Asian American Studies majors and minors. Advanced study of academic writing in specific Asian American studies subfields, with focus on development and analysis of proposals, reports, and academic journal articles (including literary essays and/or social sciences research papers) in common discursive forms, stylistic patterns, and research practices in given subfield. Themes and focus vary by term. Independent research related to course objective may be pursued with guidance from instructor. Satisfies Writing II requirement. Letter grading.

103. Social Science Research Methods. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Introduction to fundamentals of conducting social research on Asian Americans, providing experience in using some research methods and exercises in evaluating nature and quality of scientific research on Asian American issues. P/NP or letter grading.


104B. Internships in Asian Pacific Communities. (4) Formerly numbered 101B.) Fieldwork, eight hours minimum. Requisite: course 104A or another Asian American studies course (except 199). Integrates academic and empirical work by providing students challenge of performing public service and community work in Asian Pacific or other multicultural communities, and of bringing their ongoing internship experiences back to classroom. P/NP 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 wide range of sources that may include archival materials, oral history, material culture, and more. P/NP or letter grading.
M108. Policy, Planning, and Community. (4) (Same as Urban Planning M122.) Lecture, three hours; field laboratory. Project-oriented methods course on conducting needs assessment in Asian American communities. Geographic information systems to be used to define problems and needs. Letter grading.

M112A. Asian American Literature to 1880. (5) (Same as English M102A.) Lecture, four hours. Requires: English Composition 3 or 3H. Survey of Asian American literature from early period of formation to cultural nationalism of late 1880s and 1970s. Works of such authors as Edith Eaton, Carlos Bulosan, Hisaye Yamamoto, Louis Chu, and Maxine Hong Kingston included. P/NP or letter grading.

M112B. Asian American Literature since 1880. (5) (Same as English M102B) Lecture, four hours. Requires: English Composition 3 or 3H. Survey of contemporary Asian American literature with emphasis on its growing ethnic diversity following influx of new immigrants. Works of such authors as Theresa Cha, Bharati Mukherjee, David Wong Louie, Garrett Hongo, and Jessica Hagedorn included. P/NP or letter grading.

112A. 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, ethnicity, gender, class, and sexual orientation, that shape individual's unique margin. Balanced blend of reading and creative writing. P/NP or letter grading.

113. Asian Americans and Law. (4) Lecture, four hours. Survey of major federal and California case and legislative law directed specifically toward Asian Americans from 1850 to World War II and relocation. Major subject areas include anti-Asian labor legislation, legal prohibitions against Asian rights to testify, and equal educational opportunities. Asian/Pacific American educational experiences, problems of gender, race, and class, national- and political dimensions of films. P/NP or letter grading.

M129. Health Issues for Asian Americans and Pacific Islanders: Myth or Model? (4) (Same as Community Health Sciences M140.) Lecture, three hours; fieldwork, three hours. Enforced requisite: course 129. Examination of health of Asian Americans and Pacific Islanders; identification of gaps in health status indicators and barriers to both care delivery and research for these populations. Letter grading.


M130B. Chinese Immigrant Literature and Film. (4) (Same as Comparative Literature M171.) Lecture, three hours. Knowledge of Chinese experience important. In-depth look at Chinese immigrant experience by reading literature and watching films. Theories of class, gender, and race to inform thinking and discussion of relevant issues. P/NP or letter grading.

130C. Chinese Immigration. (4) (Same as Sociology M153.) Lecture, three hours, discussion, one hour. Survey of sociological studies of Chinese immigration, with focus on international context, organization, and institutions of Chinese America and its interactions with social environment. P/NP or letter grading.


131B. Japanese Americans and Incarceration. (4) Seminar, three to four hours. Requires: course 10 or 10W. Designed for juniors/seniors. In-depth analysis of key literature about mass incarceration of Japanese Americans during World War II and long-range effects of internment. Emphasis on research. Original paper based on primary sources held by University of California required. Letter grading.


M132B. Korean American Literature. (4) (Same as Comparative Literature M168.) Seminar, three hours. Course examines 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.


141A. Asian American and Pacific Islander Leadership Development Project Part I: Leadership. (4) (Formerly numbered 118A.) Lecture, three to four hours. Limited to juniors/seniors. First term of two-term series on leadership development, with focus on intellectual and practical learning of leadership concepts, models, and skills. In Progress grading (credit to be given only on completion of course 141B).

141B. Asian American and Pacific Islander Leadership Development Project Part II: Field Studies. (4) (Formerly numbered 118B.) Lecture, three to four hours; fieldwork, three hours. Enforced requisite: course 141A. Limited to juniors/seniors. Second 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 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) (Formerly numbered 107A.) Laboratory, three hours. Requires: course 142A. Continuing 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, composite/ADR, 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. (4) (Formerly numbered 107B.) Laboratory, three hours. Enforced requisite: 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/ADR, 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 developments 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 expression. Introduction to ethnocommunications theory and methodology, developed to allow diverse peoples and cultures to reclaim and promote their histories, experiences, and contributions through story, analysis, and visual usage of new media technologies. P/NP or letter grading.
M166A. Immigration Rights, Labor, and Higher Education. (4) (Same as Chicana and Chicano Studies M166A and Labor and Workplace Studies M166A.) Seminar, three hours. New immigrant rights movement, with particular attention to labor and higher education. Overview of history of immigrant rights movements and examination of development of coalition efforts between labor movement and immigrant rights movement nationally and locally. Special focus on issues of immigrant students in higher education, challenges facing undocumented immigrant students, and legislative and policy issues that have emerged. Students conduct oral histories, family histories, research on immigration and immigrant rights, write poetry and spoken word about immigrant experience, and work to collectively develop student publication on immigrant students in higher education. P/NP or letter grading.

M166B. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Chicana and Chicano Studies M166B and Labor and Workplace Studies M166B.) Seminar, two hours. Requisite: course M166A. Expansion of research conducted by students in course M166A involving oral histories, research on immigration/labor/higher education, and exploration of legal issues impacting undocumented students. Letter grading.

M166C. Worker Center Movement: Next Wave Organizing for Justice for Immigrant Workers. (4) (Same as Chicana and Chicano Studies M166C and Labor and Workplace Studies M167.) Seminar, three hours. Development of theoretical and practical understanding of worker center movement, with focus on historical factors that have led to emergence and growth of worker centers. Role of worker centers in promoting multietnic and multicampaigning for workplace and economic justice. Transnational cross-border solidarity issues and rights of undocumented workers. P/NP or letter grading.

M167A-M167B. Intraracial Dynamics in American Society and Culture. (5-5) (Same as Afro-American Studies M167A-M167B and Chicana and Chicano Studies M167A-M167B.) Seminar, two hours. Not open to freshmen or students with credit for GE Clusters 20A and/or 20B. Examination of nature and meaning of race, racism, and inter racial dialogues in U.S. society, with various perspectives, including sociology, history, literary criticism, and film studies. Race as social and historical category that shapes contemporary American life. P/NP or letter grading.


M168. 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. Exposes students in outreach and retention of students in higher education, especially through student-initiated programs, efforts, activities, and services, with focus on UCLAs as case. May be repeated for credit. P/NP or letter grading.

M169. 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 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.

170. Transnational Perspectives on Asian American Literature. (4) Lecture, four hours. Enforced for juniors/seniors. Introduction to new frameworks for understanding Asian American political and racial history by building linkages between roots of social construction of race, and multistranded, multivalent social processes and perceptions that now constitute globalizing Asian America. Particular focus on transnational aspects of various historical and contemporary political topics in context of Asian American experience, including that of newer, marginalized Asian American communities. P/NP or letter grading.

171A. Critical Issues in U.S.-China Relations. (4) Lecture, three hours. 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. 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 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.


M172. Indian Identity and Diaspora. (4) (Same as History M172B.) Lecture, four hours. Designed for juniors/seniors. History of overseas Indian communities; transformations of Hinduism in diaspora; emergence of new diasporic art forms such as bhangra and chhau; and relations between Indian and other racial and ethnic groups; Indian women as embodiment of Indian culture; diasporic identi¬ties. P/NP or letter grading.

M173. Topics in Vietnamese Cinema and/or Literature. (4) (Same as Vietnamese M155.) Lecture, three hours. Knowledge of Vietnamese not required. Critical and historical examination of literary and/or filmic representations connected to Vietnamese diasporas such as empire, nation, diaspora, and globalization. Original language course materials available for interested students. P/NP or letter grading.

187A. Special Courses in Research Methodologies. (4) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in multidisciplinary research methodologies in Asian American studies. May be repeated for credit with topic change. P/NP or letter grading.

187B. Special Courses in Asian American Themes. (4) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in selected themes, including issues in cultural formation, religion, educa¬tion, social class, economic development, social movement, politics, and public policy. May be repeatsed for credit with topic change. P/NP or letter grading.

187C. Special Courses in Asian American Populations and Communities. (4) Lecture, three hours; discussion, one hour (when scheduled). Limited to ju¬niors/seniors. Variable topics in historical and contempor¬ary issues pertaining to different Asian-origin sub¬groups and their respective communities. May be re¬peated for credit with topic change. P/NP or letter grading.

187D. Special Courses in Comparative Race, Ethnicity, Gender, and Sexuality. (4) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in selected issues on race, ethnicity, gender, and sexuality from comparative perspective. May be repeated for credit with topic change. P/NP or letter grading.

187E. Special Courses in Transnationalism and Diasporas. (4) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in selected issues pertaining to transnationalism and diasporas. May be repeated for credit with topic change. P/NP or letter grading.

191A. Topics in Research Methodologies. (4) Seminar, three to four hours. Limited to juniors/se¬niors. Variable topics in multidisciplinary research methodologies in Asian American studies. May be re¬peated for credit with topic change. P/NP or letter grading.
191B. Topics in Asian American Themes. (4) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in selected Asian American themes, including issues in cultural formation, religion, education, social class, economic development, social movement, politics, and public policy. May be repeated for credit with topic change. P/NP or letter grading.

191C. Topics in Asian American Populations and Communities. (4) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in historical and contemporary issues pertaining to different Asian-origin subgroups and their respective communities. May be repeated for credit with topic change. P/NP or letter grading.

191D. Topics in Comparative Race, Ethnicity, Gender, and Sexuality. (4) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in selected comparative and international issues pertaining to transnationalism and diasporas. May be repeated for credit with topic change. P/NP or letter grading.

191E. Topics in Transnationalism and Diasporas. (4) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in selected comparative and international issues pertaining to transnationalism and diasporas. May be repeated for credit with topic change. P/NP or letter grading.

191F. Topics in Asian American Literature. (5) (Same as English M179C.) Seminar, three hours. Enforced requisite: English Composition 3 or 3H. Variable special topics course in Asian American literature. Topics include specific genres (autobiography, poetry, or drama); specific nationalities within Asian American community; and themes related to such problems as generational differences, gender politics, or interethnic encounters. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

192. Undergraduate Practicum in Asian American Studies. (2 or 4) Seminar, two or four hours. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students in Asian American studies courses. Students assist in preparation of materials and development of innovative programs with guidance of faculty members in small course settings. May not be applied toward departmental major or minor requirements. May be repeated for credit. P/NP grading.

195. Community or Corporate Internships in Asian American Studies. (4) Tutorial, two hours; fieldwork, eight hours. Requisites: courses 10 or 10W, and 20. 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.

196. Research Apprenticeship in Asian American Studies. (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 to learn skills and techniques. May not be applied toward departmental major or minor requirements. May be repeated for credit. Individual contract required. P/NP grading.

197. Individual Studies in Asian American Studies. (2 to 4) Tutorial, three hours. Requisites: course 10 or 10W or 20 or comparable knowledge in Asian American studies, 3.0 grade-point average or better. Individual contract required. P/NP or letter grading.

198A. Honors Research in Asian American Studies. (4) Tutorial, three to four hours. Requisites: course 101A through M108, 187A, or 191A. Introduction to research techniques and applications of methodologies in study of Asians and Pacific Islanders in U.S. Development of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

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 thesis or comprehensive research project under direct supervision of faculty member. Individual contract required. In 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 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 Asian American history and economic/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. Evaluation of traditional and contemporary theories and models of community for their appropriateness to understanding Asian Pacific American communities. Consideration of specific topics that explicate development, structure, and dynamics of Asian Pacific American communities in studying community issues and concerns. S/U or letter grading.


200D. Asian American Literature and Culture. (4) Seminar, three hours. Examination of questions arising from Asian American literary and cultural criticism from mid-1980s to present, with focus on assumptions, possibilities, and limitations of certain theoretical perspectives and positions that have become important in Asian American critical practice. S/U or letter grading.

203. Asian American Research Methods. (4) Seminar, three hours. Introduction to empirical research methods, stressing uses and relevancy in research with ethnic minority populations. Review of characteristics and logical processes of research and applicability of scientific and scholarly inquiry in advancing knowledge. S/U or letter grading.

215A-215B. Asian American Jurisprudence. (3 to 6 each) (Formerly numbered M215.) (Same as Law M315.) Lecture, three hours. Course 215A is enforced requisite to 215B. Designed for graduate students. Through judicial opinions, commentary, and historical readings, examination of how American law has shaped demographics, experiences, and possibilities of Asian American communities and how they shape American law as well. In Progress (215A) and S/U or letter (215B) grading.

222. Colonialism and Law in Pacific. (4) Seminar, three hours. Reading seminar on broad topics of colonialism and law and their impact on Asian American communities and other ethnic minority communities. Includes legal history, politics, and social dynamics. S/U or letter grading.

M239. Race and Ethnicity as Concept in Practice and Research. (4) (Same as Social Sciences M239.) Discussion, three hours. Integration of cross-cultural findings in healthcare with current American (U.S.) healthcare system paradigms to facilitate designing culturally based public health programs and train culturally competent practitioners. Letter grading.

M260. Topics in Asian American Literature. (4) (Same as English M260A.) Seminar, three hours. Graduate seminar that examines and critically evaluates writings of Asian Americans. May be repeated for credit. S/U or letter grading.

M261. Theorizing Third World. (4) (Same as Comparative Literature M274.) Seminar, three hours. 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.


297B. Asian Migration to U.S. (4) Seminar, three hours. Emphasis on Asia as main regional source for international migrants. Topics include patterns and theories of international migration and their relevance to Asian experience, sending and receiving country perspectives, research and policy issues. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, three hours. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. Unit credit may be applied toward full-time equivalence but not toward 11-course requirement for M.A. May be repeated for credit. S/U grading.

490. Writing Workshop for Graduate Students. (2) Lecture, one hour; discussion, one hour. Practice in writing reports, grant proposals, abstracts, theses, and article-length research papers. Analyzing rhetorical and stylistic features of essays in various Asian American journals helps students improve both their prose style and editorial abilities. Four units may be applied toward M.A. degree requirements. May be repeated once for credit. S/U grading.

495. Supervised Teaching of Asian American Studies. (4) Seminar, three hours. Preparation: apprenticeship as teaching assistant, associate, or fellow. Graduate course designed as teaching assistant in Asian American studies. Designed for graduate students. Required of all new teaching assistants. Special emphasis on teaching responsible 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 Research. (2 to 8) Tutorial, to be arranged. S/U or letter grading.

Asian Languages and Cultures / 165

Scope and Objectives

The Department of Asian Languages and Cultures offers a wide range of courses in the languages, literatures, religions, and cultural heritage of China, Japan, and Korea, as well as South and Southeast Asia. The department offers training in many specialized fields such as archaeology, film, folklore, history, linguistics, literature, mythology, religious studies, and cultural studies. Courses prepare students for careers in business, government service, international relations, journalism, law, publishing, teaching, and academic professions.

Undergraduate majors earn a Bachelor of Arts degree. The graduate program offers Master of Arts and Ph.D. degrees. At all levels of study, various major fields are possible.

For undergraduates, the department offers majors that combine language study with courses taught in English that examine the rich cultural heritage of China, Japan, and Korea, as well as South and Southeast Asia. The majors also provide opportunities for education abroad in an Asian country. The language courses aim to develop the four skills of speaking, aural comprehension, reading, and writing in a balanced and mutually supportive manner. The lecture and seminar courses aim to develop critical thinking and writing skills through in-depth study of a culture within a broader historical and comparative context.

Undergraduate majors who wish to pursue graduate degrees are encouraged to apply for admission to the honors program.

At the graduate level, the department offers a program leading to an M.A. degree in several fields of Asian culture. The M.A. degree is preparatory to entrance into the Ph.D. program. The Ph.D. program, which is very selective, trains research scholars for academic careers in specialized fields.

Courses for Nonmajors

The department offers many courses in which knowledge of Asian languages is not required. A current list is available in the department office (290 Royce Hall) and at http://www.alc.ucla.edu.

Undergraduate Study


The department also offers two minors — Asian Humanities minor and Asian Languages minor. All courses 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, Filipino 6, Hindi-Urdu 6, Indonesian 6, Japanese 6, Korean 6, Thai 6, Vietnamese 6, or equivalent); one civilization course (e.g., Chinese 50, Japanese 50, Korean 50, or one introduction to religions course (e.g., Asian 60, 60W, 61, South Asian 60, Southeast Asian 30) 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
The Major

**Required:** Three upper division language courses in one Asian language offered by the department and six 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.

**Preparation for the Major**

Required: Completion of the intermediate sequence in one Asian language offered by the department (e.g., Chinese 6, Filipino 6, Hindi-Urdu 6, Indonesian 6, Japanese 6, Korean 6, Thai 6, Vietnamese 6, or equivalent); one introduction to religions course from Asian 60, 60W, 61, South Asian 60, or Southeast Asian 30.

**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](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Five upper division Chinese language courses (of which at least two must be in the premodern language or texts), three upper division Chinese literature courses, two upper division electives in Chinese, and one upper division elective within the department.

**Japanese B.A.**

**Preparation for the Major**

**Required:** Japanese 6 or equivalent, and 50 or 60.

**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](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Five upper division Japanese language courses (of which at least two must be in the premodern language or texts), three upper division Japanese literature courses, two upper division electives in Japanese, and one upper division elective within the department.

**Korean B.A.**

**Preparation for the Major**

**Required:** Korean 6 or equivalent, 50.

**Transfer Students**

Transfer applicants to the Korean major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Korean and one Korean civilization course.

Refer to the UCLA Transfer Admission Guide at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](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 equivalent, 50.

**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](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Five upper division Korean language courses, three upper division Korean literature courses, two upper division electives in Korean, and one upper division elective within the department.

**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 an overall GPA of 3.0. Students should apply for admission by Winter Quarter of their junior year and, at the time of admission, must have completed at least two upper division courses in their major. For application forms and further information, contact the departmental undergraduate adviser.

**Requirements**

Two honors projects, a seminar, and an honors thesis are required. The honors project consists of special research on a topic in an upper division course in their major selected in consultation with the instructor, resulting in a written report to be completed with a grade of B+ or better, in addition to the normal course requirements. All honors students are required to demonstrate the ability to conduct research by writing an honors thesis. In preparation for this project, students must take Asian 191H, in which they write a seminar paper. At least one honors project must be completed prior to enrolling in course 191H. After completing the seminar, they must also take Asian 198 during which they revise their seminar paper into an honors thesis under the direction of a faculty member. Course 198 (4 units minimum) must be taken in addition to courses applied toward major requirements. 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, (3) complete an honors project in each of two upper division courses within the department, (4) complete an undergraduate seminar within the department, and (5) complete Asian 198.

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, (3) complete an honors project in each of two upper division courses within the department, (4) complete an undergraduate seminar within the department, and (5) complete Asian 198 with a grade of A.

**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 file a petition with the departmental undergraduate adviser.

Required Lower Division Courses (10 units): Two courses from Asian 60, 60W, 61, Chinese 50, Japanese 50, 60, Korean 50, South Asian 60, Southeast Asian 30.

Required Upper Division Courses (20 units): Five courses in the department concerning Asian culture (e.g., film, folklore, history, linguistics, literature, mythology, religious studies).

No more than 4 units may be applied toward both this minor and a major or minor in another department or program, and at least 16 units must be taken in residence at UCLA.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Asian Languages and Cultures offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Asian Languages and Cultures.

Asian Lower Division Courses

60. Introduction to Buddhism, (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 60W. Knowledge of Asian languages not required. General survey of development of Buddhism in India, with focus on those religious doctrines and meditative practices most essential to various Asian traditions of Buddhism. Letter grading.

60W. Introduction to Buddhism, (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 60W. Knowledge of Asian languages not required. Knowledge of Asian languages not required. General survey of development of Buddhism in India, with focus on those religious doctrines and meditative practices most essential to various Asian traditions of Buddhism. Letter grading.

60W. Introduction to Buddhism, (5) Lecture, three hours; discussion, one hour. Knowledge of Asian languages not required. Introduction to Zen traditions and to interplay between Zen and other fundamental cultural and religious concerns in East Asia. Topics include role of Zen within Buddhist thought and practice, artistic and literary arts, society, and daily life. Letter grading.

70A-70B-70C. Popular Culture in East Asia. (5-5-5) Lecture, three hours; discussion, one hour. Popular cultures in China, Japan, Korea, and Vietnam. Topics include popular religion, language, literature, arts, material culture, cinema, and music. Themes include identities, gender, sexuality, and class relations. Letter grading. 70A, 70B, 17th through 19th Centuries; 70B, 1895 to 1945; 70C, From 1945.

Upper Division Courses
120. Languages and Cultures of East Asia. (4) Lecture, three hours; discussion, one hour. 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 — to show what they share and how they differ in terms of linguistic features, historical development, and cultural outputs 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. For credit with topic change. Letter grading.

151. Buddhist Literature in Translation. (4) Formerly numbered 161.) Lecture, three hours. Recommended preparation: prior course on Buddhism or traditional Asian religions. Knowledge of Asian languages not required. Readings from the literature of Indic and non-Indic origin, with emphasis on key Buddhist themes and critical issues in cross-cultural interpretations of Asian religious texts. Letter grading.

152. Tibetan Buddhism. (4) Lecture, three hours. Knowledge of Asian languages not required. Survey of thought and practices of Buddhism in Tibet from its beginnings to present. Letter grading.

161. Topics in Asian Religions. (4) Lecture, three hours. Knowledge of Asian languages not required. In-depth examination of selected topics in one or more religious traditions of Asia. Topics vary, but may include death, gender, and state and religion. May be repeated for credit with topic change. Letter grading.

162. Buddhist Meditation Traditions. (4) Lecture, three hours. 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, symbolic 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 religions. Knowledge of Asian languages not required. Investigation of various themes in development of Buddhist traditions across historical periods as well as national and cultural boundaries, including issues of praxis, politics, and translation. Letter grading.

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 linguistic approaches to history of religions. 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, 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. Introduction to history of field, bibliography, relations with other disciplines, and current issues and research trends. S/U or letter grading.


203. Variable Topics in East Asian Linguistics. (4) Seminar, three hours. Advanced course that explores topics in East Asian linguistics critical to the research of current research on Asian languages and in-depth analysis of linguistic data. Topics include linguistic structure, communicative function, pragmatics, language, society, and culture, and language change. May be repeated for credit. S/U or letter grading.

205. Variable Topics in East Asian Culture and History. (4) Seminar, three hours. Selected topics in East Asian culture and history, 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 topics. S/U or letter grading.


220A-220B. Seminars: Topics in Cultural Studies. (4-4) Seminar, three hours. Complements course 210. Further investigation of methodology and materials of cultural studies in connection with specific topics selected by instructors. May be repeated for credit. In Progress (220A) and letter (220B) grading.

222A-222B. Seminars: Corpus Linguistics. (4-4) Formerly numbered 222.) Seminar, three hours. Construction and exploitation of computerized language corpora for studying issues in areas such as lexicology, discourse grammar, language change and variation, language learning, and teaching. Discussion of special issues in working with East Asian language corpora. In Progress (222A) and S/U or letter (222B) grading.

230A-230B. Seminars: Theoretical Topics in East Asian Literature. (4-4) Seminar, three hours. Preparation: reading knowledge of at least one East Asian language. Survey of topics that are brought to fore by reading of literature from or about East Asia. Readings from both Western and Eastern theoreticians; issues of translation, comparison, and categorization. In Progress (230A) and letter (223B) grading.

238. Travel Writing in East Asia. (4) Lecture, three hours. Recommended preparation: Chinese 50 or Japanese 50 or 60. Exploration of travel writing about countries of East Asia, primarily China and Japan, with focus on English translations of works by native writers and by foreign visitors through centuries. Currently scheduled with course C138B. Letter grading.

240A-240B. Seminars: Topics in East Asian Literary History. (4-4) Seminar, three hours. Preparation: reading knowledge of at least one East Asian language. Critical issues common to literary historiography in East Asia, including periodization, canon, ideology, interaction between high and low culture, written and oral, etc. In Progress (240A) and letter (240B) grading.


245A-245B. Seminars: Position of Modernity in East Asian Literature. (4-4) Seminar, three hours. Preparation: at least five years of one East Asian language. Designed for graduate students. Course 245A concerned with conceptual architecture and archaeology of modernity, with readings largely from European sources. In-class debate probes relevance of these readings for work as Asians. Focus on Asian writings in course 245B. In Progress (245A) and letter (245B) grading.


255. Topics in Southeast Asian Literature and/or Cinema. (4) Seminar, three hours. Knowledge of one Southeast Asian language recommended but not required. 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.

256A-256B. Seminars: Selected Topics in Buddhist Studies. (4-4) Seminar, three hours. Coverage varies. May be repeated for credit. In Progress (256A) and letter (256B) 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, philosophical, phenomenological, political, reductionist, and other approaches. Readings of primary and secondary sources of modern scholarship. Currently scheduled with course C170. Letter grading.

281A-281B. Field Methods for Study of East Asian Oral Traditions. (4-4) Seminar, three hours. Description 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.

M282. 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 hardly explored area of study of colonialism. S/U or letter grading.

293. Graduate Student Colloquium. (4) Research group organized 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.
Chinese

Lower Division Courses

1. Elementary Modern Chinese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 or Chinese placement test. 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.

2. Elementary Modern Chinese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1A or Chinese placement test. 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.

3. Elementary Modern Chinese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2 or Chinese placement test. 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.

4. Intermediate Modern Chinese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2A or Chinese placement test. 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.

5. Intermediate Modern Chinese. (5) Lecture, five hours. Enforced requisite: course 3 or Chinese placement test. 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.

6. Intermediate Modern Chinese. (5) Lecture, five hours. Enforced requisite: course 3A or Chinese placement test. 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 Chinese not required. General survey of religious life in China, with emphasis on everyday religious practice over doctrine, and themes common to Buddhism, Daoism, and Confucianism. P/NP or letter grading.

7. Variable Topics in Chinese Culture. (4) Lecture, three hours. Knowledge of Chinese language or culture not required. Variable topics course covering many different aspects of Chinese culture. Consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change. P/NP or letter grading.
Upper Division Courses

100A-100B-100C. Advanced Modern Chinese. (4-4-4) Lecture, two hours; discussion, two hours. Enforced requisite: course 6, 6A, 10, or Chinese placement test. Course 100A is enforced requisite to 100B, which is enforced requisite to 100C. Not open to students who have taken, from whatever source, enough Chinese to qualify for more advanced courses. Materials selected from contemporary Chinese publications, with emphasis on social sciences. Texts analyzed for their linguistic features and social and cultural background. Readings, compositions, informal debates on topical issues, and oral presentations. Offered in summer only. P/NP or letter grading.

100L. Advanced Modern Chinese: Intensive. (12) Lecture, eight hours; discussion, eight hours. Enforced requisite: course 6 or 10 or Chinese placement test. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Intensive course equivalent to courses 100A, 100B, and 100C. Materials selected from contemporary Chinese publications, with emphasis on social sciences. Texts analyzed for their linguistic features and social and cultural background. Readings, compositions, informal debates on topical issues, and oral presentations. Offered in summer only. P/NP or letter grading.

101A-101B. Advanced Readings in Modern Chinese. (4-4) Lecture, two hours; discussion, two hours. Enforced requisite: course 100C or 100I or Chinese placement test. Not open to students 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 magazines, journals, and books related to humanities and social sciences. Each course may be taken independently for credit. 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. 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. Readings and discussion of works of modern Chinese literature. Each course may be taken independently for credit. Letter grading.


139. Gardens in China. (4) (Formerly numbered Asian C139.) Lecture, three hours. Recommended preparation: Chinese 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.

140A-140D. Readings in Classical Chinese Literature. (4 each) Lecture, three hours. Enforced requisite: course 110C. Advanced classical Chinese. Readings and discussion of works of premodern Chinese literature. Each course may be taken independently for credit. Letter grading. 140A. Poetry; 140B. Prose; 140C. Fiction; 140D. Philosophical Texts. (Formerly numbered 170.)

C150A. Lyrical Traditions. (4) Lecture, three hours. Knowledge of Chinese not required. Readings in English translations of selected writings of traditional China, with emphasis on development of subjectivity and modes of address. May be taken independently for credit. Concurrently scheduled with course C250A. P/NP or letter grading.

C150B. Traditional Narrative and Drama. (4) Lecture, three hours. 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 and Culture. (4) Lecture, two hours; discussion, one hour. Knowledge of Chinese not required. Investigation of various topics in contemporary Chinese literature and culture, including ideas and poetics of Chinese postmodernism, nativism, feminism, mass culture, and media. 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 cinemas, 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.


156. Variable Topics in Culture and Society in Taiwan. (4) (Formerly numbered 156.) Seminar, three hours. 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 with topic change. Concurrently scheduled with course C257. Letter grading.


156B. Traditional Narrative and Drama. (4) Lecture, three hours. 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.


C175. Introduction to Chinese Thought. (4) Lecture, three hours. Knowledge of Chinese not required. Survey of Chinese thoughts represented in texts of Zhou through early Han periods (circa 1000 to 100 B.C.E.), with focus on invention of “Confucian” tradition (including Five Classics) and on defenses of that tradition against challenges from “Mohists,” “Legalists,” and other groups of thinkers. Concurrently scheduled with course C275. Letter grading.


188. Chinese Mythology. (4) Lecture, three hours. 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 Chinese arts. Letter grading.


189A. Chinese Ethnology and Calligraphy. (4) Lecture, three hours. Recommended requisite: course 3. Coverage of (1) development of Chinese writing system from “Pottery Inscriptions” 6,000 years ago to modern “Simplified Forms” and studies of Six Scripts principles that were used to form Chinese characters and (2) aesthetic training of calligraphic art and its appreciation with focus on ways of recognizing and interpreting “Cursive Style,” common form of handwriting. Letter grading.

191A. Variable Topics Research Seminars: 20th-Century China and Taiwan. (4) Seminar, three hours. Designed for seniors. Research seminar on selected topics in modern and contemporary literature and culture from China and Taiwan. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

191B. Variable Topics Research Seminars: 20th-Century China and Taiwan. (4) Seminar, three hours. Designed for seniors. Research seminar on selected topics in modern and contemporary literature and culture from China and Taiwan. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

197. Individual Studies in Chinese. (4) Tutorial, to be arranged. Limited to juniors/seniors and graduate students who desire more advanced or specialized instruction in Chinese. Independent study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required; see undergraduate adviser. P/NP or letter grading.

Graduate Courses

200A. Research Methods in Chinese. (4) Seminar, three hours. Requisite: course 110C. Lectures and discussion designed to develop basic skills in using traditional Chinese research materials. Topics include classical dictionaries; sinological indexes; bibliographical, biographical, and geographical sources; encyclopedias; anthologies; rare editions; illustrated matter and calligraphy. S/U grading.

200B. Proseminar: Premodern Chinese Literature. (4) Seminar, three hours. Introduction to major bibliographical and methodological resources in the study of premodern Chinese literature, with focus on research tools in field and on secondary English materials. Major literary genres, periods, and authors. S/U or letter grading.

200C. Proseminar: Modern Chinese Literature. (4) Seminar, three hours. Introduction to major bibliographical and methodological resources in the field of modern Chinese literature, with focus on research tools and on scholarship in English on modern literary trends and genres. S/U or letter grading.
295A-295B. Seminars: Selected Topics in Chinese Cultural History. (4-4) Seminar, three hours. Discussion and research on major themes related to Chinese culture, such as understandings of Chinese civilization and Chinese dynastic history. Other topics include cultural developments of ancient and medieval China. May be repeated for credit. In Progress (295A) and letter (295B) grading.

Filipino

Lower Division Courses

1. Introductory Filipino. (5) (Formerly numbered Southeast Asian 70A.) Lecture, two hours; discussion, three hours. Course 1 is enforced requisite to 2, which is enforced requisite to 3. Coverage of basic Filipino/Tagalog grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Introductory Filipino. (5) (Formerly numbered Southeast Asian 70B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 1. Coverage of basic Filipino/Tagalog grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Intermediate Filipino. (5) (Formerly numbered Southeast Asian 70C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 2. Coverage of basic Filipino/Tagalog grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

4. Intermediate Filipino. (5) (Formerly numbered Southeast Asian 71A.) Lecture, two hours; discussion, three hours. Enforced requisite: course 3. Course 4 is enforced requisite to 5, which is enforced requisite to 6. Reinforcement of basic Filipino/Tagalog 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 Filipino. (5) (Formerly numbered Southeast Asian 71B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 4. Reinforcement of basic Filipino/Tagalog 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 Filipino. (5) (Formerly numbered Southeast Asian 71C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 5. Reinforcement of basic Filipino/Tagalog 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. Advanced Filipino: Reading and Writing. (4) (Formerly numbered Southeast Asian 172A.) Lecture, three hours. Enforced requisite: course 6 or Filipino/Tagalog placement test. Designed to move students with intermediate level of proficiency toward greater proficiency and fluency in reading, writing, speaking, and listening in Filipino language. Coverage of skills in effective use of language: description, narration, exposition, and argumentation. How to analyze different elements of writing and reading of pieces from several genres: contemporary Filipino writing. P/NP or letter grading.

130A. Filipino Short Story. (4) (Formerly numbered Southeast Asian 175.) Lecture, three hours. Enforced requisite: course 6 or Filipino/Tagalog placement test. General background knowledge on how Filipino writers view themselves and society, historically and diametrically. Sample of short stories written in Filipino/Tagalog language with some written in English for Filipino readers. Viewpoints of characters and their worldviews. P/NP or letter grading.
Hindi-Urdu
Lower Division Courses

1. Introductory Hindi-Urdu. (5) Formerly numbered South Asian 40A.) Lecture, two hours; discussion, three hours. Course 1 is enforced requisite to 2, which is enforced requisite to 3. Coverage of basic Hindi grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Introductory Hindi-Urdu. (5) Formerly numbered South Asian 40B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 1. Coverage of basic Hindi grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Introductory Hindi-Urdu. (5) Formerly numbered South Asian 40C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 2. Coverage of basic Hindi grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.


5. Intermediate Hindi-Urdu. (5) Formerly numbered South Asian 41B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 4. Enforced requisite to 5, which is enforced requisite to 6. Reinforcement of basic Hindi grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

6. Intermediate Hindi-Urdu. (5) Formerly numbered South Asian 41C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 5. Reinforcement of basic Hindi grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

Indonesian
Lower Division Courses

1. Introductory Indonesian. (5) Formerly numbered Southeast Asian 80A.) Lecture, two hours; discussion, three hours. Course 1 is enforced requisite to 2, which is enforced requisite to 3. Not open to students who have learned enough Indonesian to qualify for more advanced courses. Coverage of basic Indonesian grammar, with equal emphasis on reading, writing, and speaking skills. P/NP or letter grading.

2. Introductory Indonesian. (5) Formerly numbered Southeast Asian 80B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 1. Not open to students who have learned enough Indonesian to qualify for more advanced courses. Coverage of basic Indonesian grammar, with equal emphasis on reading, writing, listening, and speaking skills. P/NP or letter grading.

3. Introductory Indonesian. (5) Formerly numbered Southeast Asian 80C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 2. Not open to students who have learned enough Indonesian to qualify for more advanced courses. Coverage of basic Indonesian grammar, with equal emphasis on reading, writing, listening, and speaking skills. P/NP or letter grading.

4. Intermediate Indonesian. (5) Formerly numbered Southeast Asian 81A.) Lecture, five hours. Enforced requisite: course 3. Course 4 is enforced requisite to 5, which is enforced requisite to 6. 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. (5) Formerly numbered Southeast Asian 81B.) Lecture, five hours. Enforced requisite: course 4. 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. (5) Formerly numbered Southeast Asian 81C.) Lecture, five hours. Enforced requisite: course 5. 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. (5-5-5) Formerly numbered Southeast Asian 182A-182B-182C.) Lecture, five hours; discussion, three hours. P/NP or letter grading.

5. Intermediate Modern Japanese. (5) Lecture, five hours; discussion, three hours. Enforced requisite: course 4 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; discussion, three hours. Enforced requisite: course 5 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. Intermediate Readings in Modern Japanese. (4) Lecture, three hours. Enforced requisite: course 5 or Japanese placement test. Not open to students with credit for course 100A or who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Development of overall competency in reading intermediate-level Japanese materials. Instruction in understanding grammar and practical expressions, as well as expansion of Kanji and vocabulary to achieve higher ability in comprehension of written materials in Japanese. Translations from Japanese to English, as well as from English to Japanese. May be used to fulfill lower division language requirement at UCLA, but course 6 must be taken to progress to 100A. P/NP or letter grading.

8. Elementary Japanese: Intensive. (15) Lecture, five hours; discussion, 15 hours. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. 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. Letter grading.

10. Intermediate Modern Japanese: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Enforced requisite: course 5 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. Letter grading.


60. Images of Japan: Literature and Film. (5) Lecture; screenings, four hours; discussion, two hours. 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.

90. Japanese Aesthetics and Tea Ceremony. (4) Lecture, three hours. Knowledge of Japanese not required. Introduction to Japanese aesthetics in theory and practice, including study of ritual and specific trends in Japanese aesthetics such as imperfection asymmetry, suggestion, miniaturization, indirectness, wabi, sabi, hikae, yugen, as reflected and practiced in tea ceremony. P/NP or letter grading.

Upper Division Courses

100A-100B-100C. Advanced Modern Japanese. (4-4-4) Lecture, five hours. Enforced requisite: course 6 or 10 or Japanese placement test. Course 100A is enforced requisite to 100B, which is enforced requisite to 100C. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Advanced study of Japanese language with emphasis on sociocultural issues of contemporary Japanese society. Materials selected from contemporary publications, videos, and audiotapecs. Reading with focus on themes, writing summaries and opinions, oral activities, and project work. P/NP or letter grading.
100. Advanced Modern Japanese: Intensive. (12) Lecture, 10 hours; discussion, 10 hours. Enforced requisite: course 6 or 10 or Japanese placement test. Not open to students who have learned, from another source, enough Japanese to qualify for more advanced courses. Intensive course equivalent to courses 100A, 100B, and 100C. Learning Japanese language and sociocultural issues of contemporary Japanese society. Materials selected from contemporary publications, videos, and audio-tapes. Requisite: Successful completion of one course in Japanese placement test. Not open to students who have earned, from other sources, enough Japanese to qualify for more advanced courses. Students who complete courses 100A-100B, 100C, may be taken independently for credit. Letter grading.

101A-101B. Advanced Readings in Modern Japanese. (4-4) Lecture, two hours; discussion, 90 minutes. Enforced requisite: course 100C or 100D or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Advanced readings and discussion for students planning to do advanced coursework or research on Japan. Topics selected from magazines, journals, and books related to humanities and social sciences. Each course may be taken independently for credit. Letter grading.

102A-102B. Advanced Reading and Writing for Japanese-Heritage Speakers. (4-4) (Formerly numbered 15 and 102.) Lecture, three hours. Enforced preparation: Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Designed for advanced-level Japanese-heritage learners or nonheritage learners who are fluent in daily spoken Japanese. Emphasis on building vocabulary knowledge of Kanshi, reading and writing, and formal aspects of spoken Japanese (polite and honorific/humble forms). Each course may be taken independently for credit. Students who complete courses 102A and/or 102B are not eligible to take Japanese 101 series or below. P/NP or letter grading.


120. Introduction to Japanese Linguistics. (4) (Same as Linguistics M116.) Lecture, three hours; discussion, one hour. Enforced requisite: course 3 or Japanese placement test. Introduction to Japanese grammar and sociolinguistics through reading, discussion, and problem solving in phonology, syntax, semantics, and discourse pragmatics. Letter grading.


130A-130B-130C. Readings in Modern Japanese Literature. (4-4-4) Seminar, three hours. Enforced requisite: course 100C or 100D or Japanese placement test. Course 130A or Japanese placement test is enforced requisite to 130B; course 130B or Japanese placement test is enforced requisite to 130C. Readings and discussion of works by modern Japanese writers. Each course may be taken independently for credit. Letter grading. 140A. Heian; 140B. Medieval; 140C. Edo.

C149. Introduction to Kambun and Other Literary Styles. (4) Lecture, three hours. Enforced requisite: course 110 or Japanese placement test. Readings and discussions of works of premodern Japanese literature. Each course may be taken independently for credit. Letter grading.


152. Postwar Japanese Culture through Literature. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 110 or Japanese placement test. Survey of Japanese literature from 16th century to post-WWII. P/NP or letter grading.

154. Postwar Japanese Culture through 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. Knowledge of Japanese not required. Examination of the influence of 20th-century cultural trends in Japanese literary texts. Concurrently scheduled with course C250. Letter grading.

155. Topics in Japanese Cinema. (4) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or one course from Comparative Literature 1A, 1B, 1C, 1D. Knowledge of Japanese not required. Examination of the influence of 20th-century cultural trends in Japanese cinema. Concurrently scheduled with course C250. Letter grading.

156. Literature and Technology. (4) (Same as Comparative Literature M176.) Lecture, three hours. Knowledge of Japanese not required. Examination of representation of technology in 20th-century fiction. Discussion of impact of technology on shifting images of gender, subjectivity, and national identity. P/NP or letter grading.


161. Religious Life in Modern Japan. (4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Religious transformations accompanying rapid industrialization, urbanization, militarism, and defeat in the Pacific War, including analyses of dominant beliefs and symbols. P/NP or letter grading.


175. Introduction to Japanese Thought. (4) Lecture, three hours. Knowledge of Japanese not required. General survey of Japanese thought from early to modern times, including analyses of Shinto mythology, forms of Confucianism, ethic of bushido, National Learning School, and modern Japanese philosophers such as Nishida Kitaro and Watsuji Tetsuro. Attention also to representative types of contemporary thinking about Japanese thought, especially question of what might qualify as recognizably "Japanese" in aesthetics, ethics, and philosophy. Letter grading.


182. Japanese Folklore. (4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Lectures/discussions on native religious rituals (festivals) and observances of Japanese, with special emphasis on artistic behavior. Discussion of Shinto, Shinto/Buddhist syncretism, and other non-Buddhist belief systems. Concurrently scheduled with course C282. Letter grading.


191A. Variable Topics Research Seminars: Classical Japan. (4) Seminar, three hours. Research seminar on selected topics on philosophy of literary arts. May be repeated once with consent of instructor. Concurrently scheduled with course C286L. Letter grading.

191B. Variable Topics Research Seminars: Modern Japan. (4) Seminar, three hours. Research seminar on selected topics on 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.
Graduate Courses

220A. Research Methods in Japanese Linguistics. (4) Seminar, three hours. Introduction to different research paradigms for Japanese linguistics, as well as resources associated with these approaches. Discussion of linguistic knowledge in traditional Japanese scholarship (Kokugaku) and coverage of newer approaches from modern Western linguistics. S/U or letter grading.

200B. Proseminar: Classical Japanese Literature. (4) Seminar, three hours. Introduction to major bibliographical and methodological resources in field of premodern Japanese literature, with focus on research tools in field and on scholarship in English on history of books in Japan as well as on major literary genres. S/U or letter grading.

200C. Proseminar: Modern Japanese Literature. (4) Seminar, three hours. Introduction to major bibliographical and methodological resources in field of modern Japanese literature, with focus on research tools and on scholarship in English on modern literary trends and genres. S/U or letter grading.


201A-201B. Introduction to Reading Japanese Academic Texts. (4-4) Lecture, three hours. Requisite: course 7 or 100A. Course 201A is requisite to 201B. Designed for graduate students. Introduction to modern Japanese-language academic texts, both prewar and postwar, with focus only on reading; students who need to improve other skills should take additional courses. S/U or letter grading.


211. No and Kyogen. (4) Lecture, three hours. Preparation: one year of classical Japanese. Readings of selected No and Kyogen texts from Muromachi and Edo periods, as well as readings of critical writings and discussion of theories. May be repeated for credit with consent of instructor. Letter grading.


224A-224B. Seminars: Selected Topics in Japanese Discourse Linguistics. (4-4) Seminar, three hours. Requisite: course CM122. Critical reading and discussion of selected topics in Japanese discourse linguistics. May be repeated for credit with consent of instructor. In Progress (224A) and letter (224B) grading.

225A-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 politeness are utilized to achieve desired literary effects. May be repeated for credit with consent of instructor. In Progress (225A) and letter (225B) grading.

226. Survey of Functional Linguistics. (4) Lecture, four hours. Survey of recent empirical and theoretical research in several areas of functional linguistics, that has served as backbone for development of Japa- nese discourse linguistics. May be repeated for credit with consent of instructor. S/U or letter grading.


228. Fundamentals in Discourse Data Analysis. (4) Lecture, three hours. Designed to prepare stu- dents to conduct research in natural discourse data, both spoken and written, for linguistic analysis. Dis- cussion of discourse taxonomy, data collection meth- odologies, data organization, analytical frameworks.

235A-235B. Seminars: Selected Topics in Modern Japanese Fiction. (4-4) Seminar, three hours. May be repeated for credit with consent of instructor. In Progress (235A) and letter (235B) grading.

240A-240B. Seminars: Selected Topics in Japa- nese Literature. (4-4) Seminar, three hours. May be repeated for credit. In Progress (240A) and letter (240B) grading.

241A-241B. Seminars: Japanese Classics. (4) Seminar, three hours. Prose and poetry from early times to 1668. May be repeated for credit with con- sent of instructor. In Progress (241A) and letter (241B) grading.


245A-245B. Seminars: Medieval Japanese Litera- ture. (4-4) Seminar, three hours. Preparation: one year of classical Japanese. Selected readings in trav- el poetry, travel diaries, and other genres of Japanese travel literature of Heian, Kamakura, Nambokucho, and Muromachi periods. May be repeated for credit with consent of instructor. In Progress (245A) and let- ter (245B) grading.


2A. Elementary Korean for Korean-Heritage Speakers. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1A or Korean placement test. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for students who are from Korean-speaking family background and have some limited knowledge of Korean. Emphasis on formal aspects of standard Korean (basic grammar, reading, daily conversation, polite forms, basic writing). P/NP or letter grading.

3A. Elementary Korean for Korean-Heritage Speakers. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2A or Korean placement test. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Continuation of course 2. P/NP or letter grading.

3A. Elementary Korean for Korean-Heritage Speakers. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2A 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.


4A. Intermediate Korean for Korean Speakers. (5) Lecture, five hours. Enforced requisite: course 3A or Korean placement test. Not open to students who attended elementary school in Korea for more than one year or who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for students who seek training in written components of standard Korean (spelling, reading, writing, and grammar) at intermediate level. Continuation of course 3A. P/NP or letter grading.

5. Intermediate Modern Korean. (5) Lecture, five hours. Enforced requisite: course 4 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 4. P/NP or letter grading.

5A. Intermediate Korean for Korean Speakers. (5) Lecture, five hours. Enforced requisite: course 4A or Korean placement test. Not open to students who attended elementary school in Korea for more than one year or who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for Korean heritage learners. Emphasis on four skills (spelling, grammar, readings, and conversation in modern Korean). P/NP or letter grading.

6. Intermediate Modern Korean. (5) Lecture, five hours. Enforced requisite: course 5 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 5. P/NP or letter grading.

6A. Intermediate Korean for Korean Speakers. (5) Lecture, five hours. Enforced requisite: course 5A or Korean placement test. Not open to students who attended elementary school in Korea for more than one year or who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for Korean heritage learners. Emphasis on four skills (spelling, grammar, readings, and conversation in modern Korean). Continuation of course 5A. Completion of courses 5A, 6A, 10, or Korean placement test. Course 100A is enforced requisite to 100B, which 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 prose and poetry, with emphasis on grammar and Sino-Korean. P/NP (undergraduates), S/U (graduates), or letter grading.

101A-101B-101C. Advanced Readings in Modern Korean. (4-4-4) Lecture, three hours. Enforced requisite: course 100C or Korean placement test. Course 101A is enforced requisite to 101B; course 101B or Korean placement test is enforced requisite to 101C. Advanced readings and discussion for students planning to do advanced coursework or research on Korea. Topics selected from mainstream works, related to humanities and social sciences. P/NP (undergraduates), S/U (graduates), or letter grading.

102A-102B-102C. Advanced Korean Conversation. (4-4-4) Lecture, three hours. Enforced requisite: course 100C or Korean placement test. Course 102A or Korean placement test is enforced requisite to 102B; course 102B or Korean placement test is enforced requisite to 102C. Not open to students who attended elementary school in Korea for more than two years or who have learned, from whatever source, enough Korean to qualify for more advanced courses. Reading and discussion of modern Korean authors, designed to further improve spoken proficiency. P/NP or letter grading.

103A-103B-103C. Readings in Sino-Korean Characters. (4-4-4) Lecture, two and one-half hours. Required for Basic Modern Korean. Course 103A or Korean placement test is enforced requisite to 103B; course 103B or Korean placement test is requisite to 103C. Sino-Korean vocabulary and characters necessary for advanced topics in Korean. Sino-Korean characters are used differently from same Chinese characters used in contemporary Chinese in terms of pronunciation, meaning, and word formation. Proficiency of speaking or reading, or to be able to read at least 1,800 Sino-Korean characters. Characteristic of recoinclusion patterns and semantic association of Sino-Korean vocabulary. P/NP or letter grading.

8. Elementary Korean: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Intensive course equivalent to courses 1, 2, and 3. Introduction to fundamentals of standard Korean, including pronunciation, grammar, and Korean characters, with emphasis on all four basic language skills — speaking, listening, comprehending, reading, and writing. Offered in summer only. Letter grading.

10. Intermediate Modern Korean: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Enforced requisite: course 3 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. Conversation, composition, and readings with structural analysis in modern Korean. Offered in summer only. Letter grading.

50. Korean Civilization. (5) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. General survey of development of Korean culture within context of political, social, and economic history. P/NP or letter grading.

60. Introduction to Korean Religions. (5) Lecture, three hours. Enforced requisite: course 101 or Korean placement test. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Continuation of courses 101A-101B-101C. Sino-Korean vocabulary and characters necessary for advanced and superior level of knowledge in Korean. Sino-Korean characters are used differently from Sino-Chinese characters used in China in terms of pronunciation, meaning, and word formation. Enforced requisite: course 100C or Korean placement test. Course 101C or Korean placement test is requisite to 101B; course 101B or Korean placement test is requisite to 101C. Development of professional and academic proficiency in oral and written Korean to understand many sociolinguistic and cultural references as well as variety of styles and registers. Korean language is a unique language that without difficulty any practical, social, and professional topics, whether those topics are familiar or not. P/NP or letter grading.

107A-107B-107C. Professional/Academic Korean. (5-5-5) Lecture, five hours. Required. Course 107A or Korean placement test. Course 107A or Korean placement test is requisite to 107B; course 107B or Korean placement test is requisite to 107C. Preparation of students to function at American Council on Teaching of Foreign Languages (ACTFL) superior proficiency level in Korean in three modalities: speaking, listening, and reading. Use of speaking, listening, and reading skills to participate effectively and without difficulty any practical, social, and professional topics, whether those topics are familiar or not. P/NP or letter grading.

CM120. Structure of Korean. (4) (Same as Linguistics M172.) Lecture, three hours. Recommended preparation: two years of Korean, or one year of Korean and some knowledge of linguistics. Discussion of major syntactic, semantic, and pragmatic characteristics of Korean in light of works related to a variety of topics in linguistics with brief and focused introduction to typological features, and phonological structure of Korean. Concurrently scheduled with course C220. Letter grading.

151. Korean Literature in Translation: Modern. (4) Lecture, three hours. Requisite: English Composition 3 or 3H or one course from Comparative Literature 1A, 1B, 1C. Knowledge of Korean not required. Survey of Korean literature of 20th century. P/NP or letter grading.


165. Introduction to Korean Buddhist Texts. (4) Lecture, three hours. Recommended requisite: course 100A or Chinese 110C or Korean placement test. Introduction to reading premodern Korean Bud- dhist texts. Korean Buddhism is examined and taken from in- digenous doxographic materials and philosophical writings. Korean Buddhist apocryphal scriptures, na- tive exegetical commentaries, and Son (Zen) texts. Coverage varies. Texts may be read in either Sino-Ko- rean or literary Chinese. May be repeated with con- sent of instructor. Letter grading.

172. Topics in Korean Christianity. (4) Lecture, three hours. Knowledge of Korean not required. His- torical development of Christianity in Korea, beliefs and practices, impact of Christianity on modern Kore- an culture and society. Coverage varies. May be re- peated for credit with consent of instructor. Letter grading.

175. Introduction to Traditional Korean Thought. (4) Lecture, three hours; discussion, one hour. Knowl- edge of Korean not required. General survey of Korean thought from earliest records to 19th century, including shamanism, Taoism, Buddhism, Christianity, and neo- Confucianism. Korean traditions and those found in In- dia, China, Japan, and West. P/NP or letter grading.

176. Introduction to Korean Confucian Texts. (4) Lecture, three hours. Enforced requisite: course 100C or Chinese 110C or Korean placement test. Reading in premodern Koryo and Choson texts on politics, so- ciety, and philosophy. Texts may be read in either Sino-Korean or literary Chinese. May be re- peated with consent of instructor. P/NP or letter grad- ing.


181. Reading Korean Cultural Landscape. (4) Lec- ture, three hours; discussion, one hour. Knowledge of Korean not required. Introduction to Korean culture from historical/geographical perspective. Examination of human cultural imprint on land in religious, linguis- tic, rural, and urban landscapes. Letter grading.

183. Korean Folklore. (4) Lecture, three hours. Sur- vey of Korean folklore and its perspectives and meth- ods. Focus on traditional literature such as puppet plays, folk tales of marvelous, romance, satirical stories, diaries, and p’ansori. Fiction. Focus on fiction in society and culture, fiction as imaginative representation of writ- er’s relationship to real conditions of existence. Latest Western theory of narratology applied in analysis. In Progress (240A) and letter (240B) grading.

212. 19th-Century Korea. (4) Seminar, three hours; discussion, one hour. Requisite: course 180B or 180C. Proseminar covering life, intellectual, and political movement of Sunjong in 18th 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, hi- erarchy of genres, rise of literary kinds and forms, pe- riодization, 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. Recommended preparation: two years of Korean, or one year of Korean and some knowledge of linguistics. Discussion of major syntactic, semantic, and pragmatic characteristics of Korean in light of languag- tic universals, with brief introduction to formation, ty- pological features, and phonological structure of Ko- rean. Concurrently scheduled with course CM120. Letter grading.

224A-224B. Seminars: Selected Topics in Korean Linguistics. (4-4) Seminar, three hours. Critical read- ing and discussion of selected topics in Korean func- tional linguistics (grammaticalization, discourse, prag- matics, sociolinguistics). Letter grading. In Progress (224A) and letter (224B) grading.


230A-230B. Seminars: Literary Translation from Korean. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean. In consultation with in-structor, students select works to be translated. De- voted to skill of producing accurate and readable transla- tions, with emphasis on problems and tech- niques unique to poetry and prose. At end of term, students expected to produce publishable transla- tions. May be repeated once with consent of instruc- tor. In Progress (230A) and letter (230B) grading.

235A-235B. Seminars: Topics in Modern Korean Literature. (4-4) Seminar, three hours. Preparation: at least five years of Korean. Recommended: reading knowledge of Chinese or Japanese. Limited to gradu- ate 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.


245A-245B. Seminars: Classical Korean Poetry. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean. 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.


265A-265B. Seminars: Korean Buddhist Texts. (4-4) Seminar, three hours. Selected topics in Korean Buddhist texts. Coverage varies. In Progress (265A) and letter (265B) grading.

296A-296B. Seminars: Topics in Modern Korean. (4-4) Seminar, three hours. Preparation: knowledge of Korean. Critical reading and analysis of modern Korean poetry and fiction. Topics include women's life cycle, relation to social institutions, and challenges to these ideals, especially in narrative literature. 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 110B. Characteristics of Vedic thought and writings in Rig-Vedic hymns. Only course M222B may be repeated for credit. S/U or letter grading.

230. Selected Readings in Sanskrit Texts. (4) Lecture, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

234A-234B. Introduction to Panini's Grammar. (4-4) Lecture, three hours. Required: course 110C. Reading of selected passages of text, with introduction to Panini's technique. S/U or letter grading.


243. Translation Workshop: Premodern Sanskrit, Pali, and/or Prakrit Texts. (2) Seminar, two hours. Required: course 110C. Translation, grammatical analysis, and discussion of selections from premodern Sanskrit, Pali, and/or Prakrit texts. S/U grading.

South Asian Lower Division Course

60. Religion in Classical India: Introduction. (5) Lecture, three hours; discussion, one hour. Introduction to religions of classical India—Vedic, Brahmanical, Hindu, Jain, and Buddhist—paying equal attention to change and continuity, with emphasis on chronological development. P/NP or letter grading.

Upper Division Courses


110B. Intermediate Sanskrit. (4) Lecture, three hours. Preparation: course 110A. Reading of entire Bhagavadgita or comparable amount of other Sanskrit literature. P/NP or letter grading.

110C. Advanced Sanskrit. (4) Lecture, three hours. Required: course 110B. Reading of entire Bhagavadgita or comparable amount of other Sanskrit literature. P/NP or letter grading.

115. Readings in Sanskrit. (4) Lecture, three hours. Preparation: course 110C. Extensive reading in such texts as best serve students' needs. May be repeated for credit with consent of instructor. P/NP (undergraduates), S/U (graduates), or letter grading.

150. Classical Indian Literature in Translation. (4) Lecture, three hours. Knowledge of Asian languages not required. Survey of some landmarks of classical Indian literature from second millennium B.C.E. to second millennium C.E., including both poetry and prose, "high" art and more popular genres, and secular and religious content in their social and institutional contexts. P/NP or letter grading.


135. Religion and Society in Southeast Asia. (4) Lecture, three hours; discussion. Critical issues related to major religious traditions in Southeast Asia, with emphasis on reading and reflecting on recent scholarship regarding complex interactions between religion, state, and society in contemporary Southeast Asia. P/NP or letter grading.

157. Gender Issues in Southeast Asia. (4) Seminar, three hours. Critical examination of gender issues in one or more Southeast Asian countries as they connect to social historical contexts nationally, regionally, or globally. May be repeated for credit. P/NP or letter grading.

170A-170B-170C. Topics in Southeast Asian Studies. (4-4-4) Lecture, three hours. Exploration of South 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.

197. Individual Studies in Southeast Asian. (4) Tutorial, to be arranged. Limited to juniors/seniors and graduate students who desire more advanced or specialized treatment of one language offered in program beyond introductory and intermediate courses currently offered. 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 academic coordinator. P/NP or letter grading.

Thai Lower Division Courses

1. Introductory Thai. (5) Formerly numbered South-east Asian 60A.) Lecture, two hours; discussion, three hours. Course 1 is enforced requisite to 2, which is enforced requisite to 3. Coverage of basic Thai grammar, with equal emphasis on reading, writing, composing in, and oral communication. P/NP or letter grading.

2. Introductory Thai. (5) Formerly numbered South-east Asian 60B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 1. Coverage of basic Thai grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Introductory Thai. (5) Formerly numbered South-east Asian 60C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 2. Coverage of basic Thai grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.
2A. Introductory Vietnamese for Heritage Learners. (5) (Formerly numbered Southeast Asian 50E.) Lecture, five hours. Enforced requisite: course 1A or Vietnamese placement test. Not open to students who have learned, from whatever source, enough Vietnamese to qualify for more advanced courses. Designed for Vietnamese-heritage learners who have some limited knowledge of Vietnamese or have had no formal instruction in Vietnamese. Emphasis on spelling, basic grammar, reading, writing, daily conversation, and polite forms. P/NP or letter grading.

3. Introductory Vietnamese. (5) (Formerly numbered Southeast Asian 50F.) Lecture, two hours; discussion, three hours. Enforced requisite: course 2. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3A. Introductory Vietnamese for Heritage Learners. (5) (Formerly numbered Southeast Asian 50F.) Lecture, five hours. Enforced requisite: course 2A or Vietnamese placement test. Not open to students who have learned, from whatever source, enough Vietnamese to qualify for more advanced courses. Designed for Vietnamese-heritage learners who have some limited knowledge of Vietnamese or have had no formal instruction in Vietnamese. Emphasis on spelling, basic grammar, reading, writing, daily conversation, and polite forms. P/NP or letter grading.

4. Intermediate Vietnamese. (5) (Formerly numbered Southeast Asian 51A.) Lecture, two hours; discussion, three hours. Enforced requisite: course 3. Enforced prerequisite to 4. Enforced requisite to 5, which is enforced requisite to 6. 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.

4A. Intermediate Vietnamese. (5) (Formerly numbered Southeast Asian 51A.) Lecture, two hours; discussion, three hours. Enforced requisite: course 3. Course 4 is enforced requisite to 5, which is enforced requisite to 6. 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. Enforced requisite to 5. Enforced requisite to 6. 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.

5A. Intermediate Vietnamese. (5) (Formerly numbered Southeast Asian 51B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 4. Course 5 is enforced requisite to 6. 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. Enforced requisite to 6. 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.

Intermediate Thai. (Formerly numbered Southeast Asian 61A.) Lecture, two hours; discussion, three hours. Enforced requisite: course 3. Course 4 is enforced requisite to 5, which is enforced requisite to 6. 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.

4. Intermediate Thai. (Formerly numbered Southeast Asian 61B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 3. Course 4 is enforced requisite to 5, which is enforced requisite to 6. Reinforcement of basic Thai grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

5. Intermediate Thai. (Formerly numbered Southeast Asian 61C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 4. 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.

5A. Intermediate Thai. (Formerly numbered Southeast Asian 61C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 4. Coverage of basic Thai grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

6. Intermediate Thai. (Formerly numbered Southeast Asian 61D.) Lecture, two hours; discussion, three hours. Enforced requisite: course 5. 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. (5-5-5) (Formerly numbered Southeast Asian 152A-152B-152C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 6. Course 100A is requisite to 100B, which 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.

1A. Introductory Vietnamese for Heritage Learners. (5) (Formerly numbered Southeast Asian 50A.) Lecture, two hours; discussion, three hours. Course 1 is enforced requisite to 2, which is enforced requisite to 3. 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. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2A. Introductory Vietnamese for Heritage Learners. (5) (Formerly numbered Southeast Asian 50E.) Lecture, five hours. Enforced requisite: course 1A or Vietnamese placement test. Not open to students who have learned, from whatever source, enough Vietnamese to qualify for more advanced courses. Designed for Vietnamese-heritage learners who have some limited knowledge of Vietnamese or have had no formal instruction in Vietnamese. Emphasis on spelling, basic grammar, reading, writing, daily conversation, and polite forms. P/NP or letter grading.

2B. Introductory Vietnamese. (5) (Formerly numbered Southeast Asian 50F.) Lecture, five hours. Enforced requisite: course 2A or Vietnamese placement test. Not open to students who have learned, from whatever source, enough Vietnamese to qualify for more advanced courses. Designed for Vietnamese-heritage learners who have some limited knowledge of Vietnamese or have had no formal instruction in Vietnamese. Emphasis on spelling, basic grammar, reading, writing, daily conversation, and polite forms. P/NP or letter grading.

100A-100B-100C. Advanced Vietnamese. (4-4-4) (Formerly numbered Southeast Asian 152A-152B-152C.) Lecture, three hours. Enforced requisite: course 6 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, particularly its culture. Readings include both authentic original works and simplified texts. Each course may be taken independently for credit. P/NP or letter grading.

M155. Topics in Vietnamese Cinema and/or Literature. (4) (Formerly numbered Southeast Asian 155A.) Lecture, three hours. Knowledge of Vietnamese not required. Critical and historical examination of literary and/or filmic representations connected to social practices such as empire, nation, diaspora, and globalization. Original language course materials available for interested students. P/NP or letter grading.

155FL. Readings in Vietnamese. (2) (Formerly numbered Southeast Asian 155FL) Seminar; two hours. Requisite: course 3 or 3A. Enforced corequisite: course M155. Additional work in content area assigned in course M155, including reading, writing, and other exercises in Vietnamese. P/NP or letter grading.

180A. Vietnam: History and Civilization to 1858. (4) (Formerly numbered Southeast Asian 156A.) Lecture, three hours; discussion, one hour. Recommended preparation: at least one Asian history course. Exploration of Vietnamese society and culture from origins to early 19th century, with emphasis on examination of ways in which interactions between indigenous and Chinese/Southeast Asian political and cultural forces helped shape religious, literary, and social traditions. P/NP or letter grading.

180B. Vietnam: History and Civilization, 1858 to Present. (4) (Formerly numbered Southeast Asian 156B.) Lecture, three hours; discussion, one hour. Recommended preparation: at least one Asian history or civilization course. Exploration of Vietnamese history and civilization during colonial and postcolonial eras, with emphasis on profound changes that swept through Vietnamese society during period of extended political and military conflict. P/NP or letter grading.

Astronomy

See Physics and Astronomy

ATMspheric and Oceanic Sciences

College of Letters and Science

UC Los Angeles

7127 Math Sciences

Box 951565

Los Angeles, CA 90095-1565

(310) 825-1217

tel: (310) 206-5219

e-mail: depinfo@atmos.ucla.edu

http://www.atmos.ucla.edu

Professors

Richard M. Thorne, Ph.D.

Kristen L. Corbosiero, Ph.D.

Curtis A. Deutsch, Ph.D.

Jochen P. Stutz, Ph.D.

Michio Yanai, D.Sc.

Jeffrey K. Lew, Ph.D.

Associate Professors

J. David Neelin, Ph.D.

Lawrence R. Lyons, Ph.D.

Akio Arakawa, D.Sc.

Suzanne E. Paulson, Ph.D.

Bob C. Foltveit, Ph.D.

Richard M. Thorne, Ph.D.

Kristen L. Corbosiero, Ph.D.

J. David Neelin, Ph.D.

Jochen P. Stutz, Ph.D.

Suzanne E. Paulson, Ph.D.

Richard P. Turco, Ph.D.

Yonggang Xue, Ph.D.

Professors Emeriti

Suzanne E. Paulson, Ph.D.

J. David Neelin, Ph.D.

Richard M. Thorne, Ph.D.

Richard P. Turco, Ph.D.

Yonggang Xue, Ph.D.

Lawrence R. Lyons, Ph.D.

Christian Neelin, Ph.D.

David C. C. Chang, Ph.D.

Michael A. Ghil, Ph.D.

George L. Siscoe, Ph.D.

Professor of Geophysics and Planetary Physics

Carlos R. Mechoso, Ph.D.

Associate Professors

Alexander D. Hall, Ph.D.

Jochen P. Stutz, Ph.D.

Richard P. Turco, Ph.D.

Richard P. Turco, Ph.D.

Yonggang Xue, Ph.D.

Jeffrey K. Lew, Ph.D.
**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 1B, or 20A 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 study 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/adm_tr.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 101, 102, 103, 104, C110, C115, M120, 125, 130, M140, 145, C160, C170, 180, CM185 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 three 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, 123, 147, 148, Mathematics 115A, 115B, 132, 135, 136, 146, 170A, 170B, Physics 110A, 110B, 112, M122, 131, 132, Statistics 110A, 110B. Other relevant courses from related disciplines may be substituted with prior approval of the department.

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 109, C119, 122; (3) atmospheric dynamics: Atmospheric and Oceanic Sciences 101, 102, 125, Physics 112, 131, 132; (4) atmospheric dynamics and mathematical modeling: Atmospheric and Oceanic Sciences 101, 125, 180, Mathematics 115A, 115B, 132, 135, 136, 142, 146; (5) oceanography and biology: Atmospheric and Oceanic Sciences 101, 103, 104, Ecology and Evolutionary Biology 109, 123, 147, 148; (6) upper atmosphere: Atmospheric and Oceanic Sciences 101, M120, 125, C170, Physics 110A, 110B, M122.

One course may be taken on a Passed/Not Passed basis; all other minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Atmospheric and Oceanic Sciences offers Master of Science (M.S.) 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. Exciting and contentious scientific puzzles of climate system, including causes of ice ages, greenhouse warming, and el niño. Importance of climate science and prediction to society, with emphasis on science’s role in identifying, qualifying, and solving environmental problems such as ozone hole and greenhouse warming. P/NP or letter grading.

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, atmosphere and ocean circulation, past, present, and future climates, and role of science in climate change politics. P/NP or letter grading.
2. Air Pollution. (4) Lecture, three hours; discussion, one hour. Causes and effects of high concentrations of pollution in atmosphere. Topics include nature and sources of gaseous and particulate pollutants, their transport, dispersion, modification, and removal, with emphasis on atmospheric processes (e.g., chemical reactions, cloud formation, precipitation, etc.). Physical and chemical processes important to environmental science. Laboratory and as way of thinking. Discussion of critical elements. Letter grading.


3L. Introduction to Atmospheric Environment 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 variation of smog pollutants, and smoke transport. P/NP or letter grading.


3L. Introduction to Atmospheric Environment 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 variation of smog pollutants, and smoke transport. P/NP or letter grading.

5. Climates of Other Worlds. (4) Lecture, three hours; discussion, one hour. Introduction to atmospheres of planets and other orbiting bodies in the solar system, using information obtained during recent planetary exploration programs. Elementary description of origin and evolution of atmospheres on planets. Climates on planets, conditions necessary for the evolution of life, and its resulting effect on planetary environment. P/NP or letter grading.

M100. Earth and Its Environment. (4) (Same as Environment M111.) Lecture, three hours. Overview of Earth as a system of distinct, yet intimately related, physical and biological elements. Elements 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 Modelling. (4) Lecture, three hours; discussion, one hour. Enforced requisites: Mathematics 3C or 32A, Physics 1B or 6C, with grades of C or better. Global environmental issues in climate change due to human activities or natural climate variations. Quantitative introduction to new science of climate modeling to understand and predict these changes. Physical processes in climate system. Atmospheric and oceanic circulation. El Niño and year-to-year climate prediction. Greenhouse effect and global warming. Letter grading.


104. Fundamentals of Air and Water Pollution. (4) Lecture, three hours; discussion, one hour. Requisite: Chemistry 14B or 20B. Chemistry and physics of air and water pollution, including photochemistry, acid rain, air pollution meteorology and dispersion, groundwater and surface water pollution, chemical cycling, air/water interface, global atmospheric change. Letter grading.

105. Introduction to Chemical Oceanography. (4) (Same as Ecology and Evolutionary Biology M130B.) Lecture, three hours. Introductory course for physical sciences, life sciences, and engineering majors interested in oceanic environment. Chemical composition of ocean and atmosphere, chemical, and biological processes governing this composition in past and present. Cycles of major and minor oceanic constituents, with focus on those that are most important for life (i.e., carbon, nitrogen, phosphorus, silicon, and oxygen). Investigation of primary production, export production, remineralization, d- agenesis, air-sea gas exchange processes. Letter grading.

106. Applied Climatology: Principles of Climate Impact on Natural Environment. (4) (Same as Geography M106.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Exploration of knowledge and topaz problems in contemporary applied climatology, including current practices, influence of climate on environment, and human influence on changing climates. P/NP or letter grading.


C115. Mesometeorology. (4) Lecture, three hours. Requisite: course 101. Observations of phenomena with long scales ranging from 20 km to 2,000 km. Topics include polar lows, airmass thunderstorms, multicell storms, supercell tornadoes, gust fronts, downbursts, microbursts, and dry line. Discussions on design of field project. Concurrently scheduled with course C228. P/NP or letter grading.


130. California’s Ocean. (4) Lecture, four hours. Requisite: course 103 or M1015. Circuit oceanic co- evolution, biogeochemistry, biota, water quality, measurement techniques, computational modeling, conservation, and management for California’s coastal ocean, including coastal measurement cruises 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 205B. 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.

145. Atmospheric Physics: Radiation, Clouds, and Aerosols. (4) (Formerly numbered C145.) 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.

C160. Remote Sensing. (4) Lecture, three hours. Requisite: 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 C240B. P/NP or letter grading.


CM185. Statistical Methods for Physical Sciences. (4) (Same as Statistics CM185.) Lecture, three hours. Designed for junior/senior departmental majors. Statistical framework for data analysis in fields of atmospheric sciences, astronomy, geology, and chemistry, depending on class composition. Presentation of popular techniques in all fields, with emphasis on applications and data, not theory; although some understanding of theory is needed. Concurrently scheduled with course CM213. P/NP or letter grading.

186. Operational Meteorology. (2) (Formerly numbered 190.) Laboratory, six hours. Requisite: course C110. Limited to junior/senior Atmospheric, Oceanic, and Environmental Sciences majors. Students contact with weather data and forecasting, satellite and radar data. Introduction to weather forecasting for aviation, air pollution, marine weather, fire weather, and public use. Includes daily weather map discussions and visits to observing, radiosonde, and radar installations. Letter grading.
197. Individual Studies in Atmospheric and Oceanic Sciences. (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. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Atmospheric and Oceanic Sciences. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors and required for Mathematics/Athletic and Oceanic Sciences majors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

**Graduate Courses**

200A. Introduction to Atmospheric and Oceanic Fluid. (4) (Formerly numbered C200A.) Lecture, three hours; discussion, one hour. Corequisite: Physics 131. Thermodynamics of two components (moist/salt) fluids; Thermodynamic diagrams and stability; Saturation and moist processes; Hydrostatics. Equations of fluid motion in rotating coordinate systems; Scales of motion and dominant balances: geostrophic, radiative, and vorticity. Boundary layers and turbulence. Elementary waves. Letter grading.

200B. Introduction to Dynamics of Earth System. (4) Lecture, three hours. Overview of general circulation 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 and change. Letter grading.


201C. Atmospheric and Oceanic Turbulence. (4) Lecture, three hours. Requisite: course 200A. Recommended: course C201A. Turbulent flows that occur on relatively small scales (~10 km) in both atmosphere and ocean. Classical homogeneous, shear, convective, and boundary-layer turbulence and its geophysical modification due to stratification, Earth's rotation, and water phase changes. S/U or letter grading.

M203A. Introduction to Atmospheric Chemistry. (4) (Same as Civil Engineering M262A.) Lecture, three hours. Requisite for undergraduates: Chemistry 20B. Principles of chemical kinetics, thermochimistry, spectroscopy, and photochemistry; chemical composition and history of Earth's atmosphere; biogeochemical cycles of key atmospheric constituents; basic photochemistry of troposphere and stratosphere, upper atmosphere chemical processes; air pollution; chemistry and climate. S/U or letter grading.

M203B. Introduction to Atmospheric Physics. (4) Lecture, three hours; discussion, one hour. Principles of radiative transfer, absorption, emission, and scattering of solar and infrared radiation; radiation budget consideration; aerosols in atmosphere; principles of water droplet and ice crystal formation; diffusion and convection; precipitation processes; radiative forcings of clouds/aerosols and climate feedback. Letter grading.

C205A. Introduction to Solar System Plasmas. (4) Lecture, three hours; discussion, one hour. Introduction to the plasma physics occurring in the sun, solar wind, magnetospheres, and ionospheres of planets, using simple fluid (magnetohydrodynamic) models as well as individual particle (radiation belt dynamics) approaches. Solar-planetary coupling processes, geomagnetic phenomena, aurora. Concurrently scheduled with course C170. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

205B. Introduction to Solar-Terrestrial Physics. (4) Lecture, three hours; discussion, one hour. Solar, interstellar, planetary, atmospheres, auroral, geomagnetic phenomena and theoretical and background for studies in space physics. Contextual understanding and literacy in space physics terminology preferred. (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.

205C. Planetary Upper Atmospheres. (4) Lecture, three hours; discussion, one hour. Aeronomy of upper atmospheres of Earth and other planets and some of their satellites — thermospheric structure and morphology, circulations, and disturbances; ionospheres as collisional and magnetized (unmagnetized) plasmas; currents, drifts, and instabilities. Examples of upper atmosphere interaction with lower atmosphere and magnetosphere as well as with planets. Letter grading.

M206. Introduction to Biophysical Modeling of Land Surface Processes and Land/Atmosphere Interactions. (4) (Same as Geography M206.) Lecture, two hours; laboratory, one hour; reading period, one hour. Designed for graduate students. Presentations of phenomena, theory, and models. Multiple equilibrium climates and climate feedback. Letter grading.

211. Planetary Wave Dynamics and Teleconnections. (4) Lecture, three hours. Requisite: course 201A. Mean atmospheric circulation and its low-frequency variability. Persistent anomalies and multiple flow regimes. Vakilization in laboratory models of atmospheric flows and intraseasonal oscillations. Wind-driven ocean circulations and their interannual variability. Hierarchical model of atmospheric and oceanic flows. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

212A. Numerical Methods in Geophysical Fluid Dynamics. (4) Lecture, three hours. Requisite or corequisite: course 201A. Basic numerical methods for solving boundary value and initial value problems with emphasis on applications to atmospheric and oceanographic problems. Finite-difference methods and truncation error. Linear and nonlinear computational stability. Convergence and computational boundary conditions. Nonlinear shallow-water equation model. Spectral methods. SU (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.


CM213. Statistical Methods for Physical Sciences. (4) (Same as Statistics CM252.) Lecture, three hours. Designed for graduate students. Designed for graduate astronomy, atmospheric sciences, chemistry, and geology students. Statistical framework for data analysis in fields of atmospheric sciences, astronomy, geology, and chemistry, departmen
tal discretion of major department) or letter grading. 214. Theoretical Climatic Dynamics. (4) Lecture, three hours. Requisites: courses 201B, 202A, 205B. Phenomena, theory, and modeling of ocean circulations with global to regional scope. Circulation types include thermohaline and wind-driven currents. Examination of relationships between ocean circulations and smaller-scale motions, atmospheric climate, and biogeochemical transport. SU (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 circulations with global to regional scope. Circulation types include thermohaline and wind-driven currents. Examination of relationships between ocean circulations and smaller-scale motions, atmospheric climate, and biogeochemical transport. SU (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

216A. Tropical Motions with Moist Processes. (4) Lecture, three hours. Requisite: course 201C. Cumulus convection and the boundary layer in tropical cyclones and mesoscale convection systems. Interaction of cumulus convection with large-scale environment. Tropical cyclones. Monsoon meteorology. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.


218. Dynamics of Atmosphere/Ocean System. (4) Lecture, three hours. Transfer of properties between atmosphere and ocean; wind-driven ocean currents; coastal upwelling. Airsea 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 200A, 201A. Phenomena, theory, and modeling of turbulence in Earth’s oceans and atmosphere — from fine structure to planetary scale motions. Regimes of turbulence include homogeneous flows in two and three dimensions, shear flows, convection, stably stratified flows, and geostrophic 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 Turbulence. (4) Lecture, three hours. Kinematics of planetary and planetary shear flow turbulence. Surface and planetary boundary layers, including heat transfer and turbulent convection. Survey of field and laboratory observations and their interpretation by theory. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

227. Advanced Dynamic and Synoptic Meteorology. (6) Laboratory, six hours. Requisite: course 101. Weather map analysis, thermodynamic diagrams, satellite interpretation, severe weather forecasting, isotropic analysis, frontsogenesis, quasi-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.

228. Mesometeorology. (4) Lecture, three hours. Requisite: course 101. Observations of phenomena with length scales ranging from hundreds to thousands of kilometers. Topics include polar lows, air mass thunderstorms, multicell storms, supercell tornadoes, gust fronts, downbursts, microbursts, and dry line. Discussions on design of field project. Concurrently scheduled with course C115. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

229. Mesoscale Modeling. (4) Lecture, three hours. Requisites: courses 201C, 222B. Numerical and analytical modeling of convective and mesoscale motions, from shallow heat sources to large complex systems, Model frameworks, assumptions, parameterizations, and solution techniques. Role of modeling efforts in understanding dynamic structure and behavior of systems. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

230A. Atmospheric Chemistry I. (4) Lecture, three hours. Requisite: course M203A. Photochemistry of troposphere; physical chemistry of surfaces and solutions; precipitation chemistry and acid rain; atmospheric organic chemistry; regional and global biogeochemical cycles; current issues in global change. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

230B. Atmospheric Chemistry II. (4) Lecture, three hours. Requisite: course M203A. Photochemistry of stratosphere and mesosphere; basic ionospheric processes; stratospheric and mesospheric layers; physical chemistry of upper atmosphere clouds and aerosols; comparative photochemistry of planetary atmospheres; observational techniques and results. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

232. Chemical Transport Modeling. (4) Lecture, three hours. Requisites: courses M203A, 230A, 230B. Equations of tracer transport and chemical kinetics modeling in three dimensions; numerical techniques; coupled simulations of gas-phase and aerosol microphysics and chemical versus observational results; current problems in tracer 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.

234A. Cloud and Precipitation Physics I. (4) Lecture, three hours. Requisite: course 203B. Microstructure of atmospheric clouds; structure of three phases of water substance, including surface effects; thermodynamic theory for equilibrium between three phases of water substance, including surface effects; theory of homogeneous and heterogeneous nucleation of water drops and ice crystals. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

234B. Cloud and Precipitation Physics II. (4) Lecture, three hours. Requisite: course 234A. Theory of growth and evaporation of water drops and ice crystals; 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 collection. 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 M235B. Lecture, three hours. Interactions of ocean biogeochemical cycles with physical climate system. Biogeochemical processes controlling carbon dioxide and oxygen in oceans and atmosphere over time-scales from few million years to several years. Anthropogenic perturbation of global carbon cycle and climate. Response of ocean ecosystems to past and future global changes. Use of 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 to study size distributions of cloud and precipitation particles, precipitation intensity and amount, updraft velocities, horizontal 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 environmental parameters and trace constituents; remote sensing of surfaces and biomes; 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. Methods of Radiative Transfer. (4) Lecture, three hours. Requisite: course C2503C. 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

250A. Solar System Magnetohydrodynamics. (4) Lecture, three hours. Requisite: course C205A. Derivation of MHD equations with two fluid aspects, generalizes Ohm’s law, small amplitude waves, discontinuities, shock waves, and instabilities. Applications to statics and dynamics of solar wind and planetary magnetospheres and to solar wind/magnetosphere/ionosphere coupling. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.
255B. Solar System Microscopic Plasma Processes. (4) Lecture, three hours. Requisite: course C250A. Adiabatic charged particle dynamics; incoherent radiation processes; collective effects in plasmas; 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 Electrodyamics. (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.


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.

M272A-M272B-M272C. Seminars: Climate Dynamics. (2 to 4 each) (Same as Earth and Space Sciences M270A-M270B-M270C and Geography M270A-M270B-M270C) Seminar, two hours. Advanced study and analysis of current topics in atmospheric sciences. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

296A-296L. Advanced Topics in Atmospheric Sciences. (2 each) Discussion, two hours. Advanced study and analysis of current topics in atmospheric sciences. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

296A. Numerical Modeling of Atmosphere.

296B. Boundary Layers, Clouds, and Climate.

296C. Numerical Mesoscale Modeling.

296D. Climate Dynamics.

296E. Numerical Modeling of Atmosphere and Ocean.

296F. Hierarchical Modeling of Ocean/Atmosphere System.

296L. Upper Atmosphere and Space Physics.

296M. Recent Advances in Atmospheric Chemistry.

296N. Upper Atmospheric Dynamics.

296P. Experimental Mesoscale Meteorology.

296Q. Tropical Meteorology.

296R. Geophysical Fluid Dynamics, Oceanography, and Climate.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Atmospheric and Oceanic Sciences. (2) Seminar, one hour; two-day intensive training session prior to Fall Quarter. Required of all new teaching assistants and recommended for new Ph.D. students and graduate students intending to be teaching assistants during academic year. Introduction to classroom teaching for general education and upper division departmental courses. Topics include pedagogical techniques, preparation, academic integrity, and integration of technology and electronic communications. S/U grading.


Bioengineering

Henry Samueli School of Engineering and Applied Science

UCLA

5121 Engineering V

Box 951600

Los Angeles, CA 90095-1600

(310) 267-4985

e-mail: bioeng@ea.ucla.edu

http://www.bioeng.ucla.edu

Timothy J. Deming, Ph.D., Chair

Professors

Denise Aberle, M.D.

Timothy J. Deming, Ph.D.

Warren S. Grundfest, M.D., FACS

Edward E.R. McCabe, M.D., Ph.D. (Mattel Executive Endowed Professor of Pediatrics)

Associate Professors

James Dunn, M.D., Ph.D.

Benjamin M. Wu, D.D.S., Ph.D.

Assistant Professors

Daniel T. Kamei, Ph.D.

Andrea M. Kasko, Ph.D.

Jacob J. Schmidt, Ph.D.

Adjunct Professor

Alfred Mann, M.S.

Adjunct Assistant Professor

Bill J. Tawil, M.B.A., Ph.D.

Scope and Objectives

Faculty members in the Department of Bioengineering believe that the interface between biology and the physical sciences represents an exciting area for science in the twenty-first century. Bioengineering has established itself as an independent field and engineering discipline, resulting in the formation of many new bioengineering departments and the redefinition of established programs. Faculty members have embraced this unique opportunity by developing an innovative curriculum, creating state-of-the-art facilities, and performing cutting-edge research.

Instead of treating bioengineering as an application of traditional engineering, it is taught as an applied science discipline in its own right. The bioengineering program is a structured compilation of unique forward-looking courses dedicated to producing graduates who are well-grounded in the fundamental sciences and highly proficient in rigorous analytical engineering tools necessary for lifelong success in the wide range of possible bioengineering careers. The program provides a unique engineering educational experience that responds to the growing needs and demands of bioengineering.

Department Mission

Bioengineering is a diverse multidisciplinary field that has established itself as an independent engineering discipline. The school is developing a small yet innovative Bioengineering Department that is dedicated to producing graduates who are well-grounded in funda-
184 / Bioengineering

mental sciences and the rigorous analytical engineering tools necessary for lifelong success in the many possible bioengineering careers.

Undergraduate Program Objectives

The goal of the bioengineering curriculum is to provide students with the fundamental scientific knowledge and engineering tools necessary for graduate study in engineering or scientific disciplines, continued education in health professional schools, or employment in industry. There are three main objectives: (1) to provide students with rigorous training in engineering and fundamental sciences, (2) to provide knowledge and experience in state-of-the-art research in bioengineering, and (3) to provide problem-solving and team-building skills to succeed in a career in bioengineering.

Undergraduate Study

Bioengineering B.S.

Preparation for the Major

Required: Bioengineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B, 30BL; Computer Science 31; Life Sciences 2, 3. (satisfies HSSEAS GE life sciences requirement), 3, 4; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.

The Major

Required: Bioengineering 100, 110, 120, 165, 176, 180, 180L, 181, 181L, 182A, 182B, 182C, Chemistry and Biochemistry 153A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and two major field elective courses (8 units) from Biomedical Engineering C101, CM102, CM103, CM145, CM150, CM150L, C170, C171, CM180, C181, C185, C187.

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

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 biosignal processing, biomechanics, biomaterials, tissue engineering, biotechnology, biological imaging, biomedical optics and lasers, neuroengineering, and biomolecular machines. Letter grading.

Upper Division Courses

100. Bioengineering Fundamentals. (4) Lecture, four hours; discussion, one hour; outside study seven hours. Requisites or corequisites: Electrical Engineering 1 or Physics 1C, and Mathematics 32B. 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.

104. Physical Chemistry of Biomacromolecules. (4) (Same as Biomedical Engineering CM104.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 30A, Life Sciences 2, 3. 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 fundamental principles of 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, solvation of charged species, and separation and characterization of biomacromolecules. Letter grading.

105. Biopolymer Chemistry and Bioconjugates. (4) (Same as Biomedical Engineering CM105.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistry 20A, 20B, 30A. Highly recommended: one organic chemistry and one general chemistry course. Bioconjugate chemistry is science of coupling biomolecules for wide range of applications. Oligonucleotides may be coupled to one surface in gene chip, or oligosaccharides may be coupled to 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 some sample applications. Letter grading.

106. Topics in Biophysics, Channels, and Membranes. (4) (Same as Biomedical Engineering CM106.) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 14C, Life Sciences 1, 2, 3, 4, Mathematics 33B, Physics 1C, 4AL, 4BL. Coverage in depth of physical processes associated with biological membranes and channel proteins, with specific emphasis on electro-physiology. Basic physical principles governing electrophoresis in dielectric media, building on complexity to ultimately address action potentials and signal propagation in nerves. Topics include Nerst/Planck and Poisson/Boltzmann equations, Nernst potential, Donnan equilibrium, GHK equations, energy barriers in ion channels, cable equation, action potentials, Hodgkin/Huxley equations, impulse propagation, axon geometry and conduction, dendritic integration. Letter grading.

110. Biotransport and Bioreaction Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 100, Computer Science 31 or Mechanical and Aerospace Engineering 20. Mathematics 33B. Introduction to analysis of fluid flow: heat transfer, mass transfer, binding events, and biochemical reactions in systems of interest to bioengineers, including cells, tissues, organs, human body, extracorporeal devices, tissue engineering systems, and biartificial organs. Introduction to pharmacokinetic analysis. Letter grading.

120. Biomedical Transducers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 14C or 30A, Electrical Engineering 1 or Physics 1C. Mathematics 32B. Principles of transduction, design characteristics for different measurements, reliability and performance characteristics, and data processing and filtering. Emphasis on silicon-based microfabricated and nanostructured sensors. Novel materials, biocompatibility, biostability. Safety of electronic interfaces. Actuator design and interfacing control. Letter grading.

M131. Nanopore Sensing. (4) (Same as Biomedical Engineering CM131.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 100, 120, Life Sciences 2, 3, Physics 1A, 1B, 1C. Analysis of sensing and detection of fluctuating ionic conductance through artificial or protein nanopores. Physics of pore conductance. Applications to single molecule detection and DNA sequencing. Review of current literature and technological applications. History and instrumentation of resistive pulse sensing, theory and instrumentation of electrical measurements in electrolytes, nanopore fabrication, ionic conductance through pores and GHK equation, patch clamp and single channel measurements and instrumentation, noise issues, protein engineering, molecular sensing, DNA sequencing, membrane engineering, and future directions of field. Letter grading.

165. Bioethics and Regulatory Policies in Bioengineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. As bridge connecting bioengineering with engineering professionals, bioengineers face ethical challenges of both and from those resulting from conflicts between motivation to use most promising technology and motivation to protect patients and research subjects. They also face ethical challenges in jurisprudence, not only in using patent law, but in testifying for court cases that require bioengineering input, and as teachers when they explain their professional activities to others. Introduction to scope of bioengineering profession ethics, with emphasis on medical research, and engineering ethics due to case reports being plentiful in these areas. Letter grading.

M172. Design of Minimally Invasive Surgical Tools. (4) (Same as Biomedical Engineering CM172.) Lecture, three hours; discussion, two hours; outside study, seven hours. As bridge connecting bioengineering with engineering professionals, bioengineers face ethical challenges of both and from those resulting from conflicts between motivation to use most promising technology and motivation to protect patients and research subjects. They also face ethical challenges in jurisprudence, not only in using patent law, but in testifying for court cases that require bioengineering input, and as teachers when they explain their professional activities to others. Introduction to scope of bioengineering profession ethics, with emphasis on medical research, and engineering ethics due to case reports being plentiful in these areas. Letter grading.

176. Principles of Biocompatibility. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Chemistry 153A, Electrical Engineering 1 or Physics 1C, 1L, 1N, 1P. Introduction to biocompatibility at systemic, tissue, cellular, and molecular levels. Biomechanical compatibility, stress/strain constitutive equations, cellular and molecular response to mechanical signals, biomechanics of cellular compatibility, immune response. Letter grading.

Course. Student presentation of projects in research specialty of faculty member teaching undergraduate students who are part of research group seminars. Bioengineering.

For credit with topic or instructor change. Letter grading.

Research For credit with topic or instructor change. Letter grading.

Seminar, three hours. Limited to bioengineering majors. Corequisites: course 180L, Corequisite: course 181L. Part II of two-part series: Molecular basis of normal physiology and pathophysiology of selected organ systems; engineering design principles of digestive and urinary systems. Fundamental engineering principles of selected medical/ surgical devices. Letter grading.

System Integration in Biology, Engineering, and Medicine II. (3) Lecture, one hour; laboratory, four hours; clinical visits, three hours; outside study, seven hours. Requisites: course 180L. Corequisite: course 181L. Part II of two-part series: Molecular basis of normal physiology and pathophysiology of selected organ systems; engineering design principles of digestive and urinary systems. Fundamental engineering principles of selected medical/ surgical devices. Letter grading.

System Integration in Biology, Engineering, and Medicine II. (3) Lecture, one hour; laboratory, four hours; clinical visits, three hours; outside study, one hour. Corequisite: course 181. Hands-on experimentation and clinical applications of selected medical therapeutic devices associated with cardiovascular and pulmonary disorders. Letter grading.

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.

Biological Chemistry

David Geffen School of Medicine

UCLA

310 Biomedical Sciences Research Building
Box 951737
Los Angeles, CA 90095-1737

(310) 825-6545
fax: (310) 206-5272
http://www.biolchem.ucla.edu

Michael Grunstein, Ph.D., Chair
John J. Colicelli, Ph.D., Vice Chair
Harvey R. Herschman, Ph.D., Vice Chair
Gregory S. Payne, Ph.D., Vice Chair

Professors

Utpal Banerjee, Ph.D.
Michael F. Carey, Ph.D.
John J. Colicelli, Ph.D.
Edward M.F. De Robertis, M.D., Ph.D. (Norman F. Sprague Professor of Molecular Oncology)
Peter A. Edwards, Ph.D.
David S. Eisenberg, D.Phil.
Judith C. Gasson, Ph.D.
Michael Grunstein, Ph.D.
Harvey R. Herschman, Ph.D. (Crum Professor of Medical Engineering)
Reid C. Johnson, Ph.D.
Joseph A. Loo, Ph.D.
Kevin McIntee, Ph.D.
Elizabeth F. Neufeld, Ph.D.
Gregory S. Payne, Ph.D.
Leonard H. Rome, Ph.D.
Ke Shuai, Ph.D.
Gabriel H. Travis, Ph.D.
Alexander van der Bieke, Ph.D.
Geraldine A. Weinmaster, Ph.D.
S. Larry Zipursky, Ph.D.

Professors Emeriti

Robert J. DeLange, Ph.D.
John Edmond, Ph.D.
Samuel Edison, Ph.D.
Robert M. Fink, Ph.D.
Armand J. Fulco, Ph.D.
Dr. G. Glitz, Ph.D.
Bruce D. Howard, M.D.
David I. Meyer, Ph.D.
John G. Pierce, Ph.D.
Sidney Roberts, Ph.D.
Emil L. Smith, Ph.D.
Marian E. Swendseid, Ph.D.
Irving Zabin, Ph.D.
Patrice J. Zamenhof, Ph.D.

Associate Professors

Timothy F. Lane, Ph.D.
Kelsey C. Martin, M.D., Ph.D. (Eleanor I. Leslie Professor of Innovative Brain Research)

Assistant Professors

Alison R. Frand, Ph.D.
Feng Guo, Ph.D.
Siavash K. Kurdistan, M.D.
Ralf Landgraf, Ph.D.
Katherine Platt, Ph.D.
James A. Wohlschlegel, Ph.D.

Adjunct Assistant Professor
Eryn Ujita Lee, Ph.D.

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 David 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://www.gdnet.ucla.edu/gasasa/library/bgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Biological Chemistry offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biological Chemistry.

Biological Chemistry

Upper Division Courses

M140. Cell Biology: Cell Cycle. (5) (Same as Molecular, Cell, and Developmental Biology M140.) Lecture, four hours; discussion, one hour. Requisites: Chemistry 14A, 14B, and 14BL, or 20A, 20B, and 20BL, Life Sciences I, II. Not open for credit to students with credit for Molecular, Cell, and Developmental Biology 165A and 165B. Satisfies premedical requirements. Eukaryotic cells, structures and biochemistry 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) (Formerly numbered 197.) Seminar, two hours. Offered 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) (Formerly numbered 195.) Seminar, two hours. Discussion of research methods and current literature in field or of research of faculty members or students. May be repeated for credit. P/NP grading.

195. Directed Research or Senior Project in Biological Chemistry. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating project 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 nonmatriculated students with consent of instructor. Primarily for first-year medical students and runs throughout School of Medicine’s second semester. General biochemistry with emphasis on mammalian systems. Structure, function, and metabolism of major cellular components. To receive credit, both courses must be taken together in same academic year. In Progress (201A) and S/U (201B) grading.

204. Human Biological Chemistry and Nutrition Laboratory. (3) Laboratory, four hours. Open to nonmedical students with consent of instructor. Experiments illustrating techniques and procedures in medically related biochemistry, nutrition, analysis of experimental results. S/U or letter grading.


220A-220B-220C. Research Laboratory Rotations. (2 to 8 each) Laboratory, two to eight hours. Students arrange apprenticeships in laboratories of one or more departmental faculty members and engage in research project under close faculty direction. Allows students to acquire in-depth laboratory experience in specific research areas and facilitates informed decision on their part in selection of dissertationadvisor. S/U grading.

M223. Membrane Molecular Biology. (4) (Same as Physiology M223.) Lecture, two hours; discussion, two hours. Required: course CM223. Advanced course in molecular aspects of membrane physiology and biochemistry covering lipids and physical chemistry of biological membranes; membrane biogenesis and targeting of proteins to membranes; pumps, carriers, and channels; receptors and transmembrane signaling. S/U or letter grading.

M234. Genetic Control of Development. (4) (Same as Molecular, Cell, and Developmental Biology M234.) Lecture, four hours. Topics at forefront of molecular developmental biology, including problems in oogenesis and early embryogenesis, pattern formation, axis determination, nervous system development, cell differentiation, and cell-cell and cell-cell matrix interactions. S/U or letter grading.

M237. Cellular and Molecular Basis of Disease. (4) (Same as Pathology M237.) Lecture, two hours. Discussion, two hours. Preparation: one course each in molecular biology and molecular biology 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. S/U or letter grading.

251A-251B-251C. Seminars: Transcriptional Regulation. (2-2-2) Seminar, two hours. Advanced courses on mechanisms of gene transcription in both eukaryotes and prokaryotes intended for students actively working or highly interested in transcription. S/U grading.

CM253. Advanced Principles of Molecular and Cellular Biosciences I. (6) (Same as Chemistry CM253, Human Genetics CM253, and Molecular, Cell, and Developmental Biology CM253.) Lecture, five hours. Requisites: Chemistry 110A, 153A, 153B, 153C, or 156, and 110A. Chemical and physical properties of proteins and nucleic acids. Biosynthesis, structure, and function of proteins, nucleic acids, and multiprotein complexes; protein and nucleic acid enzymology and gene expression. Structure, cloning, and analysis of DNA; biosynthesis and processing of RNA; biosynthesis, purification, structure, and analysis of proteins; correlation of structure and biological properties. Calculated for graduate credit. May be repeated for credit. Letter grading.


266A-266B-266C. Seminars: Molecular Embryology. (2-2-2) Formerly numbered M266A-M266B-M266C. Seminar, two hours. Advanced courses in developmental genetics and biochemistry, with emphasis on early development. Intended mostly for students actively working or highly interested in embryology. S/U grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.


597. Preparation for Examinations. (2 to 4) Tutorial, to be arranged. Individual study for Ph.D. qualifying examinations or M.S. comprehensive examination. S/U grading.


BIOLOGY

See Ecology and Evolutionary Biology

BIOMATHMATICS

David Geffen School of Medicine

UCLA
AV-617 Center for the Health Sciences
Box 951766
Los Angeles, CA 90095-1766
(310) 825-5554
fax: (310) 825-6885
e-mail: gradprog@biomath.ucla.edu
http://www.biomaht.ucla.edu

Elliott M. Landaw, M.D., Ph.D.
Janet S. Sinsheimer, Ph.D., Vice Chair
Henry S.C. Huang, D.Sc., Professor
http://www.biomath.ucla.edu

Elliott M. Landaw, M.D., Ph.D.

Biologist

Robert M. Elashoff, Ph.D., Vice Chair
Janet S. Sinsheimer, Ph.D., Vice Chair

Professors

Robert M. Elashoff, Ph.D.
Henry S.C. Huang, D.Sc.
Elliott M. Landaw, M.D., Ph.D.

Elliott M. Landaw, M.D., Ph.D., Chair
Robert M. Elashoff, Ph.D., Vice Chair
Janet S. Sinsheimer, Ph.D., Vice Chair

Elliott M. Landaw, M.D., Ph.D.
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, neuroscience, 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 relatively new, 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 a 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.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnnet.ucla.edu/gasaalibrary/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of 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. Requisite: 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. Requisite: Mathematics 32A. Designed for upper division science majors and biomedical graduate students. Survey of various 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: calculus. Analysis of deterministic models. Conditions under which deterministic and probabilistic descriptions of biological phenomena are appropriate. Both approaches applied to selected examples in physiology and biology. P/NP or letter grading.

110. Introductory Biomathematics for Medical and Biological Research. (4) Lecture, four hours; discussion, 90 minutes. Elementary statistics course that focuses on statistical concepts and critiques literature, with emphasis on clinical research. Output from statistical computer packages discussed in class, but students do not use computer themselves. Topics include descriptive statistics, t-tests, confidence intervals, linear regression and correlation, analysis of variance, nonparametric statistics, basic experimental design, sample size determination, article interpretation. P/NP or letter grading.

170A. Computer-Based Introductory Biomathematics for Medical and Biological Experimenters. (4) Lecture, four hours; discussion, 90 minutes. Intensive primer on statistics emphasizing design of experiments and analysis of data using statistical packages. Statistical topics similar to course 160—descriptive statistics, t-tests, confidence intervals, linear regression and correlation, analysis of variance, nonparametric statistics, basic experimental design, sample size determination—but students also shown how to use computer and run statistical software packages on practical aspects of data collection and cleaning. P/NP or letter grading.

170B. Statistical and Mathematical Modeling in Medical and Biological Research. (4) Lecture, four hours; discussion, 90 minutes. Second course in biomathematical methods. Topics include randomization methods, intermediate experimental design, contingency table analysis, analysis of variance, multiple linear regression, nonlinear regression, methods of classification, model checking, basic mathematical models including compartmental models, and statistical computer software. Students have opportunity to design their own experiments and analyze them on computer, and to analyze previously collected data. P/NP or letter grading.

171. Applied Regression Analysis in Medical Sciences. (4) Lecture, three hours; laboratory, one hour. Requisite: course 170A. Proficiency in applied regression analysis, with focus on interpretation of results and performing computation. Primary topics include simple linear regression, multiple regression, regression model selection, analysis of variance, logistic regression, and survival analysis. Letter grading.

190HA-190HB. Honors Research in Biomathematics. (4-4) Tutorial, to be arranged. Limited to juniors/seniors. Individual research in some aspect of biomathematics designed to acquaint students in depth with mathematical models and computer applications in biology. Must be taken for at least two terms and for total of at least 8 units. Thesis required. P/NP or letter grading.

197. Individual Studies in Biomathematics. (2 to 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.

202. Fourier Analysis in Biology. (4) Lecture, three hours; laboratory, two 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.

Graduate Courses


201. Deterministic Models in Biology. (4) Lecture, three hours; laboratory, two 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.


M203. Stochastic Models in Biology. (Same as Human Genetics M203.) Lecture, four hours. Preparation: Mathematics 170A or equivalent experience in probability. Mathematical description of biological relationships, with particular attention to areas where conditions for deterministic models are inadequate. Examples of stochastic models from genetics, physiology, ecology, and variety of other biological and medical disciplines. S/U or letter grading.

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 survey of latest methods in statistical data analysis and use of such arising in laboratory and clinical research. S/U or letter grading.
205. Electric Potential Problems in Membranes, Cells, and Tissues. (4) Lecture, four hours. Preparation: knowledge of differential equations and electrostatics, Review of elementary potential problems in rectangular, spherical, and cylindrical coordinates; modeling subthreshold electrical properties of cells; microelectrode measurement of intracellular potentials; boundary conditions for current flow across membranes; eigenfunction expansions and singular perturbation analysis of intracellular and extracellular potential distribution in spherical and cylindrical cells and synapses; computation of potential barriers for ions traversing membrane pore. S/U or letter grading.


M207A. Theoretical Genetic Modeling. (4) (Same as Biostatistics M207A.) Lecture, three hours; discussion, one hour. Requisites: Mathematics 115A, 131A, Statistics 100B. Mathematical models in statistical genetics. Topics include population genetics, genetic epidemiology, genetic gene mapping, design of genetic experiments, DNA sequence analysis, and molecular phylogeny. S/U or letter grading.

M207B. Applied Genetic Modeling. (4) (Same as Biostatistics M207B.) Lecture, three hours; laboratory, one hour. Requisites: Biostatistics 110A, 110B. Methods of computer-oriented genetic analysis. Topics may include segregation analysis, parametric and nonparametric linkage analysis, quantitative methods, and phylogenetics. Laboratory for hands-on computer analysis of genetic data; laboratory assignments reflect implementation of models. S/U or letter grading.

M208A. Modeling in Neurobiology for Mathematicians. (4) Lecture, four hours; laboratory, two hours. Preparation: introductory ordinary partial differential equations, programming experience. Introduction to electrochemical bases for nerve function and mathematical and computational methods for studying this, appropriate mathematical techniques, and use of mathematical software. Survey of current leading research areas and software systems. S/U or letter grading.

M208B. 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., NCOLUS) or one's own simple programs that use IMSL subroutines. Survey of current leading research areas. S/U or letter grading.


M211. Mathematical and Statistical Phylogenetics. (4) (Same as Human Genetics M211.) Lecture, three hours; laboratory, one hour. Requisites: Biostatistics 110A, 110B. Mathematical 170A. Theoretical models in molecular evolution, with focus on phylogenetic techniques. Topics include evolutionary tree reconstruction methods, studies of viral evolution, phylogenetic algorithms, and examples from evolutionary biology and medicine. Laboratory for hands-on computer analysis of sequence data. S/U or letter grading.

212. Nonlinear Dynamics in Biological Systems. (4) Lecture, three hours; discussion, one hour. Required preparation: elementary knowledge of ordinary differential equations, partial differential equations, and computer programming. Mathematical model of nonlinear dynamics and self-organization in temporal and spatial systems, with applications to biological systems. Topics range from bifurcation theory to low dimension to pattern formation at 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 control, intracellular calcium cycling, pattern formation in morphogenesis, and action potential models and electrical wave formation and propaga-


M230. Computed Tomography: Theory and Applications. (3) (Same as Biostatistics M230.) Lecture, four hours. Computed tomography is three-dimensional imaging technique being widely used in radiology and is becoming active research area in biomedicine. Eastern forms of computed tomography (CT), various reconstruction algorithms, special characteristics of CT, physics in CT, and various biomedical applications. S/U or letter grading.

M231. Statistical Methods for Categorical Data. (4) (Same as Biostatistics M231.) Lecture, three hours; discussion, one hour. Requisites: Biostatistics 100B or 110B. Statistics 100B. Statistical techniques for analysis of categorical data: discussion and illustration of their applications and limitations. S/U or letter grading.

M232. Statistical Analysis of Incomplete Data. (4) (Same as Biostatistics M232.) Lecture, three hours; discussion, one hour. Requisites: Statistics 100B. Discussion of statistical analysis of incomplete data sets, with material from sample survey, econometric, bio-

234. Applied Bayesian Inference. (4) (Same as Biostatistics M234.) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: Biostatistics 115 (or Statistics 100C). Bayesian approach to statistical inference, with emphasis on biomedical applications and facilities. Bayesian approaches to linear and non-linear regression, model selection, Bayesian hypothesis testing, and numerical methods. S/U or letter grading.

M243. Condensed Matter Physics of Cells. (4) (Same as Physics M243L.) Seminar, four hours. Designed for graduate students. Basic paradigms of condensed matter physics and applications to bio-

259. Controversies in Clinical Trials. (2) Lecture, one hour; discussion, one hour. Preparation: comple-
tion 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, 260A. 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. Ethics in Patient-Oriented Research. (2) (Same as Medicine M261.) Lecture, two hours; discussion, two hours. Discussion of current issues in responsible conduct of clinical research, including report- ing 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.

M262. 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.) Lecture, two hours. Preparation: completion of professional health sciences degree (M.D., D.O., D.S.N., 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 tar-
gcting, gene therapy, and genomics. Letter grading.

265A. Data Analysis Strategies I. (4) (Formerly numbered 264A.) 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 hypothe-
ses using various types of databases. Topics include developing testable hypothesis, data management, and analysis strategies and written presentation of findings. Experience with full process of hypothesis generation, 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 presentation of their findings (e.g., 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.

265B. 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.
266. Advanced Biostatistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 171. Continuation of course 171. Some traditional multivariate methods, such as principal components, factor analysis, cluster analysis, and more contemporary methods, including recursive partitioning and missing data. Multilevel and longitudinal analysis. Letter grading.

M270. Optimal Parameter Estimation and Experiment Design for Biomedical Systems. (4) (Same as Biomedical Engineering M296B, Computer Science M296A, and Medicine M270D.) Lecture, four hours; outside study, eight hours. Requisite: course 220 or Computer Science 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 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.


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 biophysical techniques that measure various biological processes. S/U or letter grading.


M281. Survival Analysis. (4) (Same as Biostatistics M215.) Lecture, three hours; discussion, one hour. Requisite: Biostatistics 115 or Statistics 100C. Statistical methods for analysis of survival data. 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 phase two trials and multiclass 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. Review of pharmacokinetics, drug metabolism and transport, assessment of drug effects, drug therapy in special populations, and contemporary drug development. S/U or letter grading.

299. Special Topics in Clinical Research. (2 to 4) Seminar, three hours. Requisites: courses M260A, M260B. Advances in 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 Biomathematics. (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 grading.


---

**BIOMEDICAL ENGINEERING**

**Interdepartmental Program**

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

**UCLA**

5212 Engineering V

Box 951600

Los Angeles, CA 90095-1600

(310) 267-4985

fax: (310) 794-5956

e-mail: bme@ea.ucla.edu

http://www.bme.ucla.edu

Timothy J. Deming, Ph.D., Chair

Faculty Advisory Committee

Timothy J. Deming, Ph.D. (Bioengineering, Chemistry and Biochemistry)

Bruce S. Dunn, Ph.D. (Materials Science and Engineering)

Chih-Ming Ho, Ph.D. (Mechanical and Aerospace Engineering)

Hooshang Kangarloo, M.D. (Pediatrics, Radiological Sciences)

Ichiro Nishimura, D.D.S., D.M.Sc., D.M.D. (Dentistry)

James N. Weiss, M.D. (Cardiology)

**Scope and Objectives**

The Biomedical Engineering Interdepartmental Program trains specially qualified engineers and scientists to work on engineering applications in either medicine or biotechnology. Graduates apply engineering principles to current needs and contribute to future advances in the fields of medicine and biotechnology. Fostering careers in industry or academia, the program offers students the choice of an M.S. or Ph.D. degree in eight distinct fields of biomedical engineering. In addition to selected advanced engineering courses, students are required to take specially designed biomedical engineering courses to ensure a minimal knowledge of the appropriate biological sciences. Students receive practical training via an M.S. or Ph.D. research thesis or dissertation in biomedical engineering. Faculty members have principal appointments in departments across campus and well-equipped laboratories for graduate student research projects.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasla/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 Biomedical Engineering Program offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biomedical Engineering.

**Biomedical Engineering**

Upper Division Courses

C101. Introduction to Biomedical Engineering. (4) Lecture, three hours; laboratory, three hours; outside study, six hours. Designed for physical sciences, life sciences, and engineering students. Introduction to wide scope of biomedical engineering via treatment of selected important individual topics by small team of specialists. Concurrently scheduled with course C201. Letter grading.

C102. Basic Human Biology for Biomedical Engineers I. (4) (Same as Physiological Science C102.) Lecture, three hours; laboratory, two hours. Preparation: human molecular biology, biochemistry, and cell biology. Not open for credit to Physiological Science majors. Broad overview of basic biological activities and organization of human body in system (organ/tissue) to system basis, with particular emphasis on molecular basis. Modeling/simulation of functional aspect of biological system included. Actual demonstration of biomedical instruments, as well as visits to biomedical facilities. Concurrently scheduled with course CM203. Letter grading.


C104. Physical Chemistry of Biomacromolecules. (4) (Same as Bioengineering M104.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisite: Chemistry 2OA, 2OB, 3OA, Life Sciences 2, 3, 2. 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, solvation of charged species, and separation and characterization of biomacromolecules. Concurrently scheduled with course C204. Letter grading.
CM105. Biopolymer Chemistry and Bioconjugates. (4) (Same as Bioengineering M105.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistry 20A, 20B, 20L. Highly recommended: one organic chemistry course. Bioconjugate chemistry is science of coupling biomolecules for wide range of applications. Oligonucleotides may be coupled to one surface in gene chip, or one protein may be coupled to one polymer to enhance its stability in serum. Wide variety of bioconjugates are in use 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. T-Phenylation and discussion of design and synthesis of synthetic bioconjugates for some sample applications. Concurrently scheduled with course C205. Letter grading.

CM106. Topics in Biophysics, Chemistry, and Membranes. (4) (Same as Bioengineering M106.) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 14C, Life Sciences 1, 2, 3, 4, 10A, 33B, Physics 1C, 4AL, 4BL. Coverage in depth of physical processes associated with biological membranes and channel proteins, with specific emphasis on electrophysiology. Basic principles of non-equilibrium thermodynamics in dielectric media, building on complexity to ultimately address action potentials and signal propagation in nerves. Topics include Nernst/Planck and Poisson/Boltzmann equations, Donnan equilibrium, GHK equations, energy barriers in ion channels, cable equation, action potentials, Hodgkin/Huxley equations, impulse propagation, axon geometry and conduction, and ion channel conformation. Concurrently scheduled with course C206. Letter grading.

CM131. Nanopore Sensing. (4) (Same as Bioengineering M131.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Bioengineering 10A, 10B, 120, 122, Chemistry 14C, 20A, 20L, Physics 1A, 1B, 4AL, 4BL. Corequisite: course CM150. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructured sensors and microactuators. Students go through process of fabricating MEMS device. Concurrently scheduled with course CM250L. Letter grading.

C170. Energy-Tissue Interactions. (4) Lecture, three hours; outside study, nine hours. Requisites: Electrical Engineering 172, 175, Life Sciences 3, Physics 17. Corequisite: course C170L. Introduction to therapeutic and diagnostic use of energy delivery devices in medical and dental applications, with emphasis on understanding fundamental mechanisms underlying various types of energy-tissue interactions. Concurrently scheduled with course C270L. Letter grading.

C170L. Introduction to Techniques in Studying Laser-Tissue Interaction. (2) Laboratory, four hours; outside study, two hours. Corequisite: course C170L. Introduction to simulation and experimental techniques used in studying laser-tissue interactions. Topics include computer simulations of light propagation in tissue, measuring absorption spectra of tissue/tissue phantom, making tissue phantoms, determination of optical properties of different tissues, techniques of temperature distribution measurements. Concurrently scheduled with course C270L. Letter grading.


CM172. Design of Minimally Invasive Surgical Tools. (4) (Same as Bioengineering M172.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 308, Life Sciences 2, 3, 7, 9A, 9B. Introduction to design principles and engineering concepts used in design and manufacture of tools for minimally invasive surgery. Coverage of FDA regulatory policy and surgical procedures. Topics include optical devices, endoscopes and laparoscopes, biopsy devices, laparoscopic tools, cardiovascular and interventional radiology devices, orthopedic instrumentation, and integration 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.

CM180. Introduction to Biomaterials. (4) (Same as Materials Science CM180.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Mathematics 110A, 110B, 110C, 110D. Introduction to biomaterials science 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. Design of novel drug delivery systems that can provide spatial and temporal control of drug release. Introduction to biomaterials with special emphasis on understanding fundamental mechanisms underlying various types of energy-tissue interactions. Concurrently scheduled with course C285. Letter grading.

CM182. Targeted Drug Delivery and Controlled Drug Release. (4) (Same as Bioengineering M182.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 20L. New therapeutics require comprehensive understanding of modern biotechnology, chemistry, 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. Corequisite: course C285. Letter grading.

C186. Introduction to Cross-Modal Sensing. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 20A, 20B, 20L. Tissue engineering applies principles of biology and physical sciences with engineering approach to regenerate tissues and organs. Directed introduction with emphasis on ongoing computational and systems biology research at UCLA in systems biology, bioinformatics, genomics, neuroscience, tissue engineering, systems biology, software, knowledge systems, biosystem simulation, and other computational and systems biology/biomedical engineering areas. P/N grading.

CM190. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) (Formally numbered M150.) (Same as Electrical Engineering CM150 and Mechanical and Aerospace Engineering CM180.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL, Corequisite: course CM150L. 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.

CM195. Foundation in Biophysics, Chemistry, and Membranes. (4) (Same as Bioengineering M155.) Lecture, two hours; discussion, two hours; outside study, two hours. Requisites: Chemistry 20A, 20B, 20L. New therapeutics require comprehensive understanding of modern biotechnology, chemistry, 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. Design of novel drug delivery systems that can provide spatial and temporal control of drug release. Introduction to biomaterials with special emphasis on understanding fundamental mechanisms underlying various types of energy-tissue interactions. Concurrently scheduled with course C285. Letter grading.
CM106B. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Formerly numbered M106B.) (Same as Computation and Systems Biology M186B and Computer Science CM186B.) Lecture, four hours; laboratory, three hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multicompartimental, predator-prey, pharmacokinetic (PK), pharmacodynamics (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 computer algorithms, with modeling software exercises in class and PC laboratory assignments. Concurrently scheduled with course CM286B. Letter grading.

CM186C. Biomodeling Research and Research Communication Workshop. (2 to 4) (Formerly numbered CM106B.) (Same as Computational and Systems Biology M186C and Computer Science CM186C.) Lecture, one hour; discussion, two hours; laboratory, one hour; outside study, eight hours. Requisite: one course CM106B. 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 methods and written communication. Concurrently scheduled with course CM286C. Letter grading.

C187. Applied Tissue Engineering: Clinical and Industrial Perspectives. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: minimum proficiency in high school Chemistry 20A, 20B, 20L. Not open for credit to students who have previously completed course 220. Introduction to tissue engineering and medical device design. Lectures include: 1. Overview of clinical applications of synthetic tissue replacement materials and clinical data. 2. Overview of central topics of tissue engineering; with focus on how to build artificial tissues into regulated clinically viable products. Topics include biomaterials selection, cell source, delivery methods, FDA approval processes, and physical/chemical and biological testing. Case studies include skin and artificial skin, bone and cartilage, blood vessels, neurotissue engineering, and liver, kidney, and other organs. Clinical and industrial perspectives of tissue engineering products. Manufacturing constraints, and regulatory changes in design and development of tissue-engineering devices. Concurrently scheduled with course C287. Letter grading.

188. Special Courses in Biomedical Engineering. (4) Lecture, four hours; outside study, eight hours. Special topics in biomedical engineering for undergraduate students that are taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated for credit. Letter grading.

Graduate Courses
C201. Introduction to Biomedical Engineering. (4) Lecture, three hours; laboratory, three hours; outside study, six hours. Designed for physical sciences, life sciences, and engineering students. Introduction to wide scope of biomedical engineering via treatment of selected important individual topics by small team of specialists. Concurrently scheduled with course C101. Letter grading.

C202. Basic Human Biology for Biomedical Engineers I. (4) (Same as Physiological Science CM202.) Lecture, three hours; laboratory, two hours. Prerequisites: Requisites include basic knowledge of human anatomy, physiology, 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) level, such as blood, heart, and nervous system. Emphasis on molecular basis. Modeling/simulation of functional aspect of biological system included. Actual demonstration of biomedical instruments, as well as visits to biomedical facilities. Concurrently scheduled with course CM102. Letter grading.


C204. Physical Chemistry of Biomacromolecules. (4) Lecture; three hours; discussion; two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 30A, Life Sciences 2, 3. To understand biological materials and design synthetic replacements, it is imperative to understand 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 network, and viscoelasticity. Application of engineering principles in the synthesis of macromolecules, such as protein conformation, solvation of charged species, and separation and characterization of biomacromolecules. Concurrently scheduled with course CM204. Letter grading.

C205. Biopolymer Chemistry and Bioconjugates. (4) Lecture; four hours; discussion; one hour; outside study, seven hours. Enforced requisites: Chemistry 20A, 20B, 20L. Highly recommended: one organic chemistry course. Bioconjugate chemistry is science of coupling biomolecules for wide range of applications. Oligonucleotides may be coupled to one surface, whereas one chain may be coupled to another 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. Basics of chemical ligand synthesis, 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 some sample applications. Concurrently scheduled with course CM105. Letter grading.

C206. Topics in Biophysics, Channels, and Membranes. (4) Lecture, four hours; discussion; two hours; outside study, eight hours. Requisites: Chemistry 20A, 20B, 30A, Mathematics 33B, Physics 1C, 4AL, 4BL. Coverage in depth of physical properties of biomolecules and channel proteins, with special emphasis on electrophysiology. Basic physical principles governing electrotostatics in dielectric media, building on complexity on cellular membrane and ion channels. These ion channels include: N-type, L-type, and P/Q-type voltage-gated in nerves. Topics include Nernst/Planck and Poisson/Boltzmann equations, Nernst potential, Donnan equilibrium, GHK equations, energy barriers in ionic channels, channel proteins. Hodgkin-Huxley equations, impulse propagation, axon geometry and conduction, dendritic integration. Concurrently scheduled with course CM106E. Letter grading.

M214A. Digital Speech Processing. (4) (Same as Electrical Engineering M214A.) Lecture, three hours; laboratory, two hours; outside study, seven hours. Requisite: Electrical Engineering 113. Theory and applications of digital processing of speech signals. Mathematical models of human speech production and perception mechanisms, speech analysis/synthesis systems that include digital filtering, speech models, and homomorphic filtering. Applications to speech synthesis, automatic recognition, and hearing aids.

M215. Biochemical Reaction Engineering. (4) (Same as Chemical Engineering CM215.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: Chemical Engineering 101C. Use of principles of reaction engineering, such as information thermodynamics, transport phenomena, and reaction kinetics to develop tools needed for technical design and economic analysis of biological reactors. Letter grading.

M217. Biomedical Imaging. (4) (Same as Electrical Engineering M217.) Lecture, three hours; laboratory, two hours; outside study, seven hours. Requisite: Electrical Engineering 114 or 211A. Mathematical principles of medical imaging modalities: X-ray, computed tomography, positron-emission tomography, single photon emission computed tomography, magnetic resonance imaging. Topics include basic principles of each imaging system, reconstruction algorithms, system configurations and their effects on reconstruction algorithms, specialized imaging techniques for specific applications such as flow imaging. Letter grading.

220. Introduction to Medical Informatics. (2) Lecture, two hours; outside study, four hours. Designed for graduate students. Introduction to research topics and issues in medical informatics for students new to field. Definition of this emerging field of study, current research efforts, and future directions in research. Key issues in medical informatics to expose students to relevant applications, such as information system architectures, data and process modeling, information extraction and representations, information retrieval and visualization, health services research, telemedicine. Emphasis on current research endeavors and applications. S/U grading.

221. Human Anatomy and Physiology for Medical Informatics. (4) Lecture, four hours; outside study, eight hours. Corequisite: course 222. Designed for graduate students. Introduction to human anatomy and physiology, with particular emphasis on visualization of anatomy and physiology from imaging perspective. Topics include chest, cardiac, neurology, gastrointestinal/genitourinary, and musculoskeletal systems. Examination of basic imaging physics (magnetic resonance, computed tomography, ultrasound, computed radiography) to provide context for imaging modalities predominantly used to view human anatomy. Geared toward nonphysicians who require more formal understanding of human anatomy/physiology. Letter grading.

222. Clinical Rotation Medical Informatics. (2) Lecture, two hours; laboratory, four hours. Corequisite: course 221. Designed for graduate students. Clinical rotation through medical imaging modalities and clinical environments. Exposure to challenges of medical practice today and clinical usage of imaging, including computed tomography, magnetic resonance, and other traditional forms of image acquisition. Designed to provide students with real-world exposure and understanding of practical applications of imaging and to re-inforce human anatomy and physiology concepts from other courses. Four hours per week in clinical environments, observing clinicians in different medical environments to gain appreciation of current practices, imaging, and information systems. Participation in clinical noon conferences to further broaden exposure and understanding of medical problems. S/U grading.
224A. Physics and Informatics of Medical Imaging. (4) Lecture, four hours; laboratory, eight hours. Requisites: Mathematics 33A, 33B. Designed for graduate students. Introduction to physics of image formation and image reconstruction processes. Computer-aided design for MEMS. Designing MEMS to microactuators. Students design microfabrication processes and applications of imaging for range of many lithographic, deposition, and etching 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 stress are covered. Letter grading.

224B. Advanced Imaging for Informatics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 224A. Additional modalities and current research in imaging. Topics include nuclear medicine, functional magnetic resonance imaging (fMRI), MR diffusion/perfusion, and optical imaging, with focus on image analysis and visualization tools. Basic physics principles behind these newer imaging concepts, with exposure to seminal works. Current research efforts, with focus on clinical applications and new tools that are available. Geared toward nonphysicists to provide basic understanding of issues related to basic medical image acquisition. Letter grading.

225. Bioseparations and Bioprocess Engineering. (4) (Same as Chemical Engineering CM225.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemical Engineering 101C and 103, or Chemistry 156. Separation strategies, unit operations, and economic factors used to design processes for isolating and purifying materials like white cells, enzymes, food additives, or pharmaceuticals that are products of biological reactors. Letter grading.

226. Medical Knowledge Representation. (4) Seminar, four hours; outside study, eight hours. Designed for graduate students. Issues related to medical knowledge representation and its application in healthcare products. Topics include database structures used for representing knowledge (conceptual graphs, frame-based models), different data models for representing spatio-temporal information, rule-based implementation of inference, key statistical methods for discovery of knowledge (data mining, statistical classifiers, and hierarchical classification), and basic information retrieval. Review of work in constructing ontologies, with focus on practical aspects and current standards. Letter grading.

227. Medical Information Infrastructures and Internet Technologies. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Introduction to networking, communications, and information infrastructures in medical environment. Exposure to basic concepts related to networking at several levels: low-level (TCP/IP at services), medium-level (networking, and high-level (components of microputing, Web-based services) implementations. Commonly used communication protocols (H7L, DICOM). Advanced discussion of micro- machining 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. Designers design micromachining processes capable of achieving desired MEMS device. Concurrently scheduled with course CM150. Letter grading.

228. Medical Decision Making. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Overview of issues related to medical decision making. Introduction to concept of evidence-based medicine and decision processes related to process of care and outcomes. Basic probability and statistics to understand research results and evaluations, and algorithmic methods for decision-making processes (Bayes 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 approaches. Letter grading.

C231. Nanopore Sensing. (4) Lecture, four hours; discussion; one hour; outside study, seven hours. Requisites: Biophysics, Physics 120, Life Sciences 2, 3, Physics 1A, 1B, 1C. Analysis of sensors based on measurements of fluctuating ionic conductance through artificial or protein nanopores. Physics of pore conductance. Application to single molecule detection and DNA sequencing. Review of current literature and technological applications. History and instrumentation of resistive pulse sensing, theory and instrumentation. Letter grading.

CM240. Introduction to Biomechanics. (4) (Same as Mechanical and Aerospace Engineering CM240.) Lecture, four hours; discussion; two hours; outside study, six hours. Requisites: Mechanical and Aerospace Engineering 1A. Introduction to mechanical functions of human body; skeletal adaptation to optimize load transfer, mobility, and function. Dynamics and kinematics. Fluid mechanics applications. Introduction to biomechanics and Biotechnology for Engineers. (4) (Same as Chemical Engineering CM245.) Lecture, four hours; discussion; one hour; outside study, eight hours. Selected topics in molecular biology that form foundation of biotechnology and biomedical industry today. Topics include recombinant DNA technology, molecular researach of gene expression, directed mutagenesis and protein engineering, DNA-based diagnostics and DNA microarrays, antibody and protein-based diagnostics, genomics and proteomics, engineerings, molecular sensing, DNA sequencing, membrane engineering, and future directions of field. Concurrently scheduled with course CM131. Letter grading.

CM245. Molecular Biotechnology for Engineers. (4) (Same as Chemical Engineering CM245.) Lecture, four hours; discussion; one hour; outside study, eight hours. Selected topics in molecular biology that form foundation of biotechnology and biomedical industry today. Topics include recombinant DNA technology, molecular researach of gene expression, directed mutagenesis and protein engineering, DNA-based diagnostics and DNA microarrays, antibody and protein-based diagnostics, genomics and proteomics, engineerings, molecular sensing, DNA sequencing, membrane engineering, and future directions of field. Concurrently scheduled with course CM145. Letter grading.

CM248. Introduction to Biological Imaging. (4) (Same as Biomedical Physics M248 and Pharmacology M248.) Lecture, laboratory, four hours; outside study, seven hours. Exploration of role of biological imaging in modern biology and medicine, including imaging physics, image acquisition, image processing, and applications of imaging for range of modalities. Practical experience provided through sereies of imaging laboratories. Letter grading.

CM250A. Introduction to Micromachining and Micromechanical Systems (MEMS). (4) (Formerly numbered M250A.) Lecture, four hours; discussion; one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Conception of MEMS; current tools. Enforced requisite: course CM150 or CM250A. Advanced discussion of micro-machining 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 stress are covered. Letter grading.

CM250B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Chemical Engineering M250B and Mechanical and Aerospace Engineering M250B.) Lecture, three hours; discussion; one hour; outside study, eight hours. Enforced requisite: course CM150 or CM250A. Advanced discussion of micro-machining 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 stress are covered. Letter grading.

CM250L. Introduction to Micromachining and Micromechanical Systems (MEMS) Laboratory. (2) (Same as Electrical Engineering CM250L and Mechanical and Aerospace Engineering CM250L.) Lecture, one hour; laboratory, four hours; outside study, one hour. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisite: course CM250A. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Designers design MEMS to be produced with both foundry and nonfoundry processes. Concurrently scheduled with course M250A. Design project required. Letter grading.


M259H. Biomechanics of Traumatic Injury. (4) (Same as Environmental Health Sciences M259H.) Lecture, four hours; laboratory, four hours; outside study, eight hours. Enforced requisite: Graduate students. Introduction to applied biomechanics of accidental injury causation and prevention; discussion of mechanisms of injury that result in bone and soft tissue trauma; discussion of mechanisms underlying rehabilitation after traumatic injury. Letter grading.
M260. Neuroengineering. (4) (Same as Electrical Engineering M255S and Neuroscience M206.) Lecture, four hours; laboratory, three hours; outside study, five hours. Requisites: Mathematics 22A, Physics 1B or 6B. Introduction to principles and technologies of bioelectricity and neural signal recording, processing, and stimulation. Topics include bioelectricity, electrophysiology (action potentials, local field potentials, EEG, ECOG), intracellular and extracellular recording, microelectrode technology, neural signal processing (neural disorders, filters, spike detection, spike sorting, stimulation artifact removal), brain-computer interfaces, deep-brain stimulation, and prosthetics. Letter grading.


M263. Neuroanatomy: Structure and Function of Nervous System. (4) (Same as Neuroscience M203.) Lecture, three hours; discussion/laboratory, three hours. Anatomy of central and peripheral nervous system at cellular histological and regional systems level, with emphasis on contemporary experimental approaches to morphological study of nervous system in discussions of circuitry and neurochemical anatomy of major brain regions. Consideration of representative vertebrate and invertebrate nervous systems. Letter grading.

C270. Energy-Tissue Interactions. (4) Lecture, three hours; outside study, nine hours. Requisites: Electrical Engineering 172, 175, Life Sciences 3, Physics 17. 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 C270L. Letter grading.

C270L. Introduction to Techniques in Studying Laser-Tissue Interaction. (2) Laboratory, four hours; outside study, two hours. Corequisite: course C270. Introduction to simulation and experimental techniques used in studying laser-tissue interactions. Topics include computer simulations of light propagation in tissue, measuring absorption spectra of tissue/tissue phantom, making tissue phantoms, determination of optical properties of different tissues, techniques of temperature distribution measurements. Concurrently scheduled with course C270L. Letter grading.


C272. Design of Minimally Invasive Surgical Tools. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 30B, Life Sciences 2, 3, Mathematics 22A. Introduction to design principles and engineering concepts used in design and manufacture of tools for minimally invasive surgery. Coverage of FDA regulatory policy and surgical procedures. Topics include optical devices, endoscopes and laparoscopes, biopsy devices, laparoscopic tools, cardiovascular and interventional radiology devices, orthopedic instrumentation, and integration of devices with therapy. Examination of complex problems such as fabrication, testing, and validation. Preparation of drawings and consideration of development of new and novel devices. Concurrently scheduled with course CM172. Letter grading.

CM260. Introduction to Biomaterials. (4) (Same as Materials Science CM260.) Lecture, three hours; discussion, two hours; outside study, nine hours. Requisite: Chemistry 20A, 20B, and 20L. Introduction to materials science and engineering at the subcellular scale. Examination of physical properties of biomaterials with an emphasis on advanced characterization by microscopy, extraction, mechanical testing, biocompatibility, and role of mechanical forces. Concurrently scheduled with course CM180. Letter grading.


C283. Targeted Drug Delivery and Controlled Drug Release. (4) Lecture, three hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 20L. New therapeutics require comprehensive understanding of modern biology, physiologic, biologic, and engineering. Targeted delivery of therapeutic agents and their controlled release are important in treatment of challenging diseases and relevant to tissue engineering and regenerative medicine. Drug pharmacodynamics and clinical pharma- cokinetics, analysis and design, pharmacokinetics, drug delivery, and drug formulation and delivery to establish rationale for design and development of novel drug delivery systems that can provide spatial and temporal control of drug release. Introduction to biomaterials with specialized structural and interfacial properties. Exploration of both chemistry of materials and physical properties of devices and compounds used in delivery and release. Concurrently scheduled with course CM183. Letter grading.

CM295A. Advanced Modeling Methodology for Dy- namic Biomedical Systems. (4) (Same as Electrical Engineering M295A and Medicine M270C.) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 141 or 142 or Mathematics 115A or Mechanical and Aerospace Engineering 171A. Development of dynamic systems modeling methodology for physiological, biomedical, pharmacokinetic, clinical, and related systems. Control system, multicom- partmental, noncompartmental, and input/output models, linear and nonlinear. Emphasis on model applications, limitations, and relevance in biomedical sciences and other life science environments. Problem solving in PC laboratory. Letter grading.

CM296B. Optimal Parameter Estimation and Experi- ment Design for Biomedical Systems. (4) (Same as Biocomputing M296B and Medicine M270D.) Lecture, four hours; outside study, eight hours. Requisite: course M296A or Biocomputing 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 models. Considerations in the development and selection of novel design methods. Model development, data collection, and experimental design to be conducted. Letter grading.

M296D. Introduction to Computational Cardiology. (4) (Same as Computer Science M296D.) Lecture, four hours; outside study, eight hours. Requisite: course CM116B. Introduction to mathematical modeling and computer simulation of cardiac electrophysiological process. Ionic models of action potential (AP). Theory of AP propagation in one-dimensional and two-dimensional cardiac tissue. Simulation on sequential and parallel supercomputers, choice of numerical algorithms, to optimize accuracy and to provide computational stability. Letter grading.

296. Special Studies in Biomedical Engineering. (4) Lecture, four hours; outside study, eight hours. Study of selected topics in biomedical engineering taught by resident and visiting faculty members. Letter grading.

299. Seminar: Biomedical Engineering Topics. (2) Seminar, two hours; outside study, four hours. Designed for graduate biomedical engineering students. Seminar by leading academic and industrial biomedical engineers from UCLA, other universities, and biomedical engineering companies such as Baxter, Amgen, Medtronics, and Guidant on development and application of recent technological advances in discipline. Exploration of cutting-edge developments and challenges in wound healing models, stem cell biology, angiogenesis, signal transduction, gene therapy, cDNA microarray technology, bioartificial cultivation, nano- and micro-devices, scaffold engineering, and bioinformatics. S/U grading.

375. Teaching Apprentice Practicum. (4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance of faculty mentor. Culminating paper required. Letter grading.

396. Directed Individual or Tutorial Studies. (2 to 16) Tutorial, to be arranged. Limited to graduate biomedical engineering students. Petition forms to request enrollment may be obtained from program office. Supervised investigation of advanced technical problems. S/U grading.

397A. Preparation for M.S. Comprehensive Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate biomedical engineering students. Reading and preparation for M.S. comprehensive examination. S/U grading.

397B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate biomedical engineering students. Reading and preparation for Ph.D. comprehensive examination. S/U grading.

397C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate biomedical engineering students. Oral examination on preliminary research and completion of M.S. coursework. S/U grading.


399. Research for and Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. Limited to graduate biomedical engineering students. Usually taken after students have been advanced to candidacy. S/U grading.

BIOMEDICAL PHYSICS

Interdepartmental Program
David Geffen School of Medicine
UCLA
1V-365 Center for the Health Sciences
Box 951721
Los Angeles, CA 90095-1721
(310) 825-7811
fax: (310) 825-7705
email: biomedphysics@mednet.ucla.edu
http://www.labs.pharmacology.ucla.edu/bmp/
Michael McNitt-Gray, Ph.D., Chair

Faculty Advisory Committee
Magnus Dahbom, Ph.D. (Molecular and Medical Pharmacology)
Dieter R. Enzmann, M.D. (Radiological Sciences)
Steve P. Lee, M.D., Ph.D. (Radiation Oncology)
Michael McNitt-Gray, Ph.D. (Radiological Sciences)
Michael E. Phelps, Ph.D. (Molecular and Medical Pharmacology)

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 Laboratory of Structural Biology and Molecular Medicine, the Image Processing Laboratory, and a number of associated hospitals. Highly specialized equipment includes two biomedical cyclotrons, the radiation oncology cyclotron, the picture archiving and communication system (PACS), four positron-emission tomography (PET) scanners, the stereotactic gamma 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://www.gdnnet.ucla.edu/gradsaa/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 Biomedical Physics Program offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biomedical Physics.

Biomedical Physics

Upper Division Course

199. Directed Research in Biomedical Physics. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper 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 reactions 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. Requisite: 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.


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 systems: principles of medical radiography, digital 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 advances in digital diagnostic imaging systems, with topics centered on instrumentation including digital subtraction angiography (DSA) methods of producing three-dimensional images. S/U or letter grading.


208A. Medical Physics Laboratory: Medical Imaging. (4) Discussion, two hours; laboratory, four hours. Requisite: course 205. Hands-on experience performing quality control tests and check of imaging equipment such as fluoroscopy, digital subtraction angiography, mammography, ultrasound, magnetic resonance imaging, computed tomography, and computed radiography. S/U or letter grading.

208B. Medical Physics Laboratory: Radiation Therapy. (4) Discussion, two hours; laboratory, four hours. Requisite: course 203. Hands-on experience calibrating treatment planning and radiation therapy equipment. S/U or letter grading.

209. Digital Techniques in Radiological Sciences. (4) Lecture, three hours; discussion, one hour. Requisite: course 205. Study of image representation, computational structures for imaging, linear systems theory, image enhancement, image compres- sion, segmentation, and morphology. Special topics include visualization techniques, three-dimensional modeling, computer graphics, and neural net applications. Laboratory projects apply concepts developed in class. S/U or letter grading.

210. Principles of Medical Image Processing. (4) Lecture, three hours; discussion, one hour. Requisite: course 205. Study of image representation, computational structures for imaging, linear systems theory, image enhancement, image compres- sion, segmentation, and morphology. Special topics include visualization techniques, three-dimensional modeling, computer graphics, and neural net applications. Laboratory projects apply concepts developed in class. S/U or letter grading.

211. Medical Ultrasound. (4) Lecture, 90 minutes; laboratory, two hours. Preparation: one calculus course. Production of real-time ultrasound images, transducer modeling and design, Doppler and color flow instrumentation, biohazards of ultrasound, ultrasound phantom design, and ultrasound tissue charac- terization 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 postmortem-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 measuring metabolic rates in rodent brain, amino acid method for protein synthesis; quanti- tative receptor autoradiography; neuroanatomy and neurophysiology of pharmaceutical agents and PET scan inter- pretation. S/U or letter grading.

214. Medical Image Processing Systems. (4) Lecture, three hours; discussion, one hour. Requisites: courses 205, 206. Advanced techniques applied to medical imaging. Discussion of approaches to computer-aided diagno- sis and image quantitation, as well as application of pattern classification techniques (neural networks and discriminant analysis). Examination of problems from several imaging modalities (CT, MR, CR, and mam- mography). S/U or letter grading.


217. Statistics and Data Analysis in Biomedical Physics. (2) Lecture, two hours; laboratory, one hour. Requisite: course 205. Mathematics 32A, 33A, 33B. Introduction to computer-based statistical con- cepts, data analysis, and experimental design within biomedical physics research. Standard statistical packages and various statistical computing algo- rithms on relevant data sets within radiological scienc- es. Letter grading.

218. Radiologic Functional Anatomy. (2) Lecture, two hours. Introduction to human anatomy, cell biolo- gy, and physiology visualized through microscopic imaging, radiography, CT, MRI, ultrasonogra- phy, PET, and SPECT. Letter grading.


220A-220D. Laboratory Rotations in Biomedical Imaging. (2-2) Lecture, two hours. Laboratory projects in medical imaging: MR spectroscopy, MR angiography, PET, and SPECT. Letter grading.


221. Applied Health Physics. (4) Lecture, three hours; discussion, one hour. Requisite: course 216. Basics of radiation safety as applied to medical applica- tions. Introduction to all regulatory issues pertain- ing to medical uses of radioactivity. Letter grading.


223. Seminar: Radiation Biology. (4) Seminar, four hours. Exploration of physiology and molecular mechanisms that impact on response of normal and malignant tissues to ionizing radiation, with particular emphasis on functional and high-dose analysis of all approaches through which such responses can be mod- ified in therapeutic setting. Understanding of rationale for integrating biological information into process of treatment planning and delivery. S/U grading.

227. Human Disease: Current and Future Role of Biomedical Physics. (4) Lecture, three hours; dis- cussion, one hour. Present and future roles of bio- medical physics in diagnosis and treatment of human disease, with focus on interdisciplinary nature of this field. Exploration of two diseases in depth with de- tailed description of roles of physics-based diagnostic imaging and therapeutic options for each disease. Description of current and future technologies, as well as techniques that exploit interaction between diagno- sis and therapy. Letter grading.

M230. Computed Tomography: Theory and Appli- cations. (4) (Same as Biostatistics M230.) Lecture, four hours. Computed tomography is three-di- mensional 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 char- acteristics of CT, physics in CT, and various biomed- ical applications. S/U or letter grading.

M248. Introduction to Biological Imaging. (4) (Same as Biomedical Engineering M248 and Pharmaco- ny M248.) Lecture, three hours; laboratory, one hour; outside study, seven hours. Exploration of role of biomedical instrumentation in biological and med- icine, including imaging physics, instrumentation, im- age processing, and applications of imaging for range of modalities. Practical experience provided through cardiac imaging laboratory and PET laboratory. 260A-260B-260C. Seminars: Biomedical Physics. (1-1-1) Seminar, one hour. Joint critical study by stu- dents and instructors in fields of knowledge pertaining to biomedical physics. Periodic contributions by visit- ing scientists. Discussion of research in progress. Student presentations required in spring term. May be repeated. S/U (260A, 260B) and letter (260C) grading.

M256. Advanced Magnetic Resonance Imaging. (4) (Same as Neuroscience M257 and Psychiatry M266.) Lecture, four hours. Starting with basic prin- ciples, presentation of physical basis of magnetic reso- nance 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. Continuous registration required of students in medical imaging specialty. Topics of current interest in medical imaging. Role of imaging in medicine and role in research, clinical practice, and industry. Letter or S/U grading.

M285. Functional Neuroimaging: Techniques and Applications. (4) (Same as Psychiatry M285.) Semi- nar, four hours. In-depth examination of activation im- aging, including MRI and electrophysiological meth- ods, data acquisition and analysis, experimental de- sign, and results obtained thus far in human systems. Strong focus on understanding technologies, how to design activation imaging paradigms, and how to in- terpret results. Laboratory visits and design and im- plementation of functional MRI experiment. S/U or let- ter grading.

M424. Functional Magnetic Resonance Imaging Journal Club. (2) (Same as Psychiatry M424.) Dis- cussion, 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 MRI imaging, integrated electrophysi- ological and image acquisition. S/U 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.


BIOMEDICAL RESEARCH
Interdisciplinary Minor
College of Letters and Science

UCLA
2362 Life Sciences
Box 160606
Los Angeles, CA 90095-1606
(310) 267-5679
fax: (310) 267-2482
e-mail: iclark@ucla.edu
http://www.biomedresearchminor.ucla.edu

Utpal Banerjee, Ph.D., Chair
Faculty Advisory Committee
Utpal Banerjee, Ph.D. (Biological Chemistry, Molecular, Cell, and Developmental Biology)
Michael F. Carey, Ph.D. (Biological Chemistry)
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)
Soraya De Chadarevian, Ph.D. (History)
Frank A. Laski, Ph.D. (Molecular, Cell, and Developmental Biology)
Aldons J. Luquis, 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)
Stephen T. Smale, Ph.D. (Microbiology, Immunology, and Molecular Genetics)
Yi E. Sun, Ph.D. (Molecular and Medical Pharmacology, Psychiatry and Biobehavioral Sciences)
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, Life Sciences 10H, Honors Collegium 70A, or an approved alternative course. Applications must be submitted no later than the first quarter of the junior year. Students must be in good academic standing and demonstrate a genuine interest in research. All degree requirements, including the specific requirements for this minor, must be fulfilled within the unit maximum set forth by the College of Letters and Science.

Required Lower Division Courses (9 units):
Biomedical Research 5HB (or an approved alternative course) and Molecular, Cell, and Developmental Biology 60.

Required Upper Division Courses (24 units):
(1) Sixteen units of approved laboratory research through either course 198 or 199 in students’ home departments; (2) one history of science or philosophy of science course selected from History 179A, 179B, 180A, Neurobiology M168, M169, Philosophy 124, 125, 132, or 155; and (3) Biomedical Research 193H and 194H, or the required journal club seminars (such as Biological Chemistry 191 and Chemistry and Biochemistry 193A) for students in the Howard Hughes Undergraduate Research Program, MARC, or UC LEADS.

Students are expected to file a senior research thesis after completion of their 16 research units and must participate in at least one conference in which they present their research. Up to 8 units of research may be applied toward departmental requirements for the major. The research project and thesis may be the same as those for departmental honors.

Transfer credit for any required course is subject to approval. Students with a grade of less than B (3.0) in any minor course or a cumulative grade-point average of less than 3.0 are subject to dismissal from the minor.

All minor courses must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Biomedical Research
Lower Division Courses

SHA. Biomedical Research: Concepts and Strategies. (4) Formerly numbered Life Sciences SHA. Lecture, three hours. Designed for freshmen/sophomores. Exploration of scientific concepts and experimental approaches through seminars by UCLA faculty members on their cutting-edge research. Topics may include areas of study such as cancer, stem cells, and infectious disease, as well as more basic research in cell and molecular biology. Letter grading.

SHB. Biomedical Research: Essential Skills and Concepts. (4) Formerly numbered Life Sciences SHB. Lecture, three hours; discussion, one hour. Required course SHA. Designed for freshmen/sophomores. Exploration of scientific concepts and experimental approaches through seminars by UCLA faculty members on their cutting-edge research. Topics may include areas of study such as cancer, stem cells, and infectious disease, as well as more basic research in cell and molecular biology. Student investigation of one or more laboratories on campus and presentation of brief synopsis of single research project from one laboratory. Letter grading.

Upper Division Courses

193H. Journal Club Seminars: Current Topics in Biomedical Research. (2) Formerly numbered Life Sciences 193H. Seminar, two hours. Limited to Biomedical Research minor students. Presentation and discussion of recent papers from primary literature in biosciences. Letter grading.

194H. Research Group Seminars: Data Presentation in Biomedical Research. (2) Formerly numbered Life Sciences 194H. Seminar, two hours. Required course 193H. Limited to Biomedical Research minor students. Preparation of oral presentations based on student laboratory research at UCLA. May be repeated for credit. Letter grading.

BIOSTATISTICS
School of Public Health

UCLA
51-254 Center for the Health Sciences
Box 951772
Los Angeles, CA 90095-1772
(310) 825-5250
fax: (310) 267-2113
e-mail: biostat@ucla.edu
http://www.biostat.ucla.edu

William G. Cumberland, Ph.D., Chair
Professors
Thomas R. Bellin, Ph.D.
William G. Cumberland, Ph.D.
Dorota M. Dabrowska, Ph.D.
Robert M. Elashoff, Ph.D.
Gang Li, Ph.D.
Janet S. Sinsheimer, Ph.D.
Robert E. Weiss, Ph.D.
Weng Kee Wong, Ph.D.

Professors Emeriti
Abdelmonem A. Afifi, Ph.D.
Nancy G. Berman, Ph.D.
Potter C. Chang, Ph.D.
Virginia A. Clark, Ph.D.
Wilfrid J. Dixon, Ph.D.
Frederick J. Dorey, Ph.D.
Donald Guthrie, Ph.D., in Residence
Robert I. Jennrich, Ph.D.

Biostatistics
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.P.H. 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, survey research, and computer science. 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://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Biostatistics offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biostatistics.

Biostatistics

Upper Division Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200A</td>
<td>Introduction to Biostatistics</td>
<td>4</td>
<td>Introduction to the field, methodology and theory of statistics.</td>
</tr>
<tr>
<td>200B</td>
<td>Introduction to Biostatistics</td>
<td>4</td>
<td>Focus on advanced topics in biostatistics.</td>
</tr>
<tr>
<td>200C</td>
<td>Introduction to Biostatistics</td>
<td>4</td>
<td>Additional studies in biostatistics.</td>
</tr>
</tbody>
</table>

201. Topics in Applied Regression. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: courses 200A and 200B. Further studies in multiple linear regression, including applied multiple regression models, regression diagnostics and model assessment, factorial and repeated measures analysis of variance models, nonlinear regression, logistic regression, prediction scores, matching versus stratification, Poisson regression, and classification trees. Applications to biomedical and public health scientific problems. Letter grading.

202. Theory of Regression Analysis. (2) Lecture, two hours. Requisites: courses 110A, 110B. Corequisite: course 200A. Additional theoretical topics in regression analysis for students concurrently enrolled in course 200A. Topics include regression applications of matrix algebra, multivariate calculus, and statistical computing. Letter grading.

M206A-M206B-M206C. Statistics in Psychiatric and Biobehavioral Research. (2-2-2) (Same as Psychiatry M296A-M296B-M296C.) Seminar, 90 minutes. Requisite: course 100B. Designed for graduate students. Examples from psychiatric literature used to illustrate statistical ideas and analysis strategies. Topics include experimental designs, sample size calculations, parametric versus nonparametric tests, regression, ANOVA, factor analysis, defining composite variables, causal inference. Computer used to illustrate basic data analysis. Letter grading.

M208. Introduction to Demographic Methods. (4) (Same as Community Health Sciences M208, Economics M208, and Sociology M213A.) Lecture, four hours. Preparation: one introductory statistics course. Introduction to methods of demographic analysis. Topics include demographic rates, standardization, decomposition of differences, life tables, survival analysis, cohort analysis, birth interval analysis, models of population growth, stable populations, population projection, and demographic data sources. Letter grading.

M209. Statistical Modeling in Epidemiology. (4) (Same as Epidemiology M212A.) Lecture, four hours. Preparation: two terms of statistics (three terms recommended). Recommended: Epidemiology M204 or M211. Principles of modeling, including means 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.

M210. Statistical Methods for Categorical Data. (4) (Same as Biostatistics M231.) Lecture, three hours; discussion, one hour. Requisites: courses 100B or 110B, Statistics 100B. Statistical techniques for analysis of categorical data; discussion and illustration of their applications and limitations. S/U or letter grading.

M211. Statistical Methods for Epidemiology. (4) (Same as Epidemiology M211 and Statistics M250.) Lecture, four hours. Preparation: two terms of statistics (such as courses 100A, 100B). Requisites: Epidemiology 200B, 200C. Concepts and methods tailored for analysis of epidemiologic data, with emphasis on tabular and graphical techniques. Expansion of topics introduced in Epidemiology 200B and 200C and introduction of new topics, including principles of epidemiologic analysis, trend analysis, smoothing and sensitivity analysis. S/U or letter grading.

212. Distribution Free Methods. (4) Lecture, three hours; discussion, one hour. Requisites: courses 100B or 110B, Statistics 100B. Theory and application of distribution free methods in biostatistics. S/U or letter grading.

213. Statistical Simulation Techniques. (4) Lecture, three hours; discussion, one hour. Requisites: courses 100B, Statistics 100B. Techniques for simulating important statistical distributions, with applications in biostatistics. S/U or letter grading.

216. Introduction to Statistical Methods for Biological Assays. (4) Lecture, three hours. Requisite: course 110A. Topics include standard statistical procedures for estimation of relative potency, density of microorganisms, and density of radioactivity, models used for these procedures, and statistical considerations for designing such assays. S/U or letter grading.


M220. Advanced Experimental Statistics. (4) (Same as Physiological Science M200.) Lecture, four hours. Introduction to statistics with focus on computer simulation instead of formulas. Bootstrap and Monte Carlo methods used to analyze physiological data. S/U or letter grading.

230. Statistical Graphics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: courses 110A, 110B. Graphical data analysis emphasizes use of visual displays of quantitative data to gain insight into data structure by exploring patterns and relationships, and to enhance classical numerical analyses, especially assumption validity checking. Principles of graph construction, graphical methods, and perception issues. S/U or letter grading.


M232. Statistical Analysis of Incomplete Data. (4) (Same as 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, weighting, likelihood-based methods, and nonrandom nonresponse models. Emphasis on application of methods to applied problems, as well as on theory. S/U or letter grading.


240. Master's Seminar and Research Resources for Graduating Biostatistics M.S. Students. (4) Seminar, three hours. 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 format and refereeing process to help students make progress on their master's reports. Letter grading.


250A-250B. Linear Statistical Models. (4-4) Lecture, three hours; discussion, one hour. Requisite: Statistics 200A, 200B. Topics include linear algebra applied to linear statistical models, distribution of quadratic forms, Gauss/Markov theorem, fixed and random components models, balanced and unbalanced designs. Letter grading.

251. Multivariate Biostatistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 250A. Multivariate methods and their applications to epidemiological 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.


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, genetic epidemiology, gene mapping, design of genetics experiments, DNA sequence analysis, and molecular phylogeny. S/U or letter grading.


M278. Statistical Analysis of DNA Microarray Data. (4) (Same as Human Genetics M278.) Lecture, three hours. Requisite: course 200C. Instruction in 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. Requisite: course 200C. Designed for doctoral students to review statistical developments in analysis of AIDS data. Participation of students is expected, but they need not present their own research or discuss articles from literature. S/U grading.

403A. Computer Management of Health Data. (4) Lecture, two 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.

403B. Computer Management and Analysis of Health Data Using SAS. (4) (Same as Epidemiology M403B.) Lecture, two hours; laboratory, two hours. Preparation: one statistics course. Concepts of health data management, design and maintenance of large databases using SAS programming language. Cross-sectional and longitudinal population-based data sets to be used throughout to illustrate principles of data management and analysis for addressing biomedical and health-related hypotheses. Letter grading.

409. Doctoral Statistical Consulting Seminar. (2) Tutorial, to be arranged. May be repeated for credit. Letter grading.

410. Methodological Statistics in Clinical Trials. (4) Lecture, three hours; discussion, two hours. Preparation: at least two upper-division research courses. Requisite: course 100B. Use of multiple regression, principal components, factor analysis, discriminant function analysis, logistic regression, and canonical correlation in biomedical data analysis. S/U (optional only for nondivision majors) or letter grading.


412. Statistical Methods for Case-Control Studies. (4) Lecture, three hours. Preparation: course 200A. Statistical designs, sampling statistics, and analytic models of case-control studies. Special topics such as exploratory analyses, multiplicity of analyses, cross-validation, small sample performances of variance estimators, measurement error in covariates, and incomplete data. S/U or letter grading.

413. Introduction to Pharmaceutical Statistics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 100A, 100B. Exploration of various types of statistical techniques used in pharmaceutical and related industries. Topics include bioassay and other assay techniques (e.g., ELISAs and FACS analysis), quality control techniques, and pharmacokinetic and pharmacodynamic modeling. S/U or letter grading.

414. Principles of Sampling. (4) Formerly numbered 404D.) 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. Preparation: course 100B. Special topics in applied statistics not covered in other courses in professional series. S/U option.

420. Database Management Systems. (4) Lecture, three hours; laboratory, two hours. Preparation: course 403A. Database and database models applied to medical and public health studies; design of databases for efficient data retrieval and statistical analysis using package database management and statistical package programs. 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 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. 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.

Chemical and Biomolecular Engineering

Dr. Henry Samueli School of Engineering and Applied Science

UCLA

5531 Boelter Hall

Box 951592

Los Angeles, CA 90095-1592

(310) 825-2046

defax: (310) 206-4107

http://www.chemeng.ucla.edu

Professors Emeriti

Dave A. Brown, Ph.D.

Louis J. Ignarro, Ph.D.

Mark J. Kamlet, Ph.D.

Yoram Cohen, Ph.D.

A.R. Frank Wazzan, Ph.D.

Yunfeng Lu, Ph.D.

Selim M. Senkan, Ph.D.

William D. Van Vorst, Ph.D.

Vasilios I. Manousiouthakis, Ph.D.

Harold G. Monbouquette, Ph.D.

Assistant Professors

Gerasimos Orkoulas, Ph.D.

Tatiana Segura, Ph.D.

Eldon L. Knuth, Ph.D.

Ken Nobe, Ph.D.

A.R. Frank Wazzan, Ph.D.

Dean Emeritus

Assistant Professors

Henry Samueli School of Engineering and Applied Science

UCLA

5531 Boelter Hall

Box 951592

Los Angeles, CA 90095-1592

(310) 825-2046
defax: (310) 206-4107

http://www.chemeng.ucla.edu

Harold G. Monbouquette, Ph.D., Chair

Jane P. Chang, Ph.D., Vice Chair

Professors

Jane P. Chang, Ph.D. (William Frederick Seyer Professor of Materials Electrochemistry)

Panagiotis D. Christofides, Ph.D.

Yoram Cohen, Ph.D.

James F. Davis, Ph.D.

Robert F. Hicks, Ph.D.

Louis J. Ignarro, Ph.D. (Nobel laureate, Jerome J. Beizer Professor of Medical Research)

James C. Liao, Ph.D.

Yunfeng Lu, Ph.D.

Vasilios I. Manousiouthakis, Ph.D.

Harold G. Monbouquette, Ph.D.

Selim M. Senkan, Ph.D.

Scope and Objectives

The Department of Chemical and Biomolecular Engineering conducts undergraduate and graduate programs of teaching and research that focus on the areas of cellular and biomolecular engineering, systems engineering, and semiconductor manufacturing and span the general themes of energy/environment and nanoeengineering. Aside from the fundamentals of chemical engineering (applied mathematics, thermodynamics, transport phenomena, kinetics, reactor engineering and separations), particular emphasis is focused on metabolic engineering, protein engineering, systems biology, synthetic biology, bio-nano-technology, biomaterials, air pollution, water production and treatment, combustion, environmental multimedia modeling, pollution prevention, aerosol processes, combinational catalysis, molecular simulation, process modeling/simulation/control/optimization/integration/synthesis, membrane science, semiconductor processing, chemical vapor deposition, plasma processing and simulation, electrochemistry and corrosion, polymer engineering, and hydrogen production.

Students are trained in the fundamental principles of these fields while acquiring sensitivity to society's needs — a crucial combination needed to address the challenge of continued
industrial growth and innovation in an era of economic, environmental, and energy constraints.

The undergraduate curriculum leads to a B.S. in Chemical Engineering, is accredited by ABET and AIChE, and includes the standard core curriculum, as well as biomedical engineering, biomolecular engineering, environmental engineering, and semiconductor manufacturing engineering options. The department also offers graduate courses and research leading to M.S. and Ph.D. degrees. Both graduate and undergraduate programs closely relate teaching and research to important industrial problems.

Undergraduate Mission and Program Objectives

The mission of the undergraduate program is to educate future leaders in chemical and biomolecular engineering who effectively combine their broad knowledge of mathematics, physics, chemistry, and biology with their engineering analysis and design skills for the creative solution of problems in chemical and biological technology and for the synthesis of innovative (bio)chemical processes and products. This goal is achieved by producing chemical and biomolecular engineering alumni who (1) draw readily on a rigorous education in mathematics, physics, chemistry, and biology in addition to the fundamentals of chemical engineering to creatively solve problems in chemical and biological technology as evidenced by contributions to new or improved products and processes and/or to publications, presentations, and patents, (2) incorporate social, ethical, environmental, and economical considerations, including the concept of sustainable development, into chemical and biomolecular engineering practice, (3) lead or participate successfully on multidisciplinary teams assembled to tackle complex multifaceted problems that may require implementation of both experimental and computational approaches and a broad array of analytical tools, and (4) pursue graduate study and achieve an M.S. or Ph.D. degree in the sciences and engineering and/or achieve success as professionals in diverse fields, including business, medicine, and environmental protection, as well as chemical and biomolecular engineering, as evidenced by professional position, responsibilities, and salary, as well as salary increases and promotion.

Undergraduate Study

Chemical Engineering B.S.

The ABET-accredited chemical engineering curricula provide 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, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104B, 106, 107, 108A, 108B, 109, Chemistry and Biochemistry 113A, 153A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and two elective courses (8 units) from Chemical Engineering 110, 111, 112, 113, 114, 115, 116, 118, 119, 125, 140.

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; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104B, 106, 107, 108A, 108B, 109, Chemistry and Biochemistry 113A, 153A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and one biomedical elective course (4 units) from Chemical Engineering C115, C125, 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; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104D, 104DL, 107, 108A, 108B, 109, 115, 125, 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; and one biomolecular elective course (4 units — Chemical Engineering 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, 4AL, 4BL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104B, 106, 107, 108A, 108B, 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; and two elective courses (8 units) from Chemical Engineering 113, 118, 119, 140 (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, 4AL, 4BL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104C, 104CL, 106, 107, 108A, 108B, 109, 1116, 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; 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://www.gdnet.ucla.edu/gasaalibrary/pgmrqintro.htm. In many cases,
more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Chemical and Biomolecular Engineering offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Chemical Engineering.

Chemical Engineering

Lower Division Courses

2. Technology and Environment. (4) Lecture, four hours; outside study, eight hours. Natural and anthropogenic flows of materials at global and regional scales. Case studies of natural cycles include global warming (CO2 cycles), stratospheric ozone depletion (chlorine and ozone cycles), and global nitrogen cycles. Flow, reaction, and chemical engineering principles. Emphasis on nanotechnology in chemical sensing, chemical plants for minimum environmental impact, for creative solution of current technological problems.

10. Introduction to Chemical and Biomolecular Engineering. (1) Lecture, one hour. General introduction to field of chemical and biomolecular engineering. Description of how chemical and biomolecular engineering analysis and design skills are applied for the solution of current technological problems in production of microelectronic devices, design of chemical plants for minimum environmental impact, application of nanotechnology to chemical sensing, and genetic-level design of recombinant microbes for chemical synthesis. Letter grading.

Upper Division Courses

100. Fundamentals of Chemical and Biomolecular Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Mathematics 33A, 33B. Preparation: basic knowledge of MATLAB programming. Introduction to chemical engineering principles of mass species transport, chemical reaction, and separation operations, and reaction engineering and simple economic principles for purposes of designing chemical processes and evaluating alternatives. Letter grading.


103. Separation Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 102A, 101B. Introduction to separation processes such as distillation, gas absorption, filtration, and reverse osmosis. Letter grading.

104A. Chemical Engineering Laboratory I. (6) Lecture, two hours; laboratory, eight hours; outside study, four hours; other, four hours. Requisites: courses 100, 101B, 102B. Measurements of temperature, pressure, flow rate, viscosity, and fluid composition in chemical processes. Methods of data acquisition, equipment selection and fabrication, and laboratory safety. Development of written and oral communication skills. Letter grading.

104AL. Chemical and Biomolecular Engineering Laboratory I (3) Laboratory, six hours; discussion, one hour; outside study, two hours. Requisites: courses 100, 101B, 102B. Open for credit to students with credit for course 104A. Measurements of temperature, pressure, flow rate, viscosity, and fluid composition in chemical processes. Methods of data acquisition, equipment selection and fabrication, and laboratory safety. Development of written and oral communication skills. Letter grading.

104B. Chemical and Biomolecular Engineering Laboratory II. (4) Laboratory, eight hours; outside study, four hours; other, four hours. Requisites: courses 101C, 103, 104A. Course consists of four experiments in chemical engineering unit operations, each of which lasts for two hours. Students present their results both written and orally. Written report includes sections on theory, experimental procedures, scale-up and process design, and error analysis. Letter grading.

104C. Semiconductor Processing. (3) Lecture, four hours; outside study, six hours. Requisite: course 101C. Corequisite: course 104CL. Basic engineering principles of semiconductor unit operations, including fabrication and characterization of semiconductors. Investigation of processing steps used to make CMOS devices, including wafer cleaning, oxidation, diffusion, lithography, chemical vapor deposition, plasma etching, metallization, and statistical design of experiments and error analysis. Presentation of student results in both written and oral form. Letter grading.

104CL. Semiconductor Processing Laboratory. (3) Laboratory, four hours. Requisite: course 101C. Corequisite: course 104C. Series of experiments that emphasize basic engineering principles of semiconductor unit operations, including fabrication and characterization of semiconductors. Investigation of processing steps used to make CMOS devices, including wafer cleaning, oxidation, diffusion, lithography, chemical vapor deposition, plasma etching, and metallization. Hands-on device testing includes transistors, diodes, and capacitors. Letter grading.


106. Chemical Reaction Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 101C, 103, 106 or C115. Integration of chemical engineering fundamentals such as transport phenomena, thermodynamics, separation operations, and reaction engineering and simple economic principles for purposes of designing chemical processes and evaluating alternatives. Letter grading.

108B. Chemical Process Computer-Aided Design and Analysis. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 103 or C125, 106 or C115, 108A, and either Civil Engineering 15 or Mechanical and Aerospace Engineering 20. Introduction to application of some mathematical and computing methods to chemical engineering design problems; use of simulation programs as automated methods for steady state material and energy balance calculations. Letter grading.

109. Numerical and Mathematical Methods in Chemical and Biological Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Preparation: basic knowledge of MATLAB programming. Numerical methods for computation of solutions of systems or linear and nonlinear algebraic equations, ordinary differential equations, and partial differential equations. Chemical and biomolecular engineering examples used throughout to illustrate application of these methods. Use of MATLAB as platform (programming environment) to write programs based on numerical methods to solve various problems arising in chemical engineering. Letter grading.

110. Intermediate Engineering Thermodynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 102B. Principles and engineering applications of statistical and phenomenological thermodynamics. Determination of partition function in terms of single molecule models and spectroscopic data; nonideal gases; phase transitions and adsorption; nonequilibrium thermodynamics and coupled transport processes. Letter grading.
C111. Cryogenics and Low-Temperature Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 102A, 102B (or Materials Science 130). Fundamentals of cryogenics and cryoeengineering science pertaining to industrial low-temperature processes. Basic approaches to analysis of cryofluids and envelopes 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.


C113. 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 quality to emission sources. Links 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 102A, 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, and build-up and removal processes for multilayered film systems. Use of electrochemistry to develop tools needed for operation of cryogenic systems; low-temperature behavior of matter, optimization of cryosystems and other special conditions. 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 models for biological systems and economic analysis of biological reactors. May be concurrently scheduled with course C215. Letter grading.

C116. 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 catalytic surfaces, interfaces in microelectronics, 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, 102C. Fundamentals of membrane science and technology, with emphasis on separations at micro, nano, and molecular/angstrom scale with membranes. Relationship between structure/morphology of dense and porous membranes and their separation characteristics. Use of nanotechnology for design of selective membranes and models of membrane transport (flux and selectivity). Examples provided from various fields/applications, including biotechnology, microelectronics, chemical processes, sensors, and 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: course CM145, Life Sciences 2, 3. Introduction to design and synthesis of biomaterials for regulation of cell behavior, and drug delivery. Biological principles of cellular microenvironment and design of extracellular matrix analogs using biological and engineering principles. Biomaterials for growth factor, and DNA and siRNA delivery as therapeutics and to facilitate tissue regeneration. Use of stem cells in tissue engineering. Concurrently scheduled with course C224. Letter grading.

C125. Bioseparations and Bioprocess Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 101C and 103, or Chemistry 156. Separation strategies, unit operations, and bioreactors 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 C225. Letter grading.

C135. Advanced Process Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 107. Introduction to advanced process control. Topics include (1) Lyapunov stability theory for autonomic control and economic analysis of biological reactors. May be concurrently scheduled with course C235. Letter grading.

C140. Fundamentals of Aerosol Technology. (4) Lecture, four hours; outside study, eight hours. Requisite: course 101C. Technology of particulate systems with applications to gas cleaning, commercial production of fine particles, and catalysis. Particle transport and deposition, optical properties, experimental methods, dynamics and control of particle formation processes. Concurrently scheduled with course C240. Letter grading.

CM145. Molecular Biotechnology for Engineers. (4) (Same as Biomedical Engineering CM145.) Lecture, four hours; discussion, one hour; outside study, eight hours. Selected topics in molecular biology that form foundation of biotechnology and biomedical industry today. Topics include recombinant DNA technology, gene expression, directed mutagenesis and protein engineering, DNA-based diagnostics and DNA microarrays, antibody and protein-based diagnostics, genomics and bioinformatics, isolation of human genes, gene therapy, and tissue engineering. Concurrently scheduled with course CM245. Letter grading.

188. Special Courses in Chemical Engineering. (4) Seminar, four hours; outside study, eight hours. Special topics in chemical engineering for undergraduate students that are 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 Seminar: Chemical Engineering. (4) Seminar, four hours; outside study, eight hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field. May be repeated for credit. Letter grading.

199. Directed Research in Chemical Engineering. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation of selected topics under guidance of faculty member. Graduating paper or project required. May be repeated for credit with school approval. Individual contract required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses

200. Advanced Engineering Thermodynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 102B. Phenomenological and statistical thermodynamics of chemical and physical systems with emphasis on engineering applications to role of atomic and molecular spectra and intermolecular forces in interpretation of thermodynamic properties of gases, liquids, solids, and plasmas. Letter grading.

201. Methods of Molecular Simulation. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 101C, 106. Principles of chemical reactor analysis and design. Particular emphasis on simultaneous effects of chemical reaction and mass transfer on noncatalytic and catalytic reactions in fixed and fluidized beds. Letter grading.

C211. Cryogenics and Low-Temperature Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 102A, 102B (or Materials Science 130). Fundamentals of cryogenics and cryoeengineering science pertaining to industrial low-temperature processes. Basic approaches to analysis of cryofluids and envelopes 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.


C214. Electrochemical Processes and Corrosion. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 102A, 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 surface finishing, passivity, electrodeposition, electroless deposition, batteries and fuel cells, electrosynthesis and bioelectrochemical processes. May be concurrently scheduled with course C214. Letter grading.
CM215. Biochemical Reaction Engineering. (4) (Same as Biomedical Engineering M215.) Lecture, four hours; discussion, one hour; outside study, seven hours. Prerequisite: 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 C115. Letter grading.

C216. Surface and Interface Engineering. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Prerequisite: 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 catalytic surfaces, interfaces in microelectronics, and solid-state laser. May be concurrently scheduled with course C116. Letter grading.

217. Electrochemical Engineering. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course C114. Transport phenomena in electrochemical systems: redox reactions, convective and electrochemical reactions, and applications to industrial electrochemistry, fuel cell design, and modern battery technology. Letter grading.


220. Advanced Mass Transfer. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 101C. Advanced treatment of mass transfer, with applications to industrial separation processes, gas cleaning, pulmonary bioengineering, controlled release systems, and reactor design; molecular and constitutive theories of diffusion, interfacial transport, membrane transport, convective mass transfer, concentration boundary layers, turbulent transport. Letter grading.

C221. Membrane Science and Technology. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Prerequisites: courses 101A, 101C, 103. Fundamentals of membrane science and technology, with emphasis on separations at micro, nano, and molecular/angstrom scale with membranes. Relationship between structure/morphology of dense and porous membranes and their separation characteristics. Use of nanotechnology for design of selective membranes and models of membrane transport (flux and selectivity). Examples provided from various fields/applications, including biotechnology, microelectronics, chemical processes, sensors, and biomedical devices. Concurrently scheduled with course C121. Letter grading.


222B. Stochastic Optimization and Control. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 222A. Introduction to linear and nonlinear systems theory and estimation theory. Prediction, Kal- man filter, smoothing of discrete and continuous systems. Stochastic control, systems with multiplicative noise. Applications to control of chemical processes. Stochastic optimization, stochastic linear and dynamic programming. S/U or letter grading.

223. Design for Environment. (4) Lecture, four hours; outside study, eight hours. Limited to graduate chemical engineering, materials science and engineering, or Master of Engineering program students. Description of current environmental objectives; lifecycle inventories; lifecycle impact assessment; design for energy efficiency; design for waste minimization, computer-aided design tools, materials selection methods. Letter grading.

C224. Cell Material Interactions. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Prerequisites: course CM145, Life Sciences 2, 3. Introduction to design and synthesis of biomaterials for regenerative medicine, in vitro cell culture, and drug delivery. Biological principles of cellular microenviron-ment and design of extracellular matrix analogs using biological and engineering principles. Biomaterials for growth factor, and DNA and siRNA delivery as therapeutics and to facilitate tissue regeneration. Use of stem cells in tissue engineering. Concurrently scheduled with course C125. Letter grading.

CM225. Bioseparations and Bioprocess Engineering. (4) (Same as Biomedical Engineering M225.) Lecture, four hours; discussion, one hour; outside study, seven hours. Prerequisites: courses 101C and 103, or Chemistry 156. 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 produced biotechnologically and proteinically scheduled with course C125. Letter grading.


231. Molecular Dynamics. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 106 or 110. Analysis and design of molecular-beam sys- tems. Molecular-beam sampling of reactive mixtures in combustion chambers or gas jets. Molecular-beam studies of gas-surface interactions, including energy accommodations and heterogeneous reactions. Applications to air pollution control and to catalysis. Let- ter grading.


234. Plasma Chemistry and Engineering. (4) Lec- ture, four hours; outside study, eight hours. Designed for graduate chemistry or engineering students. Applica-tions include chemistry, physics, and engineering principles to design and operation of plasma and ion-beam reactors used in etching, deposition, oxidation, and cleaning of materials. Examination of atomic, molecular, and plasma phenomena involved in plasma and ion- beam processing of semiconductors, etc. Letter grading.

C235. Advanced Process Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced prerequisite: course 107. Introduction to advanced process control. Topics include (1) Ly- apunov stability for autonomous nonlinear systems in- cluding inverse theorem, (2) input to state stability interconnected systems, and small gain theorems, (3) design of nonlinear and robust controllers for various classes of nonlinear systems, (4) model predictive control of linear and nonlinear systems, (5) advanced methods for tuning of classical controllers, and (6) in- trduction to control of distributed parameter systems. Concurrently scheduled with course C135. Letter grading.

236. Chemical Vapor Deposition. (4) Lecture, four hours; outside study, eight hours. Prerequisites: courses 210, C216. Chemical vapor deposition is widely used to deposit thin films that comprise microelectronic de- vices. Topics include transport phenomena, gas and surface chemical kinetics, structure and composition of deposited films, and relationship between process conditions and film properties. Letter grading.

C240. Fundamentals of Aerosol Technology. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 101C. Technology of particle/gas systems with applications to gas cleaning, commercial production of fine particles, and catalysis. Particle transport and deposition, optical properties, experi- mental methods, dynamics and control of particle for- mation processes. Concurrently scheduled with course C140. Letter grading.

CM245. Molecular Biotechnology for Engineers. (4) (Same as Biomedical Engineering CM245.) Lecture, four hours; discussion, one hour; outside study, eight hours. Selected topics in molecular biology that form foundation of biotechnology and biomedical in- dustry today. Topics include recombiant DNA tech- nology, molecular research tools, manipulation of genetics, directed mutagenesis and protein engineering, DNA-based diagnostics and DNA mi- croarrays, antibody and protein-based diagnostics, genomics and bioinformatics, isolation of human genes, gene therapy, and antisense technology. Concur- rently scheduled with course CM145. Letter grading.


250. Computer-Aided Chemical Process Design. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 108B. Application of optimization methods in chemical computer aided design in process engineering; process modeling; systematic flowsheet invention; process synthesis; optimal de- sign and operation of large-scale chemical processing systems. Letter grading.

270. Principles of Reaction and Transport Phenomena. (4) Lecture, four hours; laboratory, eight hours. Fundamentals in transport phenomena, chemical reaction kinetics, and thermodynamics at molecular level. Topics include Boltzmann equation, microscopic chemical kinetics, transition state theory, and statistical analysis. Examination of engineering applications related to state-of-the-art research areas in chemical engineering. Letter grading.

270R. Advanced Research in Semiconductor Manufacturing. (6) Laboratory, nine hours; outside study, nine hours. Limited to graduate chemical engineering students. Reading and preparation of laboratory reports on semiconductor material and device fabrication. Letter grading.

M280A. Linear Dynamic Systems. (4) (Same as Electrical Engineering M234A and Mechanical and Aerospace Engineering M270A.) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 141 or Mechanical and Aerospace Engineering 171A. State-space description of linear time-invariant (LTI) and time-varying (LTV) systems in continuous and discrete time. Linear algebra concepts such as eigenvalues and eigenvectors, singular values, Cayley/Hamilton theorem, Jordan form, solution of state equations; stability, controllability, observability, realizability, and minimality. Stabilization design via state feedback and observers; separation principle. Connections with transfer function techniques. Letter grading.

M280C. Optimal Control. (4) (Same as Electrical Engineering M240C and Mechanical and Aerospace Engineering M270C.) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 240B or Mechanical and Aerospace Engineering 270B. Applications of variational methods, Pontryagin's maximum principle, Jacobi/Beltrami equation (dynamic programming) to optimal control of dynamic systems modeled by nonlinear ordinary differential equations. Letter grading.


283C. Analysis and Control of Infinite Dimensional Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses M280A, M282A. Designed for graduate students. Introduction to advanced dynamical analysis and controller synthesis methods for nonlinear infinite dimensional systems. Topics include (1) linear operator and stability theory (basic results on Banach and Hilbert spaces, semigroup group theory, convergence theory in function spaces), (2) nonlinear model reduction (linear and nonlinear Galerkin method, proper orthogonal decomposition), (3) nonlinear and robust control of nonlinear hyperbolic and parabolic partial differential equations (PDEs), (4) applications to transport-reaction processes. Letter grading.


290. Special Topics. (2 to 4) Seminar, four hours. Requisites 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.

M297. Seminar: Systems, Dynamics, and Control Topics. (2) (Same as Electrical Engineering M248S and Mechanical and Aerospace Engineering M299S.) Seminar, two hours; outside study, six hours. Limited to graduate engineering students. Presentations of research topics by leading academic researchers from fields of systems, dynamics, and control. Students who work in these fields present their papers and results. S/U grading.

298A-298Z. Research Seminars. (2 to 4 each) Seminar, to be arranged. Requisites for each offering announced in advance by department. Lectures, discussions, student presentations, and projects in areas of current interest. May be repeated for credit. S/U grading.

299. Departmental Seminar. (2) Seminar, two hours. Limited to graduate chemical engineering students. Seminars by leading academic and industrial chemical engineers on development or application of recent technological advances in discipline. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495A. Teaching Assistant Training Seminar. (2) Seminar, two hours; outside study, four hours; one-day intensive training at beginning of Fall Quarter. Limited to graduate chemical engineering students. Required of all new teaching assistants. Special seminar in communicating chemical engineering principles, concepts, and methods; teaching assistant preparation, organization, and presentation of material, including use of grading, advising, and rapport with students. S/U grading.

495B. Teaching with Technology for Teaching Assistants. (2) Seminar, two hours; outside study, four hours. Limited to graduate chemical engineering students. Designed for teaching assistants interested in learning more about effective use of technology and ways to incorporate that technology into their classrooms for benefit of student learning. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate chemical engineering students. Special seminar in communicating chemical engineering principles, concepts, and methods; teaching assistant preparation, organization, and presentation of material, including use of grading, advising, and rapport with students. S/U grading.

597A. Preparation for M.S. Comprehensive Examinations. (2 to 12) Tutorial, to be arranged. Limited to graduate chemical engineering students in M.S. semiconductor manufacturing option. Reading and preparation for M.S. comprehensive examinations. S/U grading.

597B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Seminar, to be arranged. Limited to graduate chemical engineering students. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate chemical engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

598. Research for and Preparation of M.S. Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate chemical engineering students. Supervised independent research for M.S. candidates, including thesis prospectus. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. Limited to graduate chemical engineering students. Usually taken after students have been advanced to candidacy. S/U grading.

Professors
James U. Bowie, Ph.D.
Catherine F. Clarke, Ph.D.
Steven C. Clarke, Ph.D.
Albert J. Coury, Ph.D.
Timothy J. Deming, Ph.D.
David S. Eisenberg, D.Phil.
Jul F. Feigon, Ph.D.
Peter M. Feiler, Ph.D.
Miguel A. Garcia-Garibay, Ph.D.
Robin L. Garrett, Ph.D.
William M. Gelbart, Ph.D.
James K. Gimzewski, Ph.D.
James W. Gober, Ph.D.
Jay D. Grant, Ph.D.
Kendall N. Houk, Ph.D.
Wayne L. Hubbell, Ph.D. (Julius Stein Professor of Ophthalmology)
Michael E. Jung, Ph.D.
Richard B. Kaner, Ph.D.
Christopher J. Lee, Ph.D.
Raphael Levine, Ph.D.
Joseph A. Loo, Ph.D.
Harold G. Martinson, Ph.D.
Sabeena Merchant, Ph.D.
Daniel Neuhauser, Ph.D.
C. Kumar Patel, Ph.D.
Emir Reisler, Ph.D.
Yves F. Rubin, Ph.D.
Benjamin J. Schwartz, Ph.D.
Sarah H. Toltz, Ph.D.
Joan S. Valentine, Ph.D.
John T. Wasson, Ph.D.
Richard L. Weiss, Ph.D.
Shimon Weiss, D.Sc.
Omar M. Yaghi, Ph.D. (Christopher S. Fuite Professor)
Todd O. Yeates, Ph.D.
Jeffrey I. 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.
Richard E. Dickerson, Ph.D.
Mostafa A. El-Sayed, Ph.D.
Clifford S. Garner, Ph.D., D.Sc.
E. Russell Hardwick, Ph.D.
M. Frederick Hawthorne, Ph.D. (University Professor)
Herbert D. Kaez, Ph.D.
Charles M. Knobler, Ph.D.
Malcolm F. Nicol, Ph.D.
Howard Reiss, Ph.D.
Verne N. Schmucker, Ph.D.
Robert L. Scott, Ph.D.
Robert A. Smith, Ph.D.
J. Fraser Stoddart, Ph.D.
Carla M. Koeher, Ph.D.
Yung-Ya Lin, Ph.D.

Associate Professors
Delroy A. Baugh, Ph.D.
Guillaume F. Chanfreau, Ph.D.
Robert T. Clubb, Ph.D.
Carla M. Koeher, Ph.D.
Yung-Ya Lin, Ph.D.

Chemistry and Biochemistry
College of Letters and Science
UCLA
3010 Young Hall
Box 951569
Los Angeles, CA 90095-1569
(310) 825-3958
fax: (310) 206-4038
e-mail: info@chem.ucla.edu
http://www.chem.ucla.edu

Harold G. Martinson, Ph.D., Chair
must also complete courses equivalent to Life Sciences 2, 3, 4; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL.

Preparation for the Major

The department offers three majors: Chemistry B.S., Biochemistry B.S., and Chemistry and Biochemistry B.S. Students entering UCLA directly from high school who declare a Chemistry or Biochemistry major at the time of application are automatically admitted to that major.

Students who have completed the equivalent of Mathematics 32B.

Entering transfer students who have successfully completed a year course (including laboratory) in general college chemistry intended for science and engineering students should enter course 30A. Transfer students should consult the Undergraduate Advising Office in 4009 Young Hall for assistance with the articulation of transfer coursework.

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

Chemistry Diagnostic Examination for First-Quarter General Chemistry

The Chemistry Diagnostic Examination is no longer required for enrollment in Chemistry and Biochemistry 14A, 17, 20A, or 20AH.

Students enroll in Chemistry and Biochemistry 14A, 20A, or 20AH, depending on major.

Students who feel they have a weak background in chemistry may enroll in Chemistry and Biochemistry 17, offered on a Passed/Not Passed basis. Course 17 carries no graduation credit but does displace 4 units on the UCLA Study List.

Advanced Placement in Chemistry

Students who have taken the Advanced Placement (AP) Chemistry Test and obtained a score of 4 or 5 receive 8 units of chemistry credit and may petition for chemistry and biochemistry equivalency, or may take course 20A at UCLA. If students received a score of 3 on the AP Chemistry Test, they receive 8 units of chemistry credit but no course equivalency.

Credit Limitations

Students may not take or repeat a chemistry or biochemistry course for credit if it is a requisite for a more advanced course for which they already have credit. This applies in particular to the repetition of courses (e.g., if students wish to repeat Chemistry and Biochemistry 20A, they must do so before completing course 20B).

Undergraduate Majors

The department offers three majors: Chemistry (with concentrations in chemistry and physical chemistry), Biochemistry, and General Chemistry. The Chemistry and Biochemistry majors are designed to prepare students for graduate studies in each field, for entry into professional schools in the health sciences, and for careers in industries and businesses that depend on chemically and biochemically based technology. The General Chemistry major is intended for students who wish to acquire considerable chemical background in preparation for careers outside chemistry:

Courses used to fulfill any of the requirements for any of the departmental majors must be taken for a letter grade. Seminar courses, individual study courses, and research courses (e.g., 194, 199) may not be applied toward the requirements for the majors.

Requirements for the majors are outlined below. For additional information, contact the Undergraduate Advising Office in 4009 Young Hall.

Chemistry B.S.

The B.S. degree program is for students who intend to pursue a career in chemistry.

Chemistry Concentration

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Mathematics 31A, 31B, 32A, 32B, 33B; Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL.

The Major

Required: Chemistry and Biochemistry 110A, either 110B or C113B, 113A, 114 (or 114H), either 136 or 144, 153A, 153L, 171, C172, and two other upper division or graduate courses in the department, including at least one additional laboratory course from 136, 144, 154, C174, 184, C185.

Physical Chemistry Concentration

The physical chemistry concentration is designed primarily for students who are interested in attending graduate school in physical chemistry/physics.

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B, 30BL; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL.

The Major

Required: Chemistry and Biochemistry 110A, 110B, 113A, C113B, 114 (or 114H), 153A, 171, C172; 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.chem.ucla.edu/dept/Ugrad/ 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 B.S. degree program is for students preparing for careers in biochemistry or other fields requiring extensive preparation in both chemistry and biology.

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Life Sciences 2, 3, 4; Mathematics 31A, 31B,
Students graduate with a bachelor's degree in their major and a specialization in Computing.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Chemistry and Biochemistry offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Chemistry and Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biochemistry and Molecular Biology.

Chemistry and Biochemistry

Lower Division Courses

2. Introductory Chemistry. (4) Lecture, two hours; discussion, two hours. Not open to students with credit for course 14A or 20A. Concept of submicroscopic world of chemistry, ranging from protons to proteins in subject matter. P/NP or letter grading.

14A. Atomic and Molecular Structure, Equilibria, Acids, and Bases. (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. Not open to students with credit for course 20A. Introduction to physical and general chemistry principles; atomic structure based on quantum mechanics; 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. Thermodynamics, Electrochemistry, Kinetics, and Organic Chemistry. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 14A with grade of C– or better. Enforced corequisite: Mathematics 3A or 31A. Not open to students with credit for course 20A, 20B, or 30A. Phase changes; thermochromism; first, second, and third laws of thermodynamics; free energy changes; electrochemistry and its role as energy source; chemical kinetics, including catalysis, reaction mechanisms, and enzymes; coordination compounds; general classes and naming of organic molecules; structure, conformations, and relative energies of organic molecules; application of thermodynamics and kinetics to organic and biochemical reactions; use of molecular modeling software to illustrate molecular structures and their relative energies. P/NP or letter grading.

14BL. General and Organic Chemistry Laboratory I (3) Lecture, one hour; laboratory, three hours. Enforced requisite: course 14A with grade of C– or better. Enforced corequisite: course 14B. Not open to students with credit for course 20L. Introduction to volumetric, spectrophotometric, and potentiometric analysis. Use and preparation of buffers and pH meters. Synthesis and kinetics techniques using compounds of interest to students in life sciences. P/NP or letter grading.

14C. Structure of Organic Molecules. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 14B with grade of C– or better. Not open to students with credit for course 30A. Continuing studies in structure of organic molecules, with emphasis on biological applications. Resonance, stereochemistry, conjugation, and aromaticity; spectrosocopy (NMR, IR, and mass spectrometry); introduction to effects of structure on physical and chemical properties; survey of biomolecular structure. P/NP or letter grading.

14CL. General and Organic Chemistry Laboratory II. (4) Lecture, one hour; laboratory, six hours. Enforced requisite: courses 14B and 14BL, with grades of C– or better. Enforced corequisite: course 14C. Synthesis and analysis of compounds; purification by extraction, chromatography, recrystallization, and sublimation; characterization by mass spectrosocopy, UV, NMR, and IR spectrosocopy, optical activity, electrochemistry, pH titration. P/NP or letter grading.

14D. Organic Reactions and Pharmaceuticals. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 14C with grade of C– or better. Organic reactions, nucleophilic and electrophilic substitutions and additions; electrophilic aromatic substitutions, carboxylic reactions, analysis, molecular basis of drug action, and organic chemistry of pharmaceuticals. P/NP or letter grading.

17. Chemical Principles. (No credit) Lecture, four hours; laboratory, two hours. Chemistry 17 displaces 4 units on student's Study List but yields no credit toward degree. Introduction to chemical principles: numbers, measurements, chemical calculations, gas laws, solutions, acids, bases, and salts, molecular structure, and nomenclature. Collaborative learning and problem solving; introduction to chemistry laboratory practice. No grading.

20A. Chemical Structure. (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. Recommended: high school physics. First term of general chemistry. Survey of chemical processes, quantum chemistry, atomic and molecular structure and bonding, molecular spectroscopy. P/NP or letter grading.

20AH. Chemical Structure (Honors). (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background, high school physics, and three and one-half years of high school mathematics. Honors course parallel to course 20A. P/NP or letter grading.

20B. Chemical Energetics and Change. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 20A with grade of B+ or better or 20AH with grade of B or better. Honors course parallel to course 20B. P/NP or letter grading.

20L. General Chemistry Laboratory. (3) Lecture, one hour; laboratory, three hours. Enforced requisite: course 20A with grade of C– or better. Enforced corequisite: course 20B. Use of balance, volumetric techniques, volumetric and potentiometric analysis; Beer's law, applications for environmental analysis and materials science. P/NP or letter grading.

30A. Chemical Dynamics and Reactivity: Introduction to Organic Chemistry. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 20L with grade of C or better. First term of organic chemistry. Mechanisms of organic and inorganic reactions, including redox, elimination, addition, substitution, and radical processes. P/NP or letter grading.
30AH. Chemical Dynamics and Reactivity: Introduction to Organic Chemistry (Honors). (4) Lecture, three hours; discussion, one hour. Enforced requisites: course 20B or 20BH, with grade of B+ or better. Honors course parallel to course 30A. P/NP or letter grading.

30AL. General Chemistry Laboratory II. (4) Lecture, one hour; laboratory, four hours. Enforced requisites: courses 20B (or 20BH) and 20L, with grades of C– or better. Enforced corequisite: course 30A or 30AH. 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 30A (or 30AH) and 30AL, with grades of C– or better. Enforced corequisite: course 30B. Basic experimental techniques in organic synthesis (distillation, extraction, crystallization, and performing reactions) and organic analytical chemistry (molecular weight, refractive index, infrared spectroscopy, IR, NMR, GC). Single and multistep synthesis of known organic molecules on microweigh scale. P/NP or letter grading.

30C. Organic Chemistry: Reactivity and Synthesis, Part II. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 30B with grade of C– or better. Third term of organic chemistry. Organic spectroscopy, including proton and carbon NMR, infrared mass and UV/Vis; pericyclic reactions and molecular orbital theory; dicarbonyl compounds; polyfunctional aromatic chemistry; heterocyclic compounds; and reactions of organic functional groups. P/NP or letter grading.

30CL. Organic Chemistry Laboratory II. (4) Lecture, two hours; laboratory, six hours. Enforced requisites: courses 30B and 30BL, with grades of C– or better. Enforced corequisite: course 30C. Modern techniques in synthetic organic and analytical organic chemistry. Semi-preparative scale, multistep synthesis of organic and organometallic molecules, including asymmetric catalysis. One- and two-dimensional NMR techniques. Written reports and proposals. P/NP or letter grading.

88A-88Z. Lower Division Seminars. (2-2) Lecture, two hours. Limited to freshmen/sophomores. General introduction to frontiers of molecular sciences (experiential exploration of particular theme or topic). Consult Schedule of Classes for topics and instructors. P/NP or letter grading.

88A. Serendipity in Science. (2) Seminar, two hours. Limited to 20 freshmen. Inquiry into unexpected discoveries in science that have had significant impact on society and analysis of circumstances that brought these about, beginning with discovery of helium in 1868 (using newly developed field of spectroscopy). Discovery of X rays by Röntgen in 1895 and of radioactivity by Becquerel in 1896. Other topics include discoveries important to medicine, such as penicillin by Fleming in 1929 and chloroform by Rosenbery in 1969. P/NP or letter grading.

98XB. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Formerly numbered 5. Laboratory, three hours. Corequisite: associated undergraduate lecture course in chemistry and biochemistry for life sciences majors. Development of intuition and problem-solving skills in collaborative learning environment. May be repeated four times, but only 1 unit may be applied toward graduation. P/NP grading.


114. Physical Chemistry Laboratory. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30AL, 110A, and 113A, with grades of C– or better. Enforced corequisite: course 110B or C113B. Includes techniques of physical measurement, error analysis and statistics, special topics. Laboratory topics: magnetic resonance, vibrational measurements, and chemical dynamics. P/NP or letter grading.

114H. Physical Chemistry Laboratory (Honors). (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30AL, 110A, and 113A, with grades of B or better. Enforced corequisite: course 110B or C113B. Includes techniques of physical measurement, error analysis and statistics, special topics. Laboratory topics: magnetic resonance, vibrational measurements, and chemical dynamics. P/NP or letter grading.

115A-C115B. Quantum Chemistry. (4-4) Lecture, four hours; discussion, one hour. Enforced requisite: course 113A. Mathematics 31A, 31B, 32A, 32B, 33A. Recommended: knowledge of differential equations equivalent to Mathematics 135A or Physics 131 and of analytic mechanics equivalent to Physics 105A. Course C115A or Physics 105B is equivalent to C115B. Students entering course C115A are normally expected to take course C115B in following term. Designed for chemistry students with serious interest in quantum chemistry. Postulates and systematic development of nonrelativistic quantum mechanics; expansion theorems; wells; oscillators; angular momentum; hydrogen atom; approximation methods; time dependent problems; atoms; spectroscopy; magnetic resonance; chemical bonding. May be concurrently scheduled with courses C215A-C215B. P/NP or letter grading.


M120. Soft Matter Laboratory. (4) (Same as Physics M180G.) Laboratory, four hours. P/NP or letter grading.

121. Special Topics in Physical Chemistry. (4) Lecture, four hours. Enforced requisite: 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.

C213A-C213B. Classical and Statistical Thermodynamics. (4-4) Lecture, four hours; discussion, one hour. Enforced requisite: course 110B or 156. Recommended: course 113A. Rigorous presentation of fundamentals of classical thermodynamics. Principles of statistical thermodynamics: probability, ensembles, partition functions, independent molecules, and perfect gas. Applications of classical and statistical thermodynamics selected from diatomic and polyatomic gases, solid and fluid states, phase equilibria, electric and magnetic effects, ortho-para hydrogen, chemical equilibria, reaction rates, imperfect gas, nonelectrolyte and electrolyte solutions, surface phenomena, high polymers, gravitational. May be concurrently scheduled with courses C223A-C223B. P/NP or letter grading.
125. Computers in Chemistry. (4) Lecture, three hours. Preparation: working knowledge of Fortran IV or PL/I. Requisites: courses 110A, 110B, 113A. Discussion of computer techniques, including matrix manipulation, solution of differential equations, data acquisition, and instrumental control, and their applications to chemical processes and quantum mechanics, thermodynamics, and kinetics. P/NP or letter grading.

C125A. Computational Methods for Chemists. (4) Lecture, four hours; laboratory, four hours. Preparation: programming experience in either BASIC, Fortran, C, or Pascal. Requisites: course 110A, Mathematics 33B. Theoretical, numerical, and programming tools for constructing new chemical applications, including simple force fields and resulting statistical mechanics for simple molecules, simple ab initio methods for organic molecules and nanotubes, and classical dynamics and spectroscopy. Concurrently scheduled with course C226A. P/NP or letter grading.

136. Organic Structural Methods. (5) Lecture, two hours; laboratory, eight hours. Requisites: courses 30C and 30CL, with grades of C– or better. Laboratory course in organic structure determination by chemical and spectroscopic methods; microtechniques. P/NP or letter grading.

C136. Bionanotechnology. (4) Lecture, three hours. Requisites: courses 30C, 110A. Basic physical, chemical, and biological principles of bionanotechnology; materials and strategies for top-down and bottom-up fabrication of ordered biologically derived molecules, characterization and detection techniques, and biomimetic materials and applications at nanoscale. Concurrently scheduled with course C240. P/NP or letter grading.

C140. Bioinformatics. (4) Lecture, three hours. Requisites: courses 30C, 110A. Basic physical, chemical, and biological perspectives in bioinformatics; materials and strategies for top-down and bottom-up fabrication of ordered biologically derived molecules, characterization and detection techniques, and biomimetic materials and applications at nanoscale. P/NP or letter grading.

C143A. Structure and Mechanism in Organic Chemistry. (4) Lecture, three hours; discussion, one hour. Requisite: course C143A with grade of C– or better. Mechanisms of organic reactions; reaction mechanisms and detection of reactive intermediates. May be concurrently taken with course C243B. P/NP or letter grading.

C143B. Mechanism and Structure in Organic Chemistry. (4) Lecture, three hours; discussion, one hour. Requisite: course C143A with grade of C– or better. Mechanisms of organic reactions; structure and detection of reactive intermediates. May be concurrently scheduled with course C243B. P/NP or letter grading.

C144. Practical and Theoretical Introductory Organ- ic Synthesis. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30C and 30CL, with grades of C– or better. Lecture on modern synthesis and reaction design with emphasis on stereospecific methods for carbon-carbon bond formation. Laboratory methods of synthetic organic chemistry, including reaction techniques, synthesis of natural products, and molecules of theoretical interest. P/NP or letter grading.

C145. Theoretical and Computational Organic Chemistry. (4) Lecture, two hours; discussion, one hour. Requisite: courses 30C, 113A. Applications of quantum mechanical concepts and methods to understand and predict organic structures and reactivities. Computational modeling methods, including laboratory experience with force-field and quantum mechanical computer calculations. Concurrently scheduled with course C245. P/NP or letter grading.

153A. Biochemistry: Introduction to Structure, Enzymes, and Metabolism (Honors). (4) Lecture; two hours; discussion, one hour. Requisite: course 14D or 30B, with grade of C– or better. Recommended: Life Sciences 2, 3, Honors course parallel to course 153A. P/NP or letter grading.

153B. Biochemistry: DNA, RNA, and Protein Synthesis. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisite: course 153A or 153H, Life Sciences 2, 3. Nucleotide metabolism; DNA replication; DNA repair; transcription machinery; regulation of transcription; RNA structure and processing; protein synthesis and processing. P/NP or letter grading.

153H. Biochemistry: DNA, RNA, and Protein Synthesis (Honors). (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisite: course 153A or 153H, Life Sciences 2, 3. Honors course parallel to course 153B. P/NP or letter grading.

153C. Biochemistry: Biosynthetic and Energy Metabolism and Its Regulation. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisite: course 153A or 153H. Metabolism of carbohyd- rates, fatty acids, and lipids; photosynthetic metabolism and assimilation of inorganic nutri- ents; regulation of these processes. P/NP or letter grading.

153CH. Biochemistry: Biosynthetic and Energy Metabolism and Its Regulation (Honors). (4) Lecture, three hours; discussion, two hours. Requisite: course 153A or 153H. Honors course parallel to course 153C.


153L. Biochemical Methods I. (4) Lecture, two hours; laboratory, four hours. Enforced requisites: courses 153C and 14D, or 30B and 30BL, and 153A or 153H (may be taken concurrently), with grades of C– or better. Concurrently scheduled with course CM253L. Letter grading.

154. Biochemical Methods II. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 153A or 153AH, 153B or 153BH, and 153L, with grades of C– or better. Recommended: course 153E. Two to three major laboratory projects using biochemical techniques to investigate contem- porary problems in biochemistry. Topics include transcrip- tion activation, molecular basis of DNA-protein interactions, biochemical basis of platelet activation, and initiation of blood clotting cascade. Experiments entail characterizing function of proteins, nucleic ac- ids, and lipids involved in these processes. P/NP or letter grading.

CM155. Biological Catalysis. (4) (Same as Molecu- lar, Cell, and Developmental Biology CM160.) Lecture, four hours. Requisites: courses 153A, 153B, Life Sciences 3, Molecular, Cell, and Developmental Biology 100 or C139 or M140. Reaction mechan- isms in molecular biology; experimental approach- es for study of enzymes, including kinetics, isotopic labeling, protein chemistry, biochemistry, thermodynamics, and spectroscopy; design of pharmacologically active agents and artificial enzymes. Drug metabolism and interactions addressed on mechanistic level. Concurrently scheduled with course CM255. Letter grading.

156. Physical Biochemistry. (4) Lecture, four hours; discussion, one hour. Requisites: courses 110A, 153A. Biochemical kinetics; solution thermody- namics of biochemical systems; equilibrium; hydro- dynamics; energy levels, spectroscopy, and bonding; topics from structural, statistical, and electrochemical methods of biochemistry. P/NP or letter grading.


C159B. Mechanisms in Regulation of Transcrip- tion II. (2) Second five weeks. Lecture, four hours. Requisite: course C159A. Eukaryotic general trans- criptional apparatus; sequence-specific promoter recognition; mechanisms of transcriptional activation and repression, including role of chromatin structure; transcription factors as targets of signal transduction pathways; transcription factors in embryogenesis. Concurrently scheduled with course C259B. P/NP or letter grading.

CM160A. Introduction to Bioinformatics. (4) (For- merly numbered C160A.) (Same as Computer Science CM121.) Lecture, three hours; discussion, one hour. Enforced requisites: Biostatistics 100A or 110A or Mathematics 170 or Statistics 100A or 110A, and Computer Science 180 or Program in Computing 60 with grade of C– or better. Introduction to bioinformat- ics and methodologies, with emphasis on concepts and invention new bioinformatic methods. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM260A. P/NP or letter grading.


C161A. Plant Biochemistry. (4) Lecture, three hours; discussion, one hour. Requisite: course 153C. Introduction to distinctive features of plant biochemis- try. Topics include photosynthesis, nitrogen metabo- lism, plant cell wall metabolism, and secondary me- tabolism in relation to stress. Concurrently scheduled with course C261A. P/NP or letter grading.

C164. Free Radicals in Biology and Medicine. (2 to 4) Lecture, three hours. Enforced requisites: courses 153A and 153B or 153C, with grades of C– or better. Biochemical reactivity of oxygen, its role in mitochondrial metabolism, neurodegenerative dis- eases, apoptosis, and aging. Discussion of radical reac- tions, how they are harnessed to achieve enzyme ca- talysis, and how free radicals contribute to or regulate essential biological processes. These same reactions “run amok” under certain types of stress and can con- tribute to wide variety of diseases, including neurode- generative diseases (e.g., Huntington’s, Parkinson’s, and Alzheimer’s diseases), mitochondrial diseases, atherosclerosis, and aging. Concurrently scheduled with course C264. P/NP or letter grading.
C145. Metabolic Control by Protein Modification. (2) First five weeks. Lecture, three hours; discussion, one hour. Requisites: courses 153A, 153B, 153C. Biochemical basis of metabolic control, by posttranslational modification of proteins, including phosphorylation and methylation reactions. Concurrency scheduled with course C265. Letter grading.

C170. Molecular Biology of Photosynthetic Apparatus. (2 to 4) (Same as Molecular, Cell, and Developmental Biology M170.) Lecture, two to three hours; discussion, zero to two hours. Prerequisites: courses 153A and 153B, or Life Sciences 3, and course 153L. Recommended: courses 153C, 154, Life Sciences 4. Light harvesting, photochemistry, electron transfer, carbon fixation, carboxylate metabolism, energy synthesis in chloroplasts and bacteria. Assembly of photosynthetic membranes and regulation of genes encoding those components. Emphasis on understanding of experimental approaches. Concurrency scheduled with course C270. 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, lanthanide and actinide compounds and reactions; catalysis, spectroscopy, special topics. P/NP or letter grading.

C172. Advanced Inorganic Chemistry. (4) 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 of series of complexes, electronic structure and ligand-field theory, mechanisms of inorganic reactions, bonding and spectroscopy of organometallic compounds, transition metals in catalysis and biology. Concurrently scheduled with course C273. P/NP or letter grading.

C174. Inorganic and Metalorganic Laboratory Methods. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30CL and 110A, with grades of C– or better. Laboratory synthesis and 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.

C185. Materials Chemistry Laboratory. (5) Lecture, two hours; laboratory, eight hours. Requisites: courses 30CL and 110A, with grades of C– or better. Theory and practice of instrumental techniques of chemical and structural analysis, including atomic absorption spectroscopy, gas chromatography, mass spectrometry, nuclear magnetic resonance, polarography, X-ray fluorescence, and other modern methods. P/NP or letter grading.

186. Chemical Instrumentation. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30CL and 110A, with grades of C– or better. Theory and practice of instrumental techniques of chemical and structural analysis, including atomic absorption spectroscopy, gas chromatography, mass spectrometry, nuclear magnetic resonance, polarography, X-ray fluorescence, and other modern methods. P/NP or letter grading.

C187. Polymer Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 30B, 110A. Synthesis of macromolecules and thermodynamic and statistical mechanical descriptions of unique properties of polymers, polymer characterization methods, and special topics such as conductive and biomedical polymers and polymeric agents in synthesis. Concurrently scheduled with course C281. P/NP or letter grading.

188. Chemical Instrumentation. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30CL and 110A, with grades of C– or better. Theory and practice of instrumental techniques of chemical and structural analysis, including atomic absorption spectroscopy, gas chromatography, mass spectrometry, nuclear magnetic resonance, polarography, X-ray fluorescence, and other modern methods. P/NP or letter grading.

189. Advanced Inorganic Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 30B with grade of C– or better. Bonding theoretical methods; molecular orbital theory; ligand-field theory; electronic spectroscopy; vibrational spectroscopy. May be concurrently scheduled with course C274. P/NP or letter grading.

190. Inorganic Reaction Mechanisms. (4) Lecture, three hours. Requisites: courses 110A, 110B, 113A, C172, or Biochemistry 110. Survey of inorganic reactions (emphasizing mechanistic approach) of compounds containing carbon bonded to elements selected from main group metals, metalloids, and transition metals, including olefin complexes and metal carbonyls; applications in catalysis and organic synthesis. S/U or letter grading.

191. 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. 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 6 units. Individual contract required. P/NP grading.

192. 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 repeated for maximum of 6 units. Individual contract required. P/NP grading.

193. Research Group Seminars: Chemistry and Biochemistry. (1) Seminar, three hours. Designed for undergraduates who are part of research group. Advanced study and analysis of current topics in physical, organic, or inorganic chemistry or biochemistry. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Chemistry and Biochemistry. (2) Seminar, three hours. Limited to undergraduates. Discussion of readings selected from current literature in particular field. May be repeated for credit. P/NP grading.

195. Research Group Seminars: Chemistry and Biochemistry. (3) Seminar, three hours. Limited to undergraduates. Discussion of readings selected from current literature in particular field. May be repeated for credit. P/NP grading.

196. 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 repeated for maximum of 8 units. Individual contract required. P/NP grading.

197. 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.

198. Directed Research in Chemistry and Biochemistry. (2 to 4) Tutorial, three hours per week per unit. Enforced requisite: course 196A (8 units). Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Consult department for additional information regarding requirements, enrollment petitions, and written proposal deadlines. May be repeated for maximum of 12 units. Individual contract required. P/NP or letter grading.

199. Directed Research in Chemistry and Biochemistry. (2 to 4) Tutorial, three hours per week per unit. Enforced requisite: course 196A (8 units). Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Consult department for additional information regarding requirements, enrollment petitions, and written proposal deadlines. May be repeated for maximum of 12 units. Individual contract required. P/NP or letter grading.

200. 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, ICPSMS, GC/MS, LC/MS, LC/MS/MS, MALDI, MS/MS, protein identification, and proteomics. Concurrently scheduled with course C108. S/U or letter grading.

201. Scientific Proposal Writing. (2) Lecture, three hours. Designed for majors in Chemistry and Molecular biology students. How to write scientific proposals to be submitted to funding agencies. How to develop curricula vitae, put together grant proposals, and critique proposals. Letter grading.

202. Bioinformatics Interdisciplinary Research Seminar. (4) Seminar, two hours; discussion, two hours. Concrete examples of how biological questions, genomic and proteomic data, are solved by bioinformatics and methods 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) (Formerly numbered 203.) Lecture, two hours. Data analysis and management, statistical methods, use of animal and kit reagents, figure preparation, authorship, mentoring, human subjects protection, animal subject protection, and conflict of interest. May be repeated for credit. S/U grading.

203B. Ethics in Chemical Research. (2) Seminar, one hour. Discussion of ethics in graduate education, teaching, and chemical research, including issues such as conflicts of interest, plagiarism, intellectual property, sexual harassment, and other topics related to ethical conduct of research. S/U grading.

204. Student Research Seminar. (2) Seminar, one hour. Limited to students supported by UCLA program in Cellular and Molecular Biology Predoctoral Training. Research seminar presented by second- and third-year students. S/U grading.

M205A. Introduction to Chemistry of Biology. (3) (Formerly numbered M205.) (Same as Pharmacology M205A.) Lecture, three hours. Chemical biology teaching language and techniques of biology. Structure of biological molecules, kinetics and thermodynamics of biological systems, catalysis and electron transfer, genomics, proteomics, and metabolomics. S/U or letter grading.

M205B. Issues on Chemistry/Biology Interface. (2) (Same as Pharmacology M205B.) 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.

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 metals, metalloids, and transition metals, including olefin complexes and metal carbonyls; applications in catalysis and organic synthesis. S/U or letter grading.

21D. Molecular Spectra, Diffraction, and Structure. (4) Lecture, three hours; discussion, one hour. Requisite: 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.

21E. Physical Chemistry Student Seminar. (2) Seminar, two hours. Seminar presentations 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.

219C. Physical Chemistry of Complex Fluids.

219D. Computer Simulation in Chemistry.

219E. Dynamics of Molecular-Molecule and Molecular-Surface Reactions.

219F. Spectroscopy of Isolated Molecules, Complexes, and Clusters.

219G. Theoretical and Physical Organic Chemistry.

219H. Modern Methods for Molecular Reactions and Structure.

219I. Cosmochemistry.

219J. Ultraviolet Studies of Chemical Reaction Dynamics in Condensed Phase.


219L. Nanoscience.


219O. Complex Fluids: Composition, Structure, and Rheology.

C245. Theoretical and Computational Organic Chemistry. (4) Lecture, two hours; discussion, one hour; computer laboratory, 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 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.


251A-251Z. Advanced 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.

M252. Seminar: Advanced Methods in Computational Biology. (2) (Same as Human Genetics M252.) Seminar, one hour; discussion, one hour. Designed for advanced graduate students. Examination of computational methods in bioinformatics and computational biology through presentation of current literature. How to select and apply methods from computational and mathematical disciplines to solve problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.


CM255. Biological Catalysis. (4) (Same as Biological Chemistry CM255, Molecular, Cell, and Developmental Biology CM252, and Pharmacology M255.) Lecture, four hours. Requisites: courses 110A, 153A, 153B, Life Sciences 3, Molecular, Cell, and Developmental Biology 100 or C139 or M140. Reaction mechanisms in molecular biology; experimental approaches for study of enzymes, including kinetics, isotopic labeling, stereochemistry, chemical modification, and spectroscopy; design of pharmacologically active agents and artifical enzymes; interactions addressed on mechanistic level. Concurrently scheduled with course CM155. Graduate students required to write research paper and present oral report on it. Letter grading.

256A-256Z. Seminar: 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 speciality of faculty member teaching course. S/U 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.


259B. Mechanisms in Regulation of Transcription II. (2) Second five weeks. Lecture, four hours. Requisite: course C259A. Eukaryotic general transcription apparatus; sequence-specific recognition; mechanisms of transcriptional activation and repression, including role 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) (Formerly numbered CM260.) (Same as Computer Science CM260A and Human Genetics M260.) Lecture, three hours; discussion, one hour. Enforced requisites: Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A or 110A, and Computer Science 180 or Program in Computing 60 with grade of C– or better. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new bioinformatic methods. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM160A. S/U or letter grading.


261A. Plant Biochemistry. (4) Lecture, three hours; discussion, one hour. Requisite: 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; discussions, two hours. Requisites: courses CM253 or CM252, or 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. Thermodynamic and kinetic aspects of metabolism; regulatory properties of enzymes; metabolic regulation; consideration of comparative aspects of metabolism in relation to physiological function. S/U or letter grading.

264. 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 reactions of free radicals in mitochondrial metabolism, neurodegenerative diseases (e.g., Huntington’s, Parkinson’s, and Alzheimer’s diseases), mitochondrial diseases, atherosclerosis, and aging. Concurrently scheduled with course C164. S/U or letter grading.

265. Metabolic Control by Protein Modification. (2) First five weeks. Lecture, three hours; discussion, one hour. Requisites: courses 153A, 153B, 153C. Biochemical basis of controlling metabolic pathways by posttranslational modifications, including phosphorylation and methylation reactions. Concurrently scheduled with course C165. Letter grading.


268. Biochemistry Research Seminar. (2) Seminar, two hours. Seminars presented by staff, outside speakers, postdoctoral fellows, and graduate students on topics of current biochemical research interest. May be repeated for credit. S/U or letter grading.


271. Advanced Topics in Inorganic Chemistry. (2 to 4) (Formerly numbered 271A-271Z.) 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 in Research in Inorganic Chemistry. (2 each) Seminar, three hours. Advanced study and analysis of current topics in inorganic chemistry. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.


272B. Metalorganic Inorganic Biomaterialorganic Chemistry. Letter grading.


272G. Issues in Chemical Education. Seminar, two hours. Required of students conducting research in inorganic chemistry, designed primarily for entering graduate inorganic chemistry students. S/U grade.

272H. Inorganic Reaction Mechanisms. (4) Lecture, three hours. Requisites: courses 110A, 110B, 113A, C172. Survey of inorganic reactions; mechanistic principles; electronic structure; coordination chemistry; reaction mechanisms; and applications of inorganic reactions. Letter grading.

272I. Group Theory and Applications to Inorganic Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 113A, C172. Group theoretical methods; molecular orbital theory; ligand-field theory; electronic spectroscopy; vibrational spectroscopy. Letter grading.


272L. Chemical Creation Training Program. Training in fundamental science and engineering to fabricate electronic, photonic, and biomaterialorganic devices. Discussion of intellectual property issues and development of business plans. May be repeated for credit. S/U or letter grading.

272M. 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.

272N. Metalorganic Inorganic Biomaterialorganic Chemistry. Letter grading.

272O. Solid-State Chemistry. (4) Lecture, three hours. Requisites: course C272. Survey of new materials and methods for their 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 C180. S/U or letter grading.

272P. Polymer Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 30B, 110A. Survey of organic and inorganic macromolecules, thermodynamic and statistical mechanical description 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.

272Q. Introduction to Inorganic Chemistry Research. (2) Lecture, 90 minutes. Discussion of current research in inorganic chemistry, designed primarily for entering graduate inorganic chemistry students. S/U grade.


275. 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-long course each of chemistry, life sciences, and physics and at least two Earth science courses, preferably one with field experience. Classroom management, lesson design, assessment, history of science education, S/U or letter grading.

276A. 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-long course each of chemistry, life sciences, and physics and at least two Earth science courses, preferably one with field experience. Classroom management, lesson design, assessment, history of science education, S/U or letter grading.

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. Safety in Chemical and Biochemical Research. (2) Lecture, two hours. Survey of safe laboratory practices for experimental research in organic, inorganic, and physical chemistry and biochemistry. Topics include laser safety, cryogenic hazards, high- and low-pressure experimentation, gas and carcinogen handling, chemical spills, fire extinguishing, and chemical disposal. S/U grading.
CHEMISTRY/MATERIALS SCIENCE
Interdepartmental Program
College of Letters and Science
UCLA
4009 Young Hall
Box 951569
Los Angeles, CA 90095-1569
(310) 825-1859
e-mail: ugrad@chem.ucla.edu
http://www.chem.ucla.edu/

Chair
Sarah H. Tolbert, Ph.D., Chair
Sibing Pei, Ph.D., Vice Chair

Faculty Advisory Committee
Bruce S. Dunn, Ph.D. (Materials Science and Engineering)
Robin L. Garrell, Ph.D. (Chemistry and Biochemistry)
Yu Huang, Ph.D. (Materials Science and Engineering)
Richard B. Kaner, Ph.D. (Chemistry and Biochemistry)
Alexander J. Levine, Ph.D. (Chemistry and Biochemistry)
Vidvuds Ozolins, Ph.D. (Materials Science and Engineering)
Sarah H. Tolbert, Ph.D. (Chemistry and Biochemistry)
King-Ning Tu, Ph.D. (Materials Science and Engineering)
Omar M. Yagh, Ph.D. (Chemistry and Biochemistry)
Yang Yang, Ph.D. (Chemistry and Biochemistry)
Jeffrey Z. Zink, Ph.D. (Chemistry and Biochemistry)

Scope and Objectives
The Chemistry/Materials Science major is designed for students who are interested in chemistry with an emphasis on material properties and provides students the opportunity to gain expertise in both chemistry and the science and engineering in materials such as semiconductors, photonic materials, polymers, biomaterials, ceramics, and nano-scale structures. Students explore the reactivity of such materials in different environments and gain understanding of how chemical compositions affect properties. The major provides appropriate preparation for graduate studies in many fields emphasizing interdisciplinary research, including chemistry, engineering, and applied science.

Undergraduate Study
Chemistry/Materials Science B.S.
Preparation for the Major

Transfer Students
Transfer applicants to the Chemistry/Materials Science major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general chemistry with laboratory for majors, one organic chemistry course, one and one half years of calculus, and one year of calculus-based physics with laboratory.

Transfer applicants to the organic materials concentration must complete a full year of organic chemistry with laboratory in addition to the other courses listed above.

Refer to the UCLA Transfer Admissions Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: Chemistry and Biochemistry 110A, 113A, C172 or C180, C181, 185, 4 units from 110B, C113B, C172, C174, C175, C176, C180, C181; Materials Science and Engineering 104, 110, 110L, 120, 121 or 150 or 160, 131, 8 units from 111, 121, 122, 132, 150, 160, 162, CM180; 7 laboratory units from Chemistry and Biochemistry 114, 184, Materials Science and Engineering 121L, 131L, 161L.

The following courses may be applied only once toward the major: Chemistry and Biochemistry C172, C180, C181, Materials Science and Engineering 121, 150, 160.

Organic Materials Concentration
Preparation for the Major

The Major
Required: Chemistry and Biochemistry 110A, 113A, 136, 171, C185, 4 units from 110B, C113B, C142, 144, C172, C174, C175, C176, C180, C181; Materials Science and Engineering 104, 110, 110L, 120, 150, 4 units from 111, 121, 122, 131, 132, 160, 162, CM180; 7 laboratory units from Chemistry and Biochemistry 114, 184, Materials Science and Engineering 121L, 131L, 161L.

For further information, contact Denise Manton, Chemistry and Biochemistry, 4009 Young Hall, (310) 825-4660.

CESAR E. CHÁVEZ
DEPARTMENT OF CHICANA AND CHICANO STUDIES
College of Letters and Science

UCLA
7349 Bunche Hall
Box 95150
Los Angeles, CA 90095-1559
(310) 206-7695
e-mail: chavez-info@chavez.ucla.edu
http://www.chavez.ucla.edu

Alicia Gaspar de Alba, Ph.D., Chair

Professors
Judith F. Baca, M.A.
Rosina M. Becerra, Ph.D.
Alicia Gaspar de Alba, Ph.D.
Kris D. Gutierrez, Ph.D.
Reynaldo F. Macias, Ph.D.
Daniel G. Solotzcano, Jr., Ph.D.
Edward E. Telles, Ph.D.
Abel Valenzuela, Jr., Ph.D.
José Luis Valenzuela, B.A.

Associate Professors
Erick Atila, Ph.D.
Leonardo J. Estrada, Ph.D.
Raúl A. Hinojosa-Ojeda, Ph.D.
Maria Cristina Pons, Ph.D.
Otto Santa Ana, Ph.D.

Assistant Professors
Meylon S. Blackwell, Ph.D.
David M. Hernandez, Ph.D.
Robert Chao Romero, Ph.D.

Scope and Objectives
The Chicana and Chicano studies field is the systematic and interdisciplinary analysis and exploration of Mexican-origin communities in the U.S. It also examines other Latina/Latino and indigenous populations in the Americas and ways they influence Chicanas and Chicanos and their communities.

The strength of the undergraduate major in Chicana and Chicano Studies is the cross-disciplinary approach to teaching and the critical skills approach to learning. Interdisciplinarity is an academic objective, achieved through the strengths and expertise of the department's faculty members whose disciplines span the arts, cultural studies, history, Latin American literature, sociolinguistics, education, and urban planning.

The department's location in Los Angeles places it in a unique position to draw from this large and diverse city. Los Angeles is home to the largest community of Mexican-origin peoples in the nation and the second largest in the world, as well as home to several other Latino
groups. California is home to 40 percent of the foreign-born population in the nation, and this is concentrated in the southern part of the state. Being in Los Angeles allows students to focus study on the social experiences, historical realities, cultural practices, linguistic attributes, and literary and artistic productions of these communities.

The interdisciplinary curriculum is an effective environment for teaching fundamental academic skills such as critical thinking and writing, as well as for exposing students to the wide range of theories, methodologies, technologies, and pedagogies that intersect the discipline. The curriculum is bilingual, learner-centered, writing-intensive, and academically rigorous.

Undergraduate Study
Chicana and Chicano Studies B.A.

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, which 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 15 upper division courses, including Chicana and Chicano Studies 100SL, 101; nine courses from the approved list of Chicana and Chicano Studies courses (available in the department office each term); and three related study courses and one advanced seminar from the approved list of courses or by petition to the department chair or undergraduate adviser. 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.

No more than 8 units of 199 courses may be applied toward the major; 199 courses applied toward the multidisciplinary senior thesis option may not also be applied toward the major. Registration in 199 courses must be approved in writing by the department chair.

All major courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better.

Honors Program
The Chicana and Chicano Studies honors program provides the opportunity for motivated and dedicated students to undertake a year-long research or creative project with the guidance and supervision of a faculty member. The program is open to all juniors and seniors who have (1) a 3.5 grade-point average in the major, (2) a cumulative GPA of 3.0 or better, and (3) completed 90 or more total units, including Chicana and Chicano Studies 10A, 10B, 101, and one course from 89, 89HC, 189, or 189HC.

The application for admission must be submitted in Spring Quarter of the year prior to admission to the program, with the advice and consent of a faculty sponsor. The proposal, research, data collection, analysis, and writing of the thesis (or the creative equivalent to this process) take place in Chicana and Chicano Studies 198A, 198B, and 198C, which may not be applied toward the major requirements. An honors thesis of at least 30 pages or a significant creative project is required.

Students who are currently undertaking the optional multidisciplinary senior thesis and who are eligible for the honors program may opt to switch to the honors program (provided it does not delay their progress toward the degree) with the approval of the department.

Optional Multidisciplinary Senior Thesis
Chicana and Chicano Studies majors have the option during their senior year to enroll in two 199 courses with the intention of producing an undergraduate thesis. The first term includes thesis conceptualization and formulation, along with preliminary data collection for the thesis. The second term entails completion of the data collection, analysis of the data, and writing of the thesis. Enrollment in the two 199 courses is with the advice and consent of a faculty member.

Chicana and Chicano Studies Minor
The Chicana and Chicano Studies minor complements study in another traditional field. Students participating in the minor are required to complete both a departmental major in another discipline and the Chicana and Chicano Studies minor.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed 45 units, and file a petition with the student adviser in 7351 Bunche Hall.

Required Lower Division Courses (10 units):
Chicana and Chicano Studies 10A, 10B.

Required Upper Division Courses (20 units minimum): Chicana and Chicano Studies 101 and four elective courses (20 units minimum) selected from the approved list (available in the department office each term).

No more than one upper division course may be applied toward both this minor and a major or minor in another department or program.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

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 Chicanas/Chicanos, including colonialism, race, labor, immigration, poverty, assimilation, and patriarchy. Emphasis on critical reading and writing skills. Letter grading.

88. Sophomore Seminars: Chicana and Chicano Studies. (2) Seminar, two hours. Limited to lower division students. Readings and discussions designed to introduce students to current research in Chicana/Chicano studies. Culminating project may be required. May not be applied toward departmental major or minor requirements. May be repeated for credit with topic change. P/NP or letter grading.

97. Variable Topics in Chicana and Chicano Studies. (2) Seminar, two hours. Prerequisite: course 10A or 10B. Current topics and particular research methods in Chicana and Chicano studies through readings and other assignments. May be repeated for credit. P/NP or letter grading.

98. Professional Schools Seminars. (2) Seminar, two hours. Limited to 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 and seniors. Service learning placement in community-based organization, labor union, or service-oriented nonprofit organization. Study of role that these organizations play in improvement and change of Chicana/Chicano communities. Students meet on regular basis with instructor and provide periodic reports of their experience. Individual contract with supervising faculty member required. Letter grading.

101. Theoretical Concepts in Chicana and Chicano Studies. (4) Lecture, four hours; discussion, one hour. Requisite: course 10A or 10B. Survey of different authors as Luis Valdez, Cherrie Moraga, Sandra Cisneros, among others. Discussion to Zoot Suit Riots and continuing through Chicano literature since 1943, beginning with reasons present geographical boundaries of U.S. 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 disenfranchising effects of race, gender, class, and immigrant status on Chicana/Chicano educational attainment and achievement. Examination of how historical, social, political, and economic forces impact Chicana/Chicano educational experience. P/NP or letter grading.


M103D. Contemporary Chicano Theater: Beginnings of Chicano Theater Movement. (5) Same as Theater M103D.) Lecture, three hours. Analysis and discussion of historical and political events from 1965 to 1980, as well as theatrical traditions that led to emergence of Chicano theater. Letter grading.


104. Comedy and Culture: Your Humorous Life. (4) Lecture, four hours. How to mine unique humorous life adventures from students’ cultural identities and turn those distinct experiences into humorous lit- erature. Exploration of identity, social, and cultural issues and the ways that Chicano/a poetry out loud, with emphasis on comedy in their pieces through art of storytelling and performance. P/NP or letter grading.

M105A. Early Chicana/Chicano Literature. (5) Same as English M105A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Chicana/Chicano literature from 16th century through Zoot Suit Riots (1943), including both oral and written forms of literary expression (corridos, folktales, essays, memoirs, novels, and poetry) by such authors as Cabeza de Vaca, Juan Seguin, America Paredes, and Maria Ruiz Aparicio Burton. P/NP or letter grading.

M105B. Recent Chicana/Chicano Literature. (5) Same as English M105B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of chicana/chicano literature since 1943, beginning with reactions to Zoot Suit Riots and continuing through Chicana/Chicano Movimento to contemporary literature. Drama, novels, memoirs, essays, and poetry by such authors as Luis Valdez, Cherrie Moraga, Sandra Cisneros, Rodolfo Anaya, Rolando Hinojosa, Oscar Zeta Acosta, and Ana Castillo. P/NP or letter grading.


M108A. Music of Latin America: Mexico, Central America, and Caribbean Isles. (4) Same as Ethno- musicology M108A.) Lecture, four hours; discussion, one hour. Survey of traditional and contemporary music culture. P/NP or letter grading.


M110. Chicana Feminism. (4) Same as Women’s Studies M132A.) Lecture, three hours. Requisite: course 10A or Women’s Studies 10. Examination of theories and practices of women who identify as “Chica- noa feminist.” Analysis of writings of Chicanas who do not identify as feminist but whose practices appear to gender inequities faced by Chicanas both within Chicana/Chicano community and dominant society. Attention to Anglo-European and Third World women. P/NP or letter grading.

111. Chicano/a and Latina/Latino Intellec- tual Traditions. (5) Lecture, five hours. General view of philosophical, cultural, and social thought as well as intellectual traditions in Americas. Role of writers as intellectuals and cultural/political strategists, and as definers of (national) identity, social reality, and struggles of liberation. Letter grading.

M112. Ethnic Groups and Their Bibliographies: Latino History and Culture. (4) Same as Informa- tion Studies M111C.) Lecture, four hours. Introduction to bibliographical and research tools and methods for students with interests in Latino history and culture. P/NP or letter grading.

M114. Chicanos in Film/Video. (5) Same as Film and Television M117.) Lectures/screenings, five hours; discussion, one hour. Goal is to gain nuanced understanding of Chicano cinema as political, socio- economic, cultural, and aesthetic practice. Examination of representa- tion 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 generic norms, including Zoot Suit, Ballad of Gregorio Cortez, and Born in East L.A. Consideration of shorter and more experimental work that critiques Hollywood image of Chicanos. Guest speakers include both pio- neer and up-and-coming filmmakers. P/NP or letter grading.

M115. Musical Aesthetics in Los Angeles. (4) (Same as Ethnomusicology M115.) Lecture, three hours. Confronting aesthetics from classical perspec- tive of art as intuition, examination on cross-cultural basis of diverse musical contexts within vast multicult- ural metropolis of Los Angeles, with focus on various musical networks and specific experiences of Chica- no/Latino, African American, American Indian, Asian, rock culture, Western art music tradition, and com- mercial music industry. P/NP or letter grading.

M116. Chicano/Latino Music in U.S. (4) Same as Ethnomusicology M116.) Lecture, four hours; discussion, one hour. Designed for students with interest of musical expression of Latino peoples who have inhabited present geographical boundaries of U.S. P/NP or letter grading.

117. Chicana/Chicano Images in Mexican Film and Literature. (4) Lecture, four hours. Preparation: adequate understanding of Spanish-language films within Mexican/Chicano context, historical and contemporary socio- economic, cultural, and political forces that shape Chicanas/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 generic norms has been plagued by use of stereotypes that limit visual representation of Chicanas/Chicanos. Explora- tion of causes and effects for such (obscure 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, and 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, with focus on UCLA as case. May be repeated twice for credit. Letter grading.


M121. Issues in Latina/Latino Poverty. (4) (Same as Urban Planning M140.) Lecture, three hours. Examination of nature and extent of urban and rural pov- erty confronting Latina/Latino population in U.S. Spe- cial emphasis on antipoverty policies of government and nonprofit organizations and social planning and economic development strategies. Attention also to literature on underclass. Letter grading.


123. Applied Research Methods in Latino Commu- nities. (4) Lecture, three hours. Through combination of lectures, key readings, and several experiments, introduction to several applied research methods that are highly effective in planning and methodologically rigorous studies on poor and/or Latino communities, including important data that can be used for critical analysis and policy recommendations. Letter grading.

M124. From Latin America to U.S.: Immigration and Latino Identity. (4) (Same as Honors College M143.) Lecture, three hours. Overview of immigration in 20th century, examining political, economic, and social contexts of which different waves of Latin American immigration to U.S. has occurred. Letter grading.


M126. Politics of Crisis: Migration, Identity, and Religion. (4) (Same as Honors College M145.) Lecture, three hours. Examination of individual and collective religious response of Latin Americans and Latinas/Latinos in U.S. to dislocations, displacements, and fragmentation produced by conquest, coloniza- tion, underdevelopment, globalization, and migration. Letter grading.
M127. Farmworker Movements, Social Justice, and AFL-CIO. (4) (Formerly numbered 127.) (Same as Labor and Workplace 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 Farm Laborers Organizing Committee, and their relationship to AFL-CIO, other unions, and their influence on Chicano Movement. Letter grading.

M128. Race, Gender, and U.S. Labor. (4) (Formerly numbered 128.) (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.

129. Field Research Methods in Labor and Workplace Studies. (5) Lecture, four hours; field studies, two hours. Designed for juniors/seniors. Discussion of roles of union and nonunion worker organizations in society and implications of equality of life for Latinx/Latino communities. Review and application of field research methods to labor organizations and workplace sites, especially participant observation, interview techniques, and grounded theory and other methods of data analysis. Letter grading.

M130. Worker Center Movement: Next Wave Organizing for Justice for Immigrant Workers. (4) (Same as Asian American Studies M130 and Labor and Workplace Studies M130.) Seminar, three hours. Development of theoretical and practical understanding of worker center movement, with focus on historical factors that have led to emergence and growth of worker centers. Role of worker centers in promoting multiethnic and multicultural campaigns for workplace and economic justice. Transnational cross-border solidarity initiatives of undocumented workers. P/NP or letter grading.

131. Barrio Popular Culture. (4) Lecture, three hours. Construction of model by which to organize study of ChicanaChicano popular culture by focusing on barrio as metaphor for community. Examination of beliefs, myths, and values of ChicanaChicano culture and representations in icons, heroes, legends, stereotypes, and popular art forms through literature, film, video, music, mass media, and oral history. Letter grading.

132. Border Consciousness. (4) Lecture, three hours. Investigation through history, popular culture, and mass media of bilingual and bicultural identities produced by geographical and cultural space between Mexico and U.S. Special attention to border consciousness as site of conflict and resistance. Letter grading.


134. Exhibiting Cultures. (4) Lecture, three hours. Analysis, through cultural studies perspective, of exhibitions of ChicanaChicana and Latino art that have occupied space in mainstream museums across U.S. since mid-1980s. Examination of how these shows both serve and subvert multicultural agenda in art world and how political identities are packaged and produced in process of exhibition-making. Field trips to local museums. Letter grading.

M135. Bilingual Writing Workshop. (4) (Same as Women's Studies M135.) Seminar, four hours. Writing sample required on first day of class; access to course Web page mandatory; need not be bilingual to enroll. Technical instruction, analysis, and theoretical discussion of bilingual creative expression, with focus on specific genre (i.e., autobiography, poetry, fiction). Emphasis on ChicanaChicano cultural, ethnic, and sexual identity. Letter grading.

136. Writing through Iconography: Codices, Sculpture, and Architecture. (4) Seminar, four hours. Introduction to Nahua philosophy through pictographic writing systems of pre-Hispanic Mexican art and to Nahua culture through examples across sculpture, codices, and ancient archaeological sites. Exposure to beginning Nahua language total immersion experience through vocabulary of ancient calendar, greetings, songs, and rituals. Discussions of reading materials, as well as glyph-drawing. Reading of works of both pioneering philosophers of mid-20th century and current researchers of iconography and oral tradition. How are Nahua and ChicanaChicano cultural and political relations relevant to address dire problems in world of today. P/NP or letter grading.

M139. Topics in ChicanaChicano Literature. (5) (Same as English M139.) Seminar, three hours. Examination of ChicanaChicano visions of Los Angeles; immigration, migration, and exile; autobiography and historical change; ChicanaChicana journalism; literary New Mexico; Chicana feminism; Chicana Chicano cultural transformation. May be repeated for credit. P/ NP or letter grading.

140. Gender, Fiction, and Social Change. (4) Lecture, four hours. Study of essays, novels, short narratives, and plays written by ChicanasChicanas. Re- quired readings represent writers with focus on themes such as gender, race, class, and ChicanoChicana experiences leading to social change. Critical reading and analysis of works, searching for strengths and flaws, to point out unique contribution of each work to greater body of U.S. literature. P/ NP or letter grading.

141. Chicana and Latin American Women's Narrative. (4) Lecture, four hours. Preparation: reading knowledge of Spanish (level 3). Examinations of Spanish American women writers and their Latin American counterparts in English and Spanish, with particular focus on how each group deals with gender, ethnic, and class issues. Letter grading.

142. Mesoamerican Literatures. (4) Lecture, four hours. Preparation: reading knowledge of Spanish (level 4). Survey of premises of Mesoamerican literatures, including myths, lyrics, poetry, religious celebrations, rituals, and drama, specifically of Aztec and 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 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 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 Nahua (Aztècs), Mixtecs, Spaniards, and African slave populations. Extension to Mexican migration to California during national period, specifically examination of adaptation and migration experiences of Chinese, Japanese, and Punjabi-Indian migrants. P/ NP or letter grading.

M144. Women's Movement in Latin America. (4) (Same as Women's Studies M144.) Lecture, four hours. Course on women's movements and feminism in Latin America and Caribbean. Historical and contemporary analysis of 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.

M145A-M145B. Introduction to Chicano Literature. (4-4) (Same as Spanish M145A-M145B.) Lecture, three hours. Required: Spanish 25 or 27. Introduction to texts representative of Chicano literary heritage. Sampling of genres, as well as historical and geographical settings and points of view characteristic of work written by Chicanos during 20th century. Most required reading is in Spanish. Bilingual and English works are included and discussed. Reading and analysis of number of important scholarly and critical statements pertaining to characteristics and development of Chicano literary corpus. Letter grading.


M146. Chicano Narrative. (4) (Same as Spanish M146.) Lecture, three hours. Introduction to major narrative genres in ChicanaChicana literary tradition. Corrido, Semblanza, chronicle, autobiography, novel, romance, and satire as a way in which narrative forms are formed by and address specific socialhistorical problems. P/ NP or letter grading.

M147. Transnational Women's Organizing in Americas. (4) (Same as Women's Studies M147C.) Lecture, four hours. Feminist theories of transnational organizing. Examination of gender and race as central to processes of globalization and essential to economic and political struggles encompassed in transnational 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 globalization has been linked to feminization of labor and migration, environmental degradation, questions of diaspora, sexuality, and cultural displacement, as well as growing global militarization. Problems and issues created by globalization and cultural, social, and political responses envisioned by transnational organizing. P/ NP or letter grading.


150. Affirmative Action History and Politics. (4) Lecture, four hours. Historical examination of policy economic context in which affirmative action policies and programs were conceived and implemented. Review of impact on Chicanos, Latinos, Latinxs, and other communities. Specific analysis of university admissions, hiring and contracting practices, and state initiatives. Letter grading.

M155S. Introduction to Sociology M155S. Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Exploration of historical and social conditions of Latinos in Los Angeles as well as major emphases of their location in larger social structure and on comparisons with other minority groups. Topics include migration, family, education, and work issues. P/NP or letter grading.

M155A. Immigrant Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166A and Labor and Workplace Studies M166A.) Seminar, three hours. New immigrant rights movement, with particular 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 undocumentated immigrant students, and legislative and policy issues that have emerged. Students conduct research on histories for an immigration and immigrant rights, write poetry and spoken word about immigrant experience, and work to collectively develop student publication on immigrant studies in higher education. P/NP or letter grading.

M156B. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166B and Labor and Workplace Studies M166B.) Seminar, two hours. Requisite: course M156A. Expansion of research conducted by students in course M156A involving oral histories, research on immigration/labor higher education, and evaluation of legislation and legal issues impacting undocumented students. Letter grading.


M159A. History of Chicano Peoples. (4) (Same as History M151A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicano) community and people of Mexican descent (Indio-Mestizo-Mulato) north of Rio through 17th, 18th, and 19th centuries, with special focus on labor and politics. Provides integrated understanding of change over time in Mexican community by inquiry into major formative historical and policy issues affecting community. Within framework of domination and resistance, discussion deals with social structure, economy, labor, culture, political organization, conflict, and ideology. Developmental research into historical events of significance occurring both in U.S. and Mexico. Lectures, special presentations, assignments, written examinations, library and field research, and submission of paper. P/NP or letter grading.

M159B. History of Chicano Peoples. (4) (Same as History M151B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicano) community and people of Mexican descent in U.S. through 20th century, with special focus on labor and politics. Provides integrated understanding of change over time in Mexican community by inquiry into major formative historical and policy issues affecting community. Within framework of domination and resistance, discussion deals with social structure, economy, labor, culture, political organization, conflict, and ideology. Developmental research into historical events of significance occurring both in U.S. and Mexico. Lectures, special presentations, assignments, written examinations, library and field research, and submission of paper. P/NP or letter grading.

160. Introduction to Chicana/Chicano Speech in American Society. (4) Lecture, three hours. Survey course presenting (1) basic elements of Chicano language use, including history of Chicano languages, types and social functions of Chicano speech (pachuco, calo, Spanglish), sexist language, and multilingualism and monolingualism and (2) major social issues associated with language use by Chicanos and other urban ethnic populations. Letter grading.

161. Chicano Sociolinguistics. (4) Lecture, three hours. Historical and contemporary development of Chicano language, prehistorical and historical theories of sociolinguistics, social/cultural change, ethnicity, and power to develop cohesive model of Chicano sociolinguistics. Topics include histories and theories of Chichewas, language change and maintenance loss, language attitude studies, and American social institutional (media, educational, legal) responses to Chicano presence. Letter grading.

162. Language Research in Barrio. (4) Lecture/practicum, three hours. Group-oriented practicum to gather, record, and analyze languages spoken in Chinatown and its communities, including development of research agenda and research instrument, gathering of actual speech and its analysis, and writing of final report under guidance of instructor. Student-selected research topics have included language use in barrio, media portrayals of Latinos, and societal and educational attitudes toward language use of Latinos. Introduction to oral history, sociolinguistic interviewing, and social science methodology. Letter grading.

163. Bilingual Advantage: Spanish Language Topics on Chicanas/Chicanos and Latin American Cultures. (5) Lecture, four hours; discussion, one hour. Analysis of Spanish language in various language and literate settings (literature, newsprint, radio, and television in U.S.), providing for student development of academic skills in Spanish. Comparison with Spanish language mass media in other parts of world. Letter grading.

M164SL. Spanish/English Exchange. (5) (Formerly numbered M170.) (Same as Honors College M128SL and Spanish M172SL.) Seminar, four hours; fieldwork at Venice High School, four hours. Preparation: two years of college or university Spanish. Students are paired with one or more English as a Second Language (ESL) Venice High School students and converse for two hours in Spanish and two hours in English. Topics for Spanish portion provided in APS manual; topics for English exchange selected by ESL teacher. Encounters form basis for student compositions and oral reports and supply part of raw data for learner's journal. Review of key areas of Spanish grammar to allow UCLA students to improve language skills, increase knowledge of Latino community and new immigrant Latino youth, and help Venice students improve their English. Some discussions concern U.S. culture, immigration, educational achievement, adaptation to American life, and stimulation of their interest in higher education. P/NP or letter grading.

165. Language in Education. (4) Lecture, three hours. Examination of language issues pertinent to educational systems, including language inequity, literacy, testing, and socialization, as well as institutional ideologies. Letter grading.

166. Paulo Freire for Chicanas/Chicanos Classroom. (4) Seminar, four hours. Introduction to pedagogy of Paulo Freire and examination of contemporary problems circumscribing Chicanas/Chicanos in education. Central focus to offer Freirian alternative to answer theoretical, methodological, practical, and policy questions about schooling of Chicanas/Chicanos in patriarchal society. P/NP or letter grading.

M167A-M167B. Intercultural Dynamics in American Society and Culture. (5-5) (Same as Afro-American Studies M167A-M167B and Asian American Studies M167A-M167B.) Seminar, two hours. Not open to freshmen or students with credit for GE Clusters 20A and/or 20B. Examination of nature and meaning of race, racism, and interracial dialogues in U.S. through various disciplinary perspectives, including sociology, history, literary criticism, and film studies. Race as social and historical category that shapes contemporary American life. P/NP or letter grading.


168B. Latinos: Television News. (4) Lecture, four hours. Requisite: course 168A. Study of multimodal (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 view of interpretive acuity through semiotics training and analysis of actual television news stories. Letter grading.

169. Representations of Indigenous Peoples in Americas. (4) Lecture, four hours. Strongly recommended requisite: course 101. Introduction to different forms of representation of indigenous peoples and their presence in Americas, with emphasis on Mesoamerica and Andes. How indigenous images are expressed, perceived, and constructed at point of contact with Europeans during development of indigenism and in current period. Discussion of how these relate to Chicana/Chicano identity construction. Letter grading.

M170SL. Latinos, Linguistics, and Literacy. (5) (Formerly numbered M170.) (Same as 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, approaches to literacy (whole language, phonics, Freire's liberation pedagogy), history of writing systems, phoneme as basis for alphabetic writing, and national literacy campaigns. Required field project involving Spanish-speaking adults in adult literacy programs. P/NP or letter grading.

171. Hegemonic Humor: Mass-Media Commercial Comedy. (4) Lecture, four hours. Hegemonic humor directs laughter of more powerful people against those with less power, and examinaton of historical and contemporary images of Chicanas and Chicanos in popular culture. Exploration of theorizing, as well as today's myriad examples, of such humor to develop critical literacy of social work it accomplishes. Letter grading.

Chicana and Chicano Studies / 217
M172V. Culture Change and Mexican People. (4) (Same as Anthropology M172V) Lecture, three hours. Requisite: course 10A or 10B or Anthropology 9. Culture change theory encompasses such issues as innovation, syncretism, colonialism, modernization, urbanization, migration, and acculturation. Examination of methods anthropologists/ethnographers use in studying culture change within ethnohistorical background of Mexican and Mexican American people to clarify social and cultural origins of modern habits and customs and, more importantly, unravel various culture change threads of that experience. Topics include technology and evolution, Indian nation-states, miscegenation, peasantry, expansionism, industrialization, immigration, ethnicity, and adaption. Field aspect of culture change required. P/NP or letter grading.

M173. Nonviolence and Social Movements. (4) (Same as Afro-American Studies M173 and Labor 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, readings, and case studies of real world applications. 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.

M174A-M174B. Restoring Civility: Understanding, Using, and Resolving Conflict. (4-4) (Same as Education M145A-M145B.) Lecture, one hour; discussion, three hours. Designed for students who want to learn principles of dialogue and mediation, as alternatives to violence, and practice how to apply them in educational settings. In Progress (M174A) and Letter (M174B) grading.

M175. Chicana Art and Artists. (4) (Same as Art M184 and World Arts and Cultures M128.) Lecture, four hours. Survey of Chicana art and artists. Examination of Chicana aesthetic. Chicana artists have developed unique experience and identity as artists and Chicanas. Letter grading.

177. Latino Social Policy. (4) Lecture, three hours. Survey 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 citizenship ability of Latinos to access public benefits and human services. Letter grading.


179. Language Politics and Policies in U.S.: Comparative and Historical Perspectives. (4) Lecture, four hours. Historical survey of language policies and language use 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 school, administration of government, justice, and workplace. Letter grading.

180. City and Community: History of Chicana/Chicano Los Angeles, 1848 to 1945. (4) Lecture, three hours. Examination of history of Los Angeles from 1848 to 1945, with emphasis on formation of disparate and adverse communities within larger urban region of Southern California. Letter grading.


182. Understanding Whiteness in American History and Culture. (4) (Same as History M151C.) Lecture, three hours; discussion, four hours (when scheduled). Designed for juniors/seniors. History, construction, and representation of whiteness in American society. Readings and discussions trace evolution of "white" identity and explore its significance to historical construction of race class in American history. Letter grading.

183. History of Los Angeles. (4) (Same as History M155.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social, economic, cultural, and political development of Los Angeles and its environs from time of its founding to present. Emphasis on diverse peoples of area, changing physical environment, various interpretations of city, and Los Angeles' place among American urban centers. P/NP or letter grading.

184. Identities in Space and Time: Regional History of U.S.-Mexican Borderlands. (4) Lecture, four hours. Survey of historic and geographic diversity of Chicanas and Chicanos in and outside of the borderlands, and the educational settings. Open to students during scheduled time with laboratory tech support, it offers instruction in collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through installation, documentation, and dedication, with work on more advanced independent projects. P/NP or letter grading.

185. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) (Same as Art M186B and World Arts and Cultures M125C.) Studio/laboratory, four hours. Course: M186BL. Examination of public monuments in U.S. as basis for cultural insight and critique of American values from perspective of artist. Use of urban Los Angeles as textbook in urban space issues such as who is "public," what is "public space" at end of 20th century, what defines neighborhoods, and do different ethnic populations use public space differently. P/NP or letter grading.

186A. Beyond Mexican Mural: Basic Muralism and Community Development. (4) (Same as Art M186A and World Arts and Cultures M125A.) Studio/laboratory, four hours. 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. P/NP or letter grading.

186B-L186B1L-M186CL. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) (Same as Art M186B and World Arts and Cultures M125B.) Studio/laboratory, four hours. Requisite: courses M186A, M186BL. Corequisite: course 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 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 prior coursework. 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 Colloquium in Chicana and Chicano Studies. (2) Seminar, two hours. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to present their written 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 the results of their research. May be repeated for credit. P/NP 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 topic of interest in field. Exploration of issue, its theoretical implications for field, and practical implications for communities. Final research project required. May be repeated for credit. P/NP or letter grading.

192. Undergraduate Practicum in Chicana and Chicano Studies. (4) Seminar, four hours. Requisite: course 10A or 10B. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students who assist in preparation of materials and/or development of innovative programs or courses of study under guidance of faculty members in small group settings or one-on-one setting. May not be applied toward departmental major or minor elective requirements. 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 Series students. Reading of journal articles associated with speaker topics to enliven postcolloquia discussions. May not be applied toward departmental major or minor elective requirements. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Chicana and Chicano Studies. (2) Seminar, one hour. Designed for undergraduate students who are part of research group. Discussion of current literature in field or of research of faculty members or students. Use of specific research method on selected topic. May be repeated for credit with topic change. P/NP grading.

195. Community Internships in Chicana and Chicano Studies. (4) Tutorial, two hours; field placement, eight hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.
CIVIC ENGAGEMENT

Interdisciplinary Minor
College of Letters and Science

UCLA
A316 Murphy Hall
Box 951430
Los Angeles, CA 90095-1430
(310) 825-3223
e-mail: civicensageminor@college.ucla.edu
http://www.civicensageminor.ucla.edu

Kathy O’Byrne, Ph.D., Chair

Faculty Advisory Committee
Joel D. Aberbach, Ph.D. (Political Science)
Jan de Leeuw, Ph.D. (Statistics)
Franklin D. Gilliam, Jr., Ph.D. (Political Science)
Reynaldo F. Macias, Ph.D. (Chicana and Chicano Studies)
Ruth M. Milkman, Ph.D. (Sociology)
Kathy O’Byrne, Ph.D. (Center for Community Learning)
Meredith Phillips, Ph.D. (Public Policy)
Susan J. Plann, Ph.D. (Spanish and Portuguese)
Robert N. Watson, Ph.D. (English)

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 academic context that enriches the valuable learning experiences that students are expected to select faculty sponsors with relevant expertise in the academic or service area in which they tend to concentrate. 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 are qualified 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 (may not be selected by Political Science majors or minors), 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 Courses (9 or 10 units):

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 specific faculty sponsor and enroll in either Civic Engagement 198 or 199 in the final quarter 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 advisory committee for the minor.

Required Upper Division Internship, Seminar, and Capstone Courses (18 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 a 195 internship course. Placement are selected in consultation with the Center for Community Learning minor coordinator and are based on both student interest and faculty recommendations. During one of the three terms, students must take Civic Engagement 194 with a grade of B or better. They must also com-
plete a capstone experience through course 198 or 199.

State internships span one term through participation in the University of California Center in Sacramento (UCSCS) program during Winter, Spring, or Summer Quarter. Students enroll in Civic Engagement 194SA and 195SA. They must also complete Civic Engagement 194 with a grade of B or better and a capstone experience through course 198 or 199 at UCLA. Applications are available in A265 Murphy Hall.

National internships span one term through acceptance into 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. They must also complete Civic Engagement 194 with a grade of B or better and a capstone experience through course 198 or 199 at UCLA. Applications are available at http://www.cappp.ucla.edu.

No more than one upper division course may be applied toward both this minor and a major or minor in another department or program. All minor courses must be taken for a letter grade, with 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

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.

Upper Division Courses

105SL. Client-Based Program Evaluation. (5) (Formerly numbered Honors College 195.) Seminar, three hours; fieldwork, three hours. Limited to juniors/seniors. Service learning course for undergraduate students and community partners through which students learn theory and practice of program evaluation. Evaluation of public health program in Los Angeles by research teams. Letter grading.

M115. Citizenship and Public Service. (4) (Same as Political Science M115C.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended prerequisite: Political Science 10. Designed for juniors/senior. Study of ways in which political thinkers have conceived of ideas of citizenship and public service, how these ideas have changed over time, and the impact of citizenship on era of markets and globalization. P/NP or letter grading.

133SL. Community-Based Research: Theory and Practice. (5) (Formerly numbered Honors Collegium 133.) Seminar, three hours; fieldwork, three hours. Limited to juniors/seniors. Service learning course in research methods. Community-based research, in collaboration with community organizations, on theme of client rights: activism and advocacy. Offered in summer only. Letters and academic journal articles related to primary policy topics associated with internships and maintain weekly journals that reflect and assess their experiences. Students meet weekly with faculty mentors to review their progress, set goals for participation and achievement, and discuss problems that may arise. Individual contract with supervising faculty member required. Letter grading.

140. Access to Justice: Hope and Reality. (4) Seminar, two hours. Limited to UCLAs 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. Prequisite: course 194. Required capstone course for junior/senior. Research on and analysis of research literature and national discussion of role of citizens in modern-day democracy. Including discussion of civic education in higher education and implications for roles of student. Letter grading.

163SL. Civic Engagement and Public Use of Knowledge. (5) (Formerly numbered Honors Collegium 163.) Seminar, three hours; fieldwork, three hours. Limited to juniors/seniors. Review and analysis of research literature and national discussion of role of citizens in modern-day democracy. Including discussion of civic education in higher education and implications for roles of student. Letter grading.

168. Access to Justice: Hope and Reality. (4) Seminar, three hours. Limited to UCLAs 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. Prequisite: course 194. Required capstone course for junior/senior. Research on and analysis of research literature and national discussion of role of citizens in modern-day democracy. Including discussion of civic education in higher education and implications for roles of student. Letter grading.

191SA. Variable Topics Research Seminars: California Politics. (4) (Formerly numbered Honors Collegium 191.) Seminar, three hours. Limited to UC Center Sacramento Program students. Designed to sharpen student methodological understanding of political issues. Topics vary by term, but use framework encompassing basic principles of economics, political science, and sociology to examine issues pertinent to California’s political and economic development: supply/demand (market) analysis, demographic analysis, and statistical analysis. Reading, discussion, and development of culminating project. P/NP or letter grading.

194. Capstone Research Seminar. (2) (Formerly numbered M194.) Seminar, two hours. Enforced prequisite: course 195. Required of students pursuing Civic Engagement minor who select local Los Angeles internship option. Review and discussion of relationship between coursework and curriculum of minor with experiential learning. Students create proposal for required capstone research project (course 198 or 199) that examines policy issues related to their choice of specialization and must include scholarly concepts from academic discipline of civic engagement and use research methodology approved by faculty mentor. Letter grading.

194SA. UC Center Sacramento Research Group Seminars. (4) (Formerly numbered Honors Collegium 194SA.) Seminar, three hours. Corequisite: course 195SA. Limited to UC Center Sacramento Program students. Development of professional skills in areas of writing, analysis, research, and oral presentation, and of understanding of policies and political processes in California. Research paper based on analysis of policy research related to area of student academic interest or to internship area required. P/NP or letter grading.

195. Community or Corporate Internships in Civic Engagement. (4) Tutorial, one hour; fieldwork, eight hours. Limited to juniors/seniors. Internship in supervised setting in corporate, governmental, or nonprofit setting, using knowledge base of civic engagement. Students meet on regular basis with faculty mentor to construct series of reading and writing assignments 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. May be repeated for credit. Individual contract with supervising faculty member required. Letter grading.

195SA. UC Center Sacramento Internships. (8) (Formerly numbered Honors Collegium 195SA.) Tutorial, one hour; fieldwork, 24 to 32 hours. Limited to junior/senior UC Center Sacramento Program students. Internship in workplace setting such as assembly member office, state senator office, governor’s office, judicial branch office, state agencies, or nonprofit organization. Students meet weekly with faculty mentors to review their progress, set goals for participation and achievement, and discuss problems that may arise. Individual contract with supervising faculty member required. Letter grading.


The objectives of the ABET-accredited civil engineering curriculum at UCLA are to (1) provide graduates with a solid foundation in basic mathematics, science, and humanities, as well as fundamental knowledge of relevant engineering principles, (2) provide students with the capability for critical thinking, engineering reasoning, problem solving, experimentation, and teamwork, (3) prepare graduates for advanced study and/or professional employment within a wide array of industries or governmental agencies, (4) produce graduates who understand ethical issues associated with their profession and who are able to apply their acquired knowledge and skills to the betterment of society, and (5) foster in students a respect for the educational process that is manifest by a lifelong pursuit of learning.

Undergraduate Study

Civil Engineering B.S.

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L; Civil and Environmental Engineering 1, 15; Computer Science 31 (or another programming course approved by the Faculty Executive Committee); Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C (or Electrical Engineering 1), 4AL.

The Major

Required: Chemical Engineering 102A or Mechanical and Aerospace Engineering 105A, Civil and Environmental Engineering 101, 103, 108, 110, 120, 135A, 151, 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:

Environmental Engineering: One laboratory course from Civil and Environmental Engineering 156A or 156B or M166L and one major project design course from 157B or 157C; recommended: courses 154, 155, 163, 164, M166

Geotechnical Engineering: Civil and Environmental Engineering 121 and 128L; recommended: courses 123, 125, 135B, 137, 142

Structural Engineering and Mechanics: Civil and Environmental Engineering 135B, one lecture course from 130, M135C, 137, 141, or 142, one laboratory course from 130L, 135L, 137L, or 142L (must select 130L or 137L or 142L if 135L is selected from structures major project design list), and one structures major project design course from 135L or 144 or 147 (must select 144 or 147 if 135L is selected from laboratory list); recommended: courses 121, 125, 130, 130L, 135L, 137, 137L, 141, 142, 142L, 143, 144, 147

Water Resources Engineering: Civil and Environmental Engineering 150 and 157L; recommended: courses 154, 156A

Additional Elective Options: Civil and Environmental Engineering 106A, 180, 181, Earth and Space Sciences 100, 139, Mechanical and Aerospace Engineering 166C, M168

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.

No more than two upper division courses may be applied toward both this minor and a major or minor in another department or program, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult the undergraduate counselors before enrolling in any courses for the minor.

All minor courses must be taken for a letter grade, with a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gas/graduate/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.)
105. Technical Communication. (4) Lecture, four hours; outside study, eight hours. Techniques for effec-
tively 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 a ready-to-use, readable style, edit work accurately, and apply and writing and presentation principles to technical docu-
ments. Topics include organization of information; ap-
plication of techniques to achieve unity, coherence, and development; use of parallel grammatical struc-
ture effectively; avoidance of common writing errors; and preparation and delivery of oral presentations.
Letter grading.

106A. Problem Solving in Engineering Economy. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

125. Fundamentals of Earthquake Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

222 / Civil and Environmental Engineering

105. Technical Communication. (4) Lecture, four hours; outside study, eight hours. Techniques for effec-
tively 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 a ready-to-use, readable style, edit work accurately, and apply and writing and presentation principles to technical docu-
ments. Topics include organization of information; ap-
plication of techniques to achieve unity, coherence, and development; use of parallel grammatical struc-
ture effectively; avoidance of common writing errors; and preparation and delivery of oral presentations.
Letter grading.

106A. Problem Solving in Engineering Economy. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

125. Fundamentals of Earthquake Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

222 / Civil and Environmental Engineering

105. Technical Communication. (4) Lecture, four hours; outside study, eight hours. Techniques for effec-
tively 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 a ready-to-use, readable style, edit work accurately, and apply and writing and presentation principles to technical docu-
ments. Topics include organization of information; ap-
plication of techniques to achieve unity, coherence, and development; use of parallel grammatical struc-
ture effectively; avoidance of common writing errors; and preparation and delivery of oral presentations.
Letter grading.

106A. Problem Solving in Engineering Economy. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

125. Fundamentals of Earthquake Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

222 / Civil and Environmental Engineering

105. Technical Communication. (4) Lecture, four hours; outside study, eight hours. Techniques for effec-
tively 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 a ready-to-use, readable style, edit work accurately, and apply and writing and presentation principles to technical docu-
ments. Topics include organization of information; ap-
plication of techniques to achieve unity, coherence, and development; use of parallel grammatical struc-
ture effectively; avoidance of common writing errors; and preparation and delivery of oral presentations.
Letter grading.

106A. Problem Solving in Engineering Economy. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

125. Fundamentals of Earthquake Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

222 / Civil and Environmental Engineering

105. Technical Communication. (4) Lecture, four hours; outside study, eight hours. Techniques for effec-
tively 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 a ready-to-use, readable style, edit work accurately, and apply and writing and presentation principles to technical docu-
ments. Topics include organization of information; ap-
plication of techniques to achieve unity, coherence, and development; use of parallel grammatical struc-
ture effectively; avoidance of common writing errors; and preparation and delivery of oral presentations.
Letter grading.

106A. Problem Solving in Engineering Economy. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

125. Fundamentals of Earthquake Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

222 / Civil and Environmental Engineering

105. Technical Communication. (4) Lecture, four hours; outside study, eight hours. Techniques for effec-
tively 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 a ready-to-use, readable style, edit work accurately, and apply and writing and presentation principles to technical docu-
ments. Topics include organization of information; ap-
plication of techniques to achieve unity, coherence, and development; use of parallel grammatical struc-
ture effectively; avoidance of common writing errors; and preparation and delivery of oral presentations.
Letter grading.

106A. Problem Solving in Engineering Economy. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

125. Fundamentals of Earthquake Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

222 / Civil and Environmental Engineering

105. Technical Communication. (4) Lecture, four hours; outside study, eight hours. Techniques for effec-
tively 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 a ready-to-use, readable style, edit work accurately, and apply and writing and presentation principles to technical docu-
ments. Topics include organization of information; ap-
plication of techniques to achieve unity, coherence, and development; use of parallel grammatical struc-
ture effectively; avoidance of common writing errors; and preparation and delivery of oral presentations.
Letter grading.

106A. Problem Solving in Engineering Economy. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

125. Fundamentals of Earthquake Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Overview of engineering seismology, including plate tectonics, faults, wave propagation, and earthquake strong ground motion. Development and selection of design ground motions using both probabilistic seismic haz-
Overview of seis-
mic design of bridges, dams, and other non-building structures. Letter grading.

137. Elementary Structural Dynamics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Prerequisite: course 135B. Basic structural dynam- ics course for civil engineering students. Elastic free, forced vibration, and earthquake response spec- tral analysis for single and multidegree of freedom systems. Axial, bending, and torsional vibration of beams. Letter grading.

137L. Structural Dynamics Laboratory. (4) Lecture, two hours; laboratory, six hours; outside study, four hours. Requisite or corequisite: course 137. Cali- bration of instrumentation for dynamic measure- ments. Determination of natural frequencies and damping factors from free vibrations. Determination of natural frequencies, mode shapes, and damping fac- tors from forced vibrations. Dynamic simulation. Letter grading.


142L. Reinforced Concrete Structural Laboratory. (4) Lecture, two hours; laboratory, six hours; outside study, four hours. Requisites: courses 135B, 142. Limited enrollment. Design considerations used for reinforced concrete beams, columns, slabs, and joints evaluated using analysis and experiments. Links be- tween theory, building codes, and experimental re- sults. Some computer software and limitations of calculation procedures used in design of rein- forced concrete structures. Development of skills for written and oral presentations. Letter grading.


150. Introduction to Hydrology. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: Mechanical and Aerospace Engineering 103. Recommended: course 15. Study of hydrologic cycle and relevant atmospheric processes, water and energy balance, radiation, precipitation formation, in-filtration, evaporation, vegetation transpiration, groundwater flow, storm runoff, and flood processes. Letter grading.

151. Introduction to Water Resources Engineer- ing. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended: course 137. Princi- ples of hydraulics, flow of water in open channels and pressure conduits, reservoirs and dams, hydraulic machinery, hydroelectric power, system design and analysis applied to water resources engineering. Letter grading.


154. Chemical Fate and Transport in Aquatic Envi- ronments. (4) Lecture, four hours; outside study, eight hours. Recommended requisite: course 153. Fundamental physical, chemical, and biological prin- ciples governing movement and fate of chemicals in surface waters and groundwater. Topics include phys- ical transport in various aquatic environments, air-wa- ter exchange, acid-base equilibria, oxidation-reduc- tion chemistry, chemical sorption, biodegradation, and bioaccumulation. Practical quantified problems considered involving both reaction and transport of chemicals in environment. Letter grading.

155. Unit Operations and Processes for Water and Wastewater Treatment. (4) Lecture, four hours; dis- cussion, two hours; outside study, six hours. Requi- site: course 153. Biological, chemical, and physical methods used to modify water quality. Fundamentals of phenomena governing design of engineered sys- tems for water and wastewater treatment systems. Field trip. Letter grading.

156A. Environmental Chemistry Laboratory. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisites: course 153 (may be tak- en concurrently). Chemistry 20A, 20B. Basic labora- tory techniques in analytical chemistry related to wa- ter and wastewater analysis. Selected experiments in- clude gravimetric analysis, titrimetry, spectrophotometry, ion exchange, 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; discussion, two hours; outside study, four hours. Requisites: Chemistry 20A, 20B. Characteriza- tion 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 reac- tors, aerations, gas stripping, coagulations, flocculations, and membrane separations. Letter grading.

157B. Design of Water Treatment Plants. (4) Lec- ture, two hours; discussion, two hours; laboratory, four hours; outside study, four hours. Prerequisite: course 155. Water quality standards and regulations, overview of water treatment plants, design of unit operations, predesign of water treatment plants, hydraulics of plants, pro- cess control and economics. Letter grading.

157C. Design of Wastewater Treatment Plants. (4) Lecture, four hours; outside study, eight hours. Requi- site: course 155. Process design of wastewater treat- ment plants, including primary and secondary treat- ment, design of mixing, aeration, trickling filter, plants, pro- cess control, and economics. Letter grading.

157L. Hydrologic Analysis and Design. (4) Lecture, four hours; laboratory, four hours; outside study, six hours. Recommended requisite: course 151. Col- lection, compilation, and interpretation of data for quantification of surface water components of hydro- logic cycle, including precipitation, evaporation, infiltr- ation, and runoff. Use of hydrologic variables and parameters for development, construction, and appli- cation of analytical models for selected problems in hydrology and water resources. Field trip required. Letter grading.

157M. Hydrology of Mountain Watersheds. (2) Fieldwork, three hours; laboratory, two hours; outside study, one hour; one field trip. Requisite: course 150 or 157L. Advanced field-based course with focus on study of catchment processes in snow-dominated and mountainous regions. Students measure and quantify snowpack properties and watershed fluxes, investigate geochemical properties of surface and groundwater systems, and classify mountain streams and flooding potential. Letter grading.


M156. Environmental Microbiology. (4) (Same as Environmental Health Sciences M156.) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisite: course 153. Microbial cell and its metabolic capabilities, microbial genetics and its potentials, growth of microbes and kinetics of growth, microbial ecology and diversity, microbiology of wastewater treatment, probing of microbes, public health microbiology. Letter grading.

M156L. Environmental Microbiology and Biotech- nology Laboratory. (1) (Formerly numbered 166L.) (Same as Environmental Health Sciences M166L.) Laboratory, two hours; outside study, two hours. Corequisite: course M156. Laboratory practice within environmental microbiology, sampling of environmental samples, classical and modern molec- ular techniques for enumeration of microbes from en- vironmental samples, techniques for determination of microbial activity in environmental samples, laboratory setups for studying environmental biotechnology. Letter grading.

180. Introduction to Transportation Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Designed for juniors/seniors. General characteristics of transportation systems, including streets and highways, railroad, transit, air, and water. Cap- acity 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.

181. Traffic Engineering Systems: Operations and Control. (4) Lecture, four hours; fieldwork/lab/roboratory, two hours; outside study, six hours. Designed for ju- nior/senior. Applications of traffic flow theories; data collection and analyses; intersection capacity analy- ses; simulation models; traffic signal design; signal timing design, implementation, and performance eval- uation; Intelligent Transportation System concept, architecture, and integration. Letter grading.
188. Special Courses in Civil and Environmental Engineering. (2 to 6) Lecture, to be arranged; outside study, to be arranged. Special topics in civil engineering for undergraduate students that are 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: Civil and Environmental Engineering. (2 to 8) Seminar, two to eight hours; outside study, four to 16 hours. For designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field or of research faculty members or students. May be repeated for credit. Letter grading.

199. Directed Research in Civil and Environmental Engineering. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Cumulating paper or project required. May be repeated for credit with school approval. Individual topics required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses


234. Advanced Topics in Structural Mechanics. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 130, 135A, 135B. Direct energy formulations for deformable systems; linear equations; analysis of structural systems with one-dimensional elements; introduction to variational calculus; discrete element displacement, force, and mixed methods; fiber membrane, plate, shell structures, instability effects. 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 method 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. Requisites: courses 130, 235A. Direct energy formulations for deformable systems; linear equations; analysis of structural systems with one-dimensional elements; introduction to variational calculus; discrete element displacement, force, and mixed methods; fiber membrane, plate, shell structures, instability effects. Letter grading.

235C. Nonlinear Structural Analysis. (4) Lecture, four hours; outside study, eight hours. Requisite: course 235B. Classification of nonlinear effects; material nonlinearities; conservative, nonconservative behavior; geometric nonlinearities, Lagrangian, Eulerian description of motion; finite element methods in geometrically nonlinear problems; post-buckling behavior of structures; solution of nonlinear 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 strain-stress 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 elastic and inelastic analysis techniques for new and existing construction. Letter grading.

244. Structural Loads and Safety for Civil Structures. (4) Lecture, four hours; outside study, eight hours. Requisite: course 141 or 142 or 143 or 144. Modeling of uncertainties in structural loads and structural mechanisms; structural safety analysis; and calculation of capacity reduction factors. Letter grading.


247. Earthquake Hazard Mitigation. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 130, and M237A or 246. Concept of seismic isolation, linear theory of base isolation, visco-elastic and hysteretic damping, capacity design, foundation and building system characteristics, control, evaluation of application of models for flood forecasting and prediction of streamflows in water resource applications. 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 sensitivity analysis, and application of models for flood forecasting and prediction of streamflows in water resource applications. Letter grading.

251B. Contaminant Transport in Groundwater. (4) (Formerly numbered 251C.) Lecture, four hours; outside study, eight hours. Requisites: courses 250B, 253. Phenomena and mechanisms of hydrodynamic dispersion, governing equations of mass transport in porous media, various analytical and numerical solutions, determination of dispersion parameters by laboratory and field experiments, biological and reactive transport in multiphase flow, simulation design, software packages and applications. Letter grading.

251C. Remote Sensing with Hydrologic Applications. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 250C. Introduction to basic physical concepts of remote sensing as they relate to surface and atmospheric hydrologic processes. Applications include radiative transfer modeling and retrieval of hydrologically relevant parameters like topography, soil moisture, snow properties, vegetation, and precipitation. Letter grading.

251D. Hydrologic Data Assimilation. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 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: course 106A, or equivalent. Introduction to economic analysis. 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 descriptors of chemical behavior of metals and inorganic ions in natural fresh/marine surface waters and in water treatment. Processes include acid-base chemistry and alkalinity (carbonate system), complexation, precipitation/dissolution, adsorption oxidation/reduction, and 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, gas transfer, disinfection, oxidation, and membrane processes. Letter grading.

255B. Biological Processes for Water and Wastewater Treatment. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 254A, 255A. Fundamentals of environmental water microbiology; kinetics of microbial growth and biological oxidation; applications for activated sludge, gas transfer, fixed-bed processes, aerobic and anaerobic digestion, sludge disposal, and biological nutrient removal. Letter grading.

258A. Membrane Separations in Aquatic Systems. (4) Lecture, four hours; outside study, eight 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.

259A. Selected Topics in Environmental Engineering. (2) Lecture, two hours; outside study, four hours. Review of recent research and developments in environmental engineering. 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, multifunctional water resource planning, and optimization of water resource systems. Topics may vary from term to term. Letter grading.

261B. Advanced Biological Processes for Water and Wastewater Treatment. (4) Lecture, four hours; outside study, eight hours. Requisite: course 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.

M252A. Introduction to Atmospheric Chemistry. (4) (Same as Atmospheric and Oceanic Sciences M203A.) Lecture, three hours. Requisite for undergraduates: Chemistry 20B. Principles of chemical kinetics, thermodynamics, spectroscopy, and photochemistry; chemical composition and history of Earth's atmosphere; biogeochemical cycles of key atmospheric constituents; basic photochemistry of troposphere and stratosphere, upper atmosphere chemical processes; air pollution; chemistry and climate. S/U or letter grading.

M252B. Atmospheric Diffusion and Air Pollution. (4) (Same as Atmospheric and Oceanic Sciences M252B,) Lecture, three hours. Nature and sources of atmospheric pollution; diffusion from point, line, and area sources; pollution dispersion in urban complexes; meteorological factors and air pollution potential; meteorological aspects of air pollution. S/U or letter grading.

263A. Physics of Environmental Transport. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Transport processes in surface water, groundwater, and atmosphere. Emphasis on exchanges across phase boundaries: sediment/water interface; air/water gas exchange; particles, droplets, and bubbles; small-scale dispersion and mixing; effect of reactions on transport; linkages between physical, chemical, and biological processes. Letter grading.

263B. Advanced Topics in Transport at Environmental Interfaces. (4) Lecture, four hours; outside study, eight hours. Requisite: course 263A. In-depth treatment of selected topics involving transport phenomena at environmental interfaces between solid, liquid, and gas phases, such as aquatic sediments, porous aggregates, and vegetative canopies. Discussion of theoretical models and experimental observations. Application to important environmental engineering problems. Letter grading.

265A. Mass Transfer in Environmental Systems. (4) Lecture, four hours; 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.

265B. Contaminant Transport in Soils and Groundwater. (4) Lecture, four hours; computer applications, two hours; outside study, six hours. Requisites: courses 250B, 265A. Principles of mass transfer as they apply in soil and groundwater, independent estimation of transport model parameters; remediating hazardous waste sites. Letter grading.

266. Environmental Biotechnology. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 153, 254A. Environmental biotechnology — concept and potential, biotechnology of pollutant control, bioremediation, biomass conversion: composting, biogas and bioethanol production. Letter grading.

296. Advanced Topics in Civil Engineering. (2 to 4) Seminar, to be arranged. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

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 should be organized in advanced technical fields. If appropriate, already held 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 assignment 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 with topic change. Letter grading.

485. Teaching Assistant Training Seminar. (2) Seminar, two hours. Preparation: appointment as teaching assistant in Civil and Environmental Engineering Department. Seminar on communication of civil engineering principles, concepts, and methods; teaching assistant preparation, organization, and presentation of material, including use of visual aids; grading, advising, and rapport with students. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate civil engineering students. Petition forms to request enrollment 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. S/U grading.

597B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate civil engineering students. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate civil engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

598. Research for and Preparation of M.S. Thesis. (2 to 16) 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.

Scope and Objectives
The civilizations of ancient Greece and Rome are the focus of research and teaching in the Classics Department. These areas of study are important in their own right and for their contributions to the political, cultural, intellectual, and artistic development of the Western world. To this end, the department offers a wide variety of interdisciplinary courses in classical civilization (multiple-listed in the Art History, Philosophy, and Political Science Departments), as well as elementary and advanced courses in ancient Greek and Latin language, literature, and linguistics. Classical civilization courses include such topics as Greek and Latin literature in translation (genres of epic, comedy, tragedy, biography), classical mythology, religion, law, gender and sexuality, politics, philosophy, art and archaeology, and the reception of the ancient world in modern cultures (cinema and classics).

The department offers Bachelor of Arts degrees in Classical Civilization, in Greek, in Latin, and in Greek and Latin and the Ph.D. degree in Classics. Students can earn Master of Arts degrees in Classics (Greek and Latin), in Greek, or in Latin only after they have been admitted to the Ph.D. program.

Undergraduate Study
Students considering a major in the department should consult the advisor 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.

Classical Civilization B.A.
The civilizations of ancient Greece and Rome have made important contributions to the political, social, artistic, and intellectual development of the Western world. The purpose of the Classical Civilization major is to provide a formal and balanced introduction to the historical and cultural experiences of the ancient Greeks and Romans. The program of study is structured, yet not rigid. Lower division survey courses and requirements in elementary language study, ancient history, and classical art establish an essential background of knowledge, while electives encourage individual and specialized interests. The program offers a

CLASSICS
College of Letters and Science
UCLA
1096 Powell Hall
Box 951417
Los Angeles, CA 90095-1417
(310) 825-4171
fax: (310) 206-1903
http://www.humnet.ucla.edu/humnet/classics/index.html

Professors Emeriti
Bernard D. Frischer, Ph.D.
Michael W. Haslam, Ph.D.
Steven Lattimore, Ph.D.
Philip Levine, Ph.D.
Jaan Puulvel, Ph.D.

Associate Professors
Shane Butler, Ph.D.
Robert A. Gurval, Ph.D.

Assistant Professors
Kathryn J. McDonnell, Ph.D.
Alex C. Purves, Ph.D.
Mario Telò, Ph.D.

Adjunct Associate Professor
Catherine Atherton, Ph.D.
broad range of courses in the fields of language, literature, history, mythology, religion, philosophy, art, and archaeology. The major serves as excellent and rewarding preparation for a professional career in medicine, law, business, journalism, communications, or the arts.

**Preparation for the Major**

**Required:** Classics 10, 20, and one course from 30, 40W, 41W, 42, 51A, 51B.

**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 classical Greek culture course, one Roman civilization course, and one course in Greek or Roman literature in translation, classical mythology, or classical archaeology.

Refer to the UCLA Transfer Admission Guide at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** (1) Greek 3 or Latin 3; (2) two upper division courses in Greek or Roman history (History 112A through 112E, 113A, 113B, 114A, 114B, 114C, 115); (3) two upper division courses in classical art or archaeology (Classics C151E, 152, M153A through M153K); (4) seven upper division courses in the department (courses in related fields not offered by the department may be substituted by petition and with approval of the undergraduate adviser) — no more than three may be selected from Greek 100 through 133 or Latin 100 through 133, and Classics 198A and 198B may be applied as only one course toward the major; (5) Classics 191. All other courses in the 190 series may be substituted only by petition.

**Greek B.A.**

**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 classical Greek culture course and/or ancient history (History 112A through 112E, 113A, 113B, 114A, 114B, 114C, 115). Courses in related fields not offered by the department may be substituted by petition and with approval of the faculty undergraduate adviser; (3) Classics 191.

**Greek and Latin B.A.**

**Preparation for the Major**

**Required:** Classics 10, 20; Greek 1, 2, 3, 20 and Latin 1, 2, 3, 20, or equivalent. Greek 16 may be substituted for Greek 1, 2, 3.

**Transfer Students**

Transfer applicants to the Greek and Latin major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of Greek and of Latin and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the UCLA Transfer Admission Guide at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** (1) Eight upper division Greek and/or Latin courses (of which at least four must be in each language), including Greek 110 or Latin 110; Greek and/or Latin 197 and 199 may be applied only by petition; (2) three upper division courses in classical civilization and/or ancient history (History 112A through 112E, 113A, 113B, 114A, 114B, 114C, 115). Courses in related fields not offered by the department may be substituted by petition and with approval of the faculty undergraduate adviser; (3) Classics 191.

**Latin B.A.**

**Preparation for the Major**

**Required:** Classics 10, 20; Latin 1, 2, 3, 20, or equivalent. Latin 16 may be substituted for Latin 1, 2, 3.

**Transfer Students**

Transfer applicants to the Latin major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of Latin and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

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.

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 and (2) complete Classics 198A and 198B with grades of A– or better.

**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.

**Required Upper Division Courses (20 units):**
- Five upper division courses in classical civilization offered by the department. One course in a related field may be substituted with approval of the faculty undergraduate adviser. Classics 191 may be applied, but all other courses in the 190 series may be substituted only by petition.

A minimum of 16 upper division units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program.

All minor courses must be taken for a letter grade, with 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.

All minor courses must be taken for a letter grade, with 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.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Graduate Study**

Official, specific degree requirements are detailed in *Program Requirements for UCLA Graduate Degrees*, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Classics offers the Master of Arts (M.A.) degree in Latin, and Master of Arts (M.A.) 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.

**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 carefully selected set of literary texts characteristic of ancient Rome and significant in Western literary tradition. Satisfies Writing II requirement. Letter grading.

42. Cinema and Ancient World. (5) Lecture/screenings, five hours; discussion, 75 minutes. Use of popular culture and cinema to introduce students to ancient Greek and/or Roman culture. Focus at discretion of instructor. P/NP or letter grading.

51A. Art and Archaeology of Ancient Greece. (5) Lecture; three hours; discussion, one hour. Survey of major period, theme, or medium of Greek art and archaeology at discretion of instructor. P/NP or letter grading.

51B. Art and Archaeology of Ancient Rome. (5) Lecture; three hours; discussion, 75 minutes. Survey of major period, theme, or medium of Roman art and archaeology at discretion of instructor. P/NP or letter grading.

87GE. General Education Seminar Sequences. (3) 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. 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 specified term. P/NP or letter grading.

88GE. General Education Seminar Sequences. (3) 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 Homer and Herodotus; Greek religion and literature; pleasures of Greek or Roman body; and 18th-century British literature and reception of classics. P/NP or letter grading.

**Upper Division Courses**

M121. History of Political Thought: Ancient and Medieval Political Theory from Plato to Machiavel- li. (4) Same as Political Science M111A.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exposition and critical analysis of major political philosophers and political ideas from Plato to Machiavelli. P/NP or letter grading.

M124. Modern Receptions of Ancient Political Thought. (4) (Same as Political Science M119A.) Lecture, three hours. Designed for juniors/seniors. Study of how Western culture has conceived and reintermediated political thought of ancient Greeks and Romans. Topics include examination of influential case(s) of modern reception of classical antiquity. P/NP or letter grading.

M125. Invention of Democracy. (5) (Same as Political Science M112B.) 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 pride 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 stress 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: one course 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 10 or 20. Survey of tragedy from 5th-century Athens through later antiquity. P/NP or letter grading.

143B. Ancient Comedy. (4) Lecture, three hours. Requisite: course 10 or 20. Survey of comedy as it developed in Greek and Roman worlds. P/NP or letter grading.

144. Topical Studies in Ancient Culture. (4) Lecture, three hours. Requisite: one course 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.

M145A. Ancient Greek and Roman Philosophy. (4) (Same as Philosophy M101A.) Lecture, three hours. Study of some major Greek and Roman philosophical texts, including those of pre-Socratics, Plato, Aristotle, and Hellenistic philosophers, with emphasis on historical and cultural setting of texts, their literary form, interrelations, and contribution to discussion of basic philosophical issues. P/NP or letter grading.

M145B. Later Ancient Greek Philosophy. (4) (Same as Philosophy M102B.) Lecture, three hours. Requisite: one course from M145A. Philosophy 100A, 100B, or 101B, or M102. 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.

M146A. Plato — Earlier Dialogues. (4) (Same as Philosophy M101A.) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected topics in early and middle dialogues of Plato. P/NP or letter grading.

M146B. Plato — Later Dialogues. (4) (Same as Philosophy M101B.) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected topics in middle and later dialogues of Plato. P/NP or letter grading.

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: one course from Mediterranean civilizations. Concurrently scheduled with course C251E. P/NP or letter grading.

152A. Ancient City: Athens. (4) Lecture, three hours. Enforced requisite: course 10 or 51A or Art History 102. 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. P/NP or letter grading.

152B. Ancient City: Rome. (4) (Formerly numbered 152.) Lecture, three hours. Enforced requisite: course 20 or 51B or Art History 1A. Range of interdisciplinary approaches to study of Rome and/or cities of Italy and Roman Empire. Approaches, themes, and periods (both ancient city and receptions of city from classical antiquity to modern era) vary depending on individual instructor and topic. P/NP or letter grading.

M153A. Minoan Art and Archaeology. (4) (Same as Art History M102A.) Lecture, three hours. Requisite: course 10 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 M102B.) Lecture, three hours. Requisite: course 10 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 M103A.) Lecture, three hours. Requisite: course 10 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 M102D.) Lecture, three hours. Requisite: course 10 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 M102E.) Lecture, three hours. Requisite: course 10 or Art History 50. Study of development of art and architecture of Greek world from middle of 4th century B.C., including transmission of Greek art forms to Romans, P/NP or letter grading.

M153F. Etruscan Art. (4) (Same as Art History M103F.) Lecture, three hours. Requisite: course M153A or Art 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 M103G.) Lecture, three hours. Requisite: course 20 or Art History 50. Art and architecture of Rome and its Empire from circa 300 B.C. to A.D. 300. P/NP or letter grading.


M153J-M153K. Classical Archaeology. (4-4) (Same as Art History M102J-M102K-M102K) Lecture, three hours; fieldwork, 21 hours. Requisite: course 10 or 20 or 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. P/NP or letter grading. M153J. Greco-Roman Architecture; M153K. Greco-Roman Sculpture; M153K. Greco-Roman Painting.

153M. Greeks and Romans on Bay of Naples. (4) Lecture, three hours; fieldwork, 21 hours. Recommended preparation: course 10 or 20 or Art History 50. Four-week intensive study of history and cultures of Bay of Naples in classical antiquity. Survey of period from first settlements and colonization by Greeks in 8th century B.C.E. to destruction of Roman towns of Pompeii and Herculaneum in 1st century C.E. Daily lectures and site visits. Field trips to Naples, Cumae, Puteoli, Paestum, Herculaneum, 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 on 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 modern imitators, from Apuleius to Shakespeare to Picasso and beyond. P/NP or letter grading.


165. Ancient Athletics. (4) Lecture, three hours. Requisite: course 10 or History 1A. Study of ancient Greek and Roman athletics and their connections with religion, politics, literature, and art. P/NP or letter grading.


M167. Magic in Ancient World. (4) (Formerly numbered 167.) (Same as Ancient Near East M167.) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 10 or 20. Exploration of art of influencing natural course of events by occult means as practiced in ancient world at large. Coverage of beliefs in supernatural forces, rites 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. Requisite: course 30. Religious, mythical, and/or historical traditions of Greece and Rome compared with each other and with other traditions worldwide. P/NP or letter grading.

169. Sex in Ancient World. (4) Lecture, three hours. Requisite: course 10 or 20 or History 1A. Examination of sex and gender systems, P/Greek, Hellenistic Roman cultures in ancient Mediterranean world. 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 course and broad range of ancient texts in translation. P/NP or letter grading.


180. Introduction to Classical Linguistics. (4) Lecture, three hours. Requisite: Greek 3 or Latin 3. Linguistic approach to Greek and Latin, including Indo-European background, etymology, pronunciation, alphabets, sociolinguistics (dialects, bilingualism), and applications to classical literature. P/NP or letter grading.


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.

202. Syntax and Development of Skills in Reading Original Latin. (4) Lecture, three hours. Focus on relationship between Latin manuscripts and vernacular manuscripts with regard to their respective presentation of written texts. S/U or letter grading.

251A. Seminar: Classical Archaeology — Aegae Bronze Age. (2 or 4) Seminar, three hours. S/U or letter grading.

251B. Seminar: Classical Archaeology — Greco-Roman Architecture. (4) Seminar, three hours. S/U or letter grading.


251D. Seminar: Classical Archaeology — Greco-Roman Painting. (2 or 4) Seminar, three hours. Studies in style and iconography of various periods of Aegean, Greek, and Roman painting. May be repeatable for credit with topic change. S/U or letter grading.

251E. Archaeological Field Techniques. (12) Off-campus field archaeology, 36 hours. Preparation: at least one classical archaeology course. Concurrently scheduled with course C151E. S/U or letter grading.

252. Topography and Monuments of Athens. (2 or 4) Lecture, two or four hours. Detailed studies in topography and monuments of Athens, combining evidence of literature, inscriptions, and actual remains. S/U or letter grading.

253. Topography and Monuments of Rome. (2 or 4) Lecture, two or four hours. Detailed studies in topography and monuments of ancient Rome, combining evidence of literature, inscriptions, and actual remains. S/U or letter grading.

260. Topics in Ancient Religion. (2 or 4) Seminar, three hours. S/U or letter grading.

268. Seminar: Comparative Mythology. (2 or 4) Seminar, three hours. Requisite: course 168. Advanced study of selected topics in comparing Greek and Roman traditions with other ancient Near Eastern and 1st millennium B.C. Readings in Greek, Latin, Hittite, Luwian, Hurrian, Hieroglyphic, Cuneiform, and literary texts. May be repeated for credit with topic change. S/U or letter grading.

288. Literary Theory. (2 or 4) Discussion, three hours. Introduction to critical and analytical approaches to classical literature. S/U or letter grading.
107. 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.
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. 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. Aristophanes. (2 or 4 each) Lecture, three hours. Course 208A is requisite to 208B. S/U (2-unit course) or letter (4-unit course) grading.
209A-209B. Seminars: Hellenistic Poetry. (2 or 4 each) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
211A-211B. Herodotus. (2 or 4 each) Lecture, three hours. Course 211A is requisite to 211B. S/U (2-unit course) or letter (4-unit course) grading.
212A-212B. Thucydides. (2 or 4 each) Lecture, three hours. Course 212A is requisite to 212B. S/U (2-unit course) or letter (4-unit course) grading.
213. Greek Historiography. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
214. Demosthenes. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.
215. Early Greek Orators. (2 or 4) Seminar, three hours. Studies in works of Antiphon, Andocides, and Lysias. S/U (2-unit course) or letter (4-unit course) grading.
216. Menander. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
217A-217B. Greek Lyric Poetry. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit. S/U (2-unit course) or letter (4-unit course) grading.
218. Greek Novels. (2 or 4) Seminar, three hours. Study of Greek romance and its place in Greek literature. Two texts (2 or 4 each): Cheraeus and Callirho and Longus: Daphnis and Chloe) studied in some detail. S/U (2-unit course) or letter (4-unit course) grading.
219. Pre-Socratic Philosophers. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
222A-222B. Plato. (2 or 4 each) Lecture, three hours. Course 222A is requisite to 222B. S/U (2-unit course) or letter (4-unit course) grading.
223A-223B. Aristotle. (2 or 4 each) Lecture, three hours. Course 223A is requisite to 223B. S/U (2-unit course) or letter (4-unit course) grading.
224. Post-Aristotelian Philosophy. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
225. Eighteenth Century and Enlightenment. (2 or 4) Seminar, three hours. Topics vary from year to year. Each course may be taken independently and may be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.
226. Nineteenth Century and Later. (2 or 4) Seminar, three hours. Topics vary from year to year. Each course may be taken independently and may be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.
227. Byzantine Poetry. (2 or 4) Lecture, three hours. Study of main representatives of both religious and secular poetry. S/U (2-unit course) or letter (4-unit course) grading.
240A-240B. History of Greek Language. (2 or 4 each) Lecture, four hours. S/U or letter grading.
243. Mycenaean Greek. (2 or 4) Seminar, three hours. Script, language, and grammar of Linear B inscriptions; their relevance to ancient Greek linguistic and cultural history. S/U or letter grading.
244. Greek Papyrology. (4) Lecture, three hours. Preparation: reading knowledge of Greek. Introduction to Greek papyri, considered both as historical documents and as carriers of literature. S/U or letter grading.
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 Ph.D. 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 14. No grading.
2. Elementary Latin. (5) Lecture, three hours; discussion, two hours. Enforced requisite: course 1. P/NP or letter grading.

Classics / 231
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 or letter grading.


103. Lucretius. (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 or half of Aeneid, designed especially for students with only limited experience in reading Latin poetry. P/NP or letter grading.

105B. Advanced Vergil. (4) Lecture, three hours. Requisite: course 100. Work in sight reading and grammatical analysis 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.


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 Apuleius' Metamorphoses and development of genre of prose novel in antiquity. May be repeated for credit with change in author and text. P/NP or letter grading.

117. Sallust. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.


119A. 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 writing, or science), and/or theme. May be repeated for credit with topic change. P/NP or letter grading.

119B. Readings in Roman Poetry. (4) Lecture, three hours. Requisite: course 100. Readings of selected Roman poetry author(s). Topics may vary from year to year and may be organized in terms of chronology (Republican or imperial), epic, lyric, elegy, and/or themé. May be repeated for credit with topic change. P/NP or letter grading.


121. Patristic Texts. (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. Comprehensive study of entire Catullan corpus. S/U (2-unit course) or letter (4-unit course) grading.

203A. Elegiac Poetry. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

203B. Propertius. (2 or 4) Lecture, three hours. Course 203A is 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 contemporaneous 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.

212. Roman Orations. (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.

213. Roman Elegy. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

214. Cicero's Philosophical Works. (2 or 4) Lecture, three hours. Course 212A is not requisite to 221B. S/U (2-unit course) or letter (4-unit course) grading.

215. Seminar: Roman Stoicism. (2 or 4) Seminar, three hours. 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 Elargitiones, Quintilian's Institutiones), with attention to its place in rhetorical tradition. May be repeated 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.

218. Lucretius. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

219. Seneca. (2 or 4) Seminar, three hours. Detailed study of one work of prose or poetry by younger Seneca. May be repeated with topic change. S/U (2-unit course) or letter (4-unit course) grading.

220. Cicero's De Natura Deorum. (2 or 4) Lecture, three hours. Course 221A is not requisite to 221B. S/U (2-unit course) or letter (4-unit course) grading.

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. Historical 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 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 with change in author. S/U or letter grading.
STUDIES arranged. Preparation: appointment as teaching as-

Thomas G. Plate, M.A.
Michael W. Suman, Ph.D.
Steven M. Peterson, Ph.D.
John Kochian, M.A.
Karyl K. Kicenski, Ph.D.

Lecturers
Paul Von Blum, J.D.
Francis F. Steen, Ph.D.
Kerri L. Johnson, Ph.D.
Kyu S. Hahn, Ph.D.
Gregory A. Bryant, Ph.D.

Assistant Professors
Paul I. Rosenthal, Ph.D.
Martie G. Haselton, Ph.D.
Matthew A. Baum, Ph.D.
Neil M. Malamuth, Ph.D.

2303 Rolfe Hall
UCLA
College of Letters and Science

COMMUNICATION

599. Research for Ph.D. Dissertation. (2 to 8)
to be arranged. S/U grading.

597. Study for M.A. Comprehensive Examination
8)

596. Directed Individual Study or Research. (2 to

595. College Teaching of Latin. (2) Seminar, to be
arranged. Preparation: appointment as teaching as-

594. Seminar: Latin Paleography. (4) Seminar, three
hours. Preparation: students in book hand in Latin

593. Seminar: Latin Historical Grammar. (2 or 4) Seminar, three
hours. Preparation: students in book hand in Latin

5. To be arranged. Preparation: students in book hand in Latin

4. To be arranged. Preparation: students in book hand in Latin

3. To be arranged. Preparation: students in book hand in Latin

2. To be arranged. Preparation: students in book hand in Latin

1. To be arranged. Preparation: students in book hand in Latin

The Major

Required Core Courses: Communication Stud-
ies 100, 101, 150.

Interpersonal Communication
Concentration
Each course may be applied toward only one

1. Eight interpersonal communication
courses, six of which must be in communi-
cation studies, selected from Anthropology
33A, 135B, M140, 141, 142A, 142B,
Communication Studies 113, 114, 115,
M116, 117, 118, 119, 120, 121, M123W,
M124, M125, M126, M127, 128, 129, 130,
M144A, M144B, 182, 188B, 191B, Linguis-
tics 103, 170, Philosophy 172, Psychology
137C, M165, 177, 178, Psychology 135 or
Sociology 132, Psychology 137I or Sociol-
ygy 135, Sociology 134, and 156 or 160

2. Three mass communication courses se-
lected from Communication Studies 122,
131, 132, 133, M135, 139, 140, 141, 143,
146, M147, 148, M149, 151, 152, M153,
154, 155, 156, 158, M159, 160, M161,
162, 165, 166, 170, 171, 173, 174, 176,
177, 178, 190, 183, 184, 186, 187,
188A, 191A, Film and Television 106A,
108, 110A, and 116 or Communication
Studies 175

Mass Communication Concentration
Each course may be applied toward only one

1. Eight mass communication courses, six of which must be in communi-
cation studies, selected from Anthropology
33A, 135B, M140, 141, 142A, 142B,
Communication Studies 113, 114, 115,
M116, 117, 118, 119, 120, 121, M123W,
M124, M125, M126, M127, 128, 129, 130,
M144A, M144B, 182, 188B, 191B, Linguis-
tics 103, 170, Philosophy 172, Psychology
137C, M165, 177, 178, Psychology 135 or
Sociology 132, Psychology 137I or Sociol-
ygy 135, Sociology 134, and 156 or 160

UCLA Transfer Admission Guide
at http://www.admissions.ucla.edu/prospect/
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 selecting four courses (at least one of which must be in communication studies) from Communication Studies 151, 154, 158, Program in Computing 10C, 20A, 20B, 40A. Courses need to be completed with a minimum grade of C– in each course and a combined grade-point average of at least 2.0. Students must petition for admission to the program and are advised to do so after they complete Program in Computing 10B (petitions should be filed in the Counseling Office). Students graduate with a bachelor's degree in communication studies and a specialization in Computing.

Communication Studies

Lower Division Courses

1. Principles of Oral Communication. (4) (Formerly numbered Speech 1.) Lecture, four hours. Enforced requisite: satisfactory score on Entry-Level Writing requirement. Examination of foundations of communication and public speaking. Consideration of number of basic theories related to study of communication and development of skills to enable composition and delivery of speeches in accordance with specific rhetorical concepts. Improvement of ability to analyze, organize, and critically think about communicative messages while becoming better equipped to articulate ideas. P/NP or letter grading.

1A. Public Speaking for Nonnative Speakers. (4) (Formerly numbered Speech 1, 1A.) 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 practices. Focus on theory and practice of public speaking, including selection of content, organization of ideas, language, and delivery. Practice in extemporaneous and manuscript speaking. Critical analysis of speeches in both contemporary and historical settings. Special emphasis on group discussions, evaluations, practice of both public and private speaking skills. Offered in summer only. P/NP or letter grading.

1B. Public Speaking for Native Speakers. (4) (Formerly numbered Speech 1B.) Lecture, four hours. Designed for native speakers of English to increase fluency and vocabulary while improving presentation skills, language usage, reasoning, style, and delivery. Conversation and pronunciation practices. Focus on theory and practice of public speaking, including selection of content, organization of ideas, language, and delivery. Practice in extemporaneous and manuscript speaking. Critical analysis of speeches in both contemporary and historical settings. Special emphasis on group discussions, evaluations, practice of both public and private speaking skills. Offered in summer only. P/NP or letter grading.

10. Introduction to Communication Studies. (5) Lecture, three hours; discussion, one hour. Introduction to fields of mass communication and interpersonal communication. Study of modes, media, and effects of mass communication, interpersonal processes, and communication theory. Letter grading.

15A. Production of Multimedia Software. (4) Lecture, three hours; laboratory, one hour. Description of what goes into multimedia software program; discussion of different platforms (PC, Mac, network computers, servers, and transmitters) and distribution means (CD-ROM, DVD-ROM, Internet), content organization and layout, data structure and management; and overall planning for prototype and final product. P/NP or letter grading.

M70. Origin of Language. (5) (Same as German M70 and Indo-European Studies M70.) Lecture, three hours; discussion, one hour. Theoretical and methodological issues surrounding origin of language. Topics include evolutionary theory, evolution of man, how language is organized in brain, and science of language, including physiology of speech, phonetics, and comparative reconstruction. Letter grading.

Upper Division Courses

100. Communication Theory. (4) Lecture, four hours. Requisite: course 10 or Linguistics 1 or Sociol 1 or Psychology 10. Analysis of fundamental nature of human communication; its physical, linguistic, psychological, and sociological bases. Study of theoretical models explicating process and constituents of communicative act. P/NP or letter grading.

101. Freedom of Communication. (4) Lecture, four hours. Analysis of legal, political, and philosophical issues related to rights of free speech, access to information. Study of court decisions governing freedom of communication in U.S. P/NP or letter grading.


103A-103B. Forensics. (2-2) (Formerly numbered Speech 181A-181B.) Lecture, two hours. Participation in on-campus and intercollegiate forensics activities, including exposure to fundamentals of competitive forensics events. Students practice public address, interpretation of literature, debate, oratory, and extemporaneous speaking and competitive in independent research and analysis. Each course may be repeated once for credit. P/NP or letter grading. 103A. Basic preparation; 103B. Advanced practice in speech.

104. Analysis and Briefing. (2) (Formerly numbered Speech 182.) Lecture, two hours. Intensive study of selected political or social issues, preparation of bibliography, analysis and evaluation of issues and arguments. May be repeated once for credit. P/NP or letter grading.

112. Current Problems in Evolution and Communication. (4) Seminar, three hours; discussion, one hour. Examination of contemporary issues in evolutionary communication research. Topics include design of communication systems, animal signaling, social communication, and speech production and perception. P/NP or letter grading.

113. Nonverbal Communication and Body Language. (4) Lecture, three hours. Examination of how various forms of nonverbal communication convey meaningful information to perceivers with focus on both production and perception of multiple communication formats (e.g., affect expression of face and body, gesture, and deixis), with strong emphasis on body language. Readings from variety of related fields. P/NP or letter grading.

114. Understanding Relationships. (4) Lecture, four hours. Exploration of types of communication that occur in close relationships, especially romantic relationships. In-depth coverage of variety of relationship topics, including intimacy, stages of intimate relationships, why we choose to get involved with some people as opposed to others, flirting, and self-disclosure. P/NP or letter grading.


M116. Communication and Conflict in Couples and Families. (4) (Same as Psychology M176.) Lecture, 90 minutes; discussion, 90 minutes. Requisites: Psychology 10, 100A, 127. 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.

117. Negotiation. (4) Lecture, four hours. Art and science of negotiation in securing agreements between independent parties. Theory and practice that underlie successful negotiation. Experiential course in which students learn broad array of negotiation skills, including identifying one's own (and others') communication style, identifying and incorporating components of successful negotiation, and resolving conflict between parties. Letter grading.

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 speaker, physical characteristics, personality, and emotional state, and on how listeners utilize 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 psycholinguistics. Topics include evolution of cooperation,rogue group and outgroup dynamics, gossip, music improvisation, and conversational behavior. P/NP or letter grading.

121. Talk and Mass Communication. (4) Lecture, three hours. In recent years there has been sea change in broadcast news and public affairs programming News was once packaged and presented to audiences in form of scripted narrative or story, but increasingly news is organized around spontaneous interpersonal encounters between some combination of journalists, public figures, and ordinary citizens. Examination of interactional forms, with emphasis on news interviews, presidential press conferences, and political speeches before live audiences, from standpoint of their historical development and consequences for journalism, political communication, and public sphere. Primary focus on inner workings of each form of talk — social norms and practices that organize participation and that distinguish forms of broadcast talk from one another and from ordinary conversation. Letter grading.

122. Promoting Dialogue between Diverse Worlds. (4) Lecture, three hours. Exploration of issues related to management of conflict between major areas of world, with focus on historical background, perception gaps, and political 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) (Formerly numbered M123W.) (Same as Anthropology M148W and Applied Linguistics and TESL M161W.) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 3B. Relationship between language and human body raises host of interesting topics. New approaches to phenomena such as embodiment become possible when body is analyzed, not as isolated entity, but as visible agent whose talk and action are lodged within both processes of human interaction and rich settings where people pursue courses of action that count in their lives. Satisfies Writing II requirement. Letter grading.

88. Sophomore Seminars: Communication Studies. (4) (Formerly numbered BBA-BBZ.) Seminar, three hours. Limited to division students. Readings and discussions designed to introduce students to current research in discipline. Culling project may be required. P/NP or letter grading.

116. Communication and Conflict in Couples and Families. (4) (Same as Psychology M176.) Lecture, 90 minutes; discussion, 90 minutes. Requisites: Psychology 10, 100A, 127. 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.
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 sexes, implied language use, and deception. Letter grading.


128. Entertainment as Implicit Pedagogy. (4) Lecture, three hours. Entertainment is significant component of both interpersonal and mass communication. Examination of evolutionary history, cognitive mechanisms, and social dimensions of play and entertainment, as well as their possible pedagogical effects. Letter grading.

129. Gaming Mind. (4) Lecture, three hours. Exploration of various aspects of online computer games that are becoming increasingly popular and technically sophisticated, with focus on what people learn from games, how they learn it, and whether learning is potentially useful. Letter grading.

130. Cultural Factors in Interpersonal Communication. (4) Lecture, three hours. Study of cultural factors as they affect processes of interpersonal communication; exercises in participation, analysis, and criticism of interethnic and interracial communication in small group configuration. 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. Critical analysis of talk show programming 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 competing functions determine content of mass media? Examination of psychological dynamics of advertising, nature of entertainment and mass culture, practice of propaganda, and changing patterns of media ownership. Assessment of impact of mass media on individuals and social institutions. Letter grading.

135. Narrative in 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.


140. Theory of Persuasive Communication. (4) Lecture, four hours. Dynamics of communication designed to influence human conduct; analysis of structure of persuasive discourse; integration of theoretical materials from relevant disciplines of humanities and social sciences. Letter grading.

141. Films of Persuasion: Social and Political Advocacy in Mass Society. (4) Lecture, four hours. Films often provide commentary about public issues. Examination of how films communicate to large audiences about historical events. Critical evaluation of these works to understand power and limitations of films as social persuasion. Letter grading.

142. Rhetorical Theory. (4) Lecture, four hours. Rhetoric has a major classical and neoclassical treatment in rhetoric. Analysis of theories of Plato, Aristotle, Cicero, Quintilian, St. Augustine, Blair, Whately, Campbell, and other leading works in theory of rhetoric. P/NP or 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 some basic sequence structures with limited extensions. Course M144A is required. M144B. Consideration of some expanded sequence structures, story structures, topical sequences, and overall structural organization of single conversations.

146. Evolution of Mass Media Images. (5) Lecture, four hours; discussion/laboratory, one hour. Examination of evolutionary psychology as basis for images select by media portraying women and/or minorities in entertainment, advertising, and informational communication. 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: Gender, Race, Class, and Sexuality. (5) (Same as Women’s Studies M149.) Lecture, four hours, activity, one hour. Limited to junior/senior Communication Studies majors. Focus on broad historical and cultural and political implications of major social events. Reexamination of manner in which mass media influence people to perceive various dominant and dominated and/or colonized groups of people. Ways in which media portray women, lesbian, bisexual, transgendered, racial and ethnic marginalized peoples, class relations, and other subaltern or subordinated groups are presented and often misrepresented in media. Exploration and employment of practical applications of communication and feminist theories for understanding ideological nature of stereotyping and politics of representation through use of media, guest presentations, lectures, class discussions, and introduction to theory and practice of cultural studies. Letter grading.


153. Media and Aggression against Women. (4) (Same as Women’s Studies M153.) Lecture, four 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 gradually co-opted to perform 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, You Tube) through social network analysis and other social science research methods. P/NP or letter grading.

158. Evolution of Communication Technology. (4) Lecture, four hours. Study of role assigned to technology in theories of communication. Examination of current development and historical information and communication technology throughout history. Survey of origins and societal implications of major development, starting with emergence of speech itself. Letter grading.

M159. Pornography and Evolution. (4) (Same as Women’s Studies M159.) Lecture, three hours. Discussion of theories and research on why pornography exists and its effects. Use of text to illustrate value of evolutionary theory to social sciences generally. Letter grading.
160. Political Communication. (4) Lecture, four hours; discussion, one hour. Study of nature and function of communication in political sphere; analysis of contemporary communications within 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 change, different types of media “effects,” and role of media in American political process. P/NP or letter grading.

152. 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.

155. Agitational Communication. (4) Lecture, four hours; discussion, one hour (when scheduled). Theory of agitational change in existing institutions and policies in democratic society. Intensive study of selected agitational movements and technique and content of their communications. Letter grading.

156. Communicative Dynamics in Film and Television Production. (4) Lecture, four hours. Identification of how motivation and creativity interact with business interest, research, and policies in producing entertainment for media market. Letter grading.


171. Theories of Freedom of Speech and Press. (4) Lecture, three hours. Requisite: course 101. 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 issues such as obscenity, defamation, access to media, and control of commercial, corporate, and government speech. 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 opportunity to address problems from 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 advocates in current society’s communications dynamics and search for truth. Review of communication research and empirical 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 Public Arts. (4) Lecture, four hours; discussion, one hour (when scheduled). Introduction to methods and problems of criticism in public arts. Study of several types of critical methods: formalistic, analogical, pragmatic, and aesthetic criticism. Topics include definition of art and criticism, aesthetic media, genre and resources of film, television, theater, and public culture of critical method; problems of critical judgment. Letter grading.

176. Visual Communication and Social Advocacy. (4) Lecture, three hours. Visual communication reaches diverse audiences in areas of social and political topics. Cartoons, posters, murals, and documentary photography have had powerful world impact. Survey of all four genres of visual communications as features of modern mass media. Letter grading.

177. Libel and Freedom of Expression. (4) Lecture, four hours. Intensive study of law of defamation and its relationship to free flow of information in democracy. Examination of rationale, scope, and effect of libel laws. Topics include application of libel laws to public official, public figure, and private plaintiffs and media and nonmedia defendants; group libel, privileged libel, and libel by fiction. Letter grading.


180. Politics of Censorship. (4) Lecture, two hours; simulation teaching, three hours. Requisite: course 101. Examination of process and substance of debates over government and private censorship by having students become active participants in long-simulated battle over current issue such as book censorship, pornography, or UNESCO’s proposed “New World Information Order.” P/NP or letter grading.

181. Evolutionary Psychology and Interpersonal Communication. (2) Seminar, three hours. Designed to bring together students undertaking supervised tutorial research in seminar setting to discuss their work with faculty members. Hands-on course in which students learn to conduct empirical research in communication and evolutionary psychology. Readings, discussions, and average of seven hours per week of research (designing experiment protocols, collecting and processing data, interpreting results). P/NP grading.

182. Nonverbal Communication in Architecture. (4) Lecture, four hours. Study of how elements of design and style of various buildings in architectural history send messages to viewers and users of such buildings. Letter grading.

183. Asia Media Systems: Introduction. (4) Lecture, four hours. Survey of news media of Asia Pacific region. Political, economic, cultural, and religious history drives each system. Survey of region’s leading countries and comparison of media systems to each other. Letter grading.

184. Advanced Asia Media Systems: Laboratory. (4) Lecture, three hours; laboratory, one hour. Survey and comparative analysis of news media Web pages of Asian Pacific, examined in Social Sciences Computing Laboratory, using media richness, content analysis, and political, cultural, and economic perspective. 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 course. 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. Investigation 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 from interaction of media institutions (print, film, broadcasting, and new technologies) and societal institutions (Congress, federal agencies, courts, Presidency, schools, churches, political action groups, advertisements, and audiences). P/NP or letter grading.

188A. Variable Topics in Mass Communication. (4) (Formerly numbered 107A.) Lecture, three hours. Variable topics; consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change. Letter grading.

188B. Variable Topics in Interpersonal Communication. (4) (Formerly numbered 107B.) Lecture, three hours. Variable topics; consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change. P/NP or letter grading.

191A. Variable Topics Research Seminars: Mass Communication. (4) Seminar, three hours. Research seminars on selected topics in mass communication. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

191B. Variable Topics Research Seminars: Interpersonal Communication. (4) Seminar, three hours. Research seminars on selected topics in interpersonal communication. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

194. Research Group Seminars: Communication Studies. (2) Seminar, two hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field of research of faculty members or students. May be repeated for credit. P/NP grading.

197. Individual Studies in Communication Studies. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject area required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A-198B-198C. Honors Research in Communication Studies. (4-4-4) (Formerly numbered 191HB-191BH-191HC.) Tutorial, three hours. Limited to juniors/seniors. May be repeated for credit. Individual contract required. Letter grading. 198A. Requisites: courses 10, 150. Development of comprehensive research project under direct supervision of faculty member. 198B. Completion 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. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Community Health Sciences
School of Public Health
UCLA
36-071 Center for the Health Sciences
Box 951772
Los Angeles, CA 90095-1772
(310) 825-5308
tel: (310) 794-1805
http://www.ph.ucla.edu/chs/
Anne R. Pebley, Ph.D., Chair
Steven P. Wallace, Ph.D., Vice Chair

Professors
Carol S. Aneshensel, Ph.D.
Emil Berkanovic, Ph.D.
Linda B. Bourque, Ph.D.
E. Richard Brown, Ph.D.
Osman M. Galal, M.D., Ph.D.
Deborah C. Giik, Sc.D.
Michael S. Goldstein, Ph.D.
Gail G. Harrington, Ph.D.
David Heber, M.D., Ph.D.
Martin Y. Iguchi, Ph.D.
Marjorie Kagawa-Singer, Ph.D., M.A., M.N., R.N.
Sinehendu B. Kar, Dr.P.H., M.Sc.
Robert L. Kliot, M.D., M.P.H., In Residence
Joel D. Koppel, M.D., In Residence
Donald E. Morisky, Sc.D., M.S.P.H., Sc.M.
Charlotte G. Neumann, M.D., M.P.H.
Anne R. Pebley, Ph.D. (Fred H. Bixby Professor of Population Policy)
Michael G. Ross, M.D., M.P.H.
Mary Jane Rotheram-Borus, Ph.D., In Residence (Dena Bar-Yaacov Endowed Professor of Childhood Psychiatry and Behavioral Sciences)
Judith M. Siegel, Ph.D., M.S.Hyg.
Dawn M. Upchurch, Ph.D.
Stephen P. Wallace, Ph.D.

Professors Emeriti
Isabelle F. Hunt, Dr.P.H., R.D.
Virginia C. Li, Ph.D., M.P.H.
Alfred K. Neumann, M.D., M.A., M.P.H., F.A.B.P.M.
Marian E. Swendsen, Ph.D.
Daniel M. Weiner, M.D.

Associate Professors
Gilbert C. Gee, Ph.D.
Kimberly D. Gregory, M.D., M.P.H., In Residence
Michael C. Lu, M.D., M.P.H.
Kimberley I. Shoaf, Dr.P.H., In Residence

Lecturers
Tiffani Brown Garnett, M.P.H.
Jill L. DeLagier, M.P.H., R.D.
Kristen McKinney, Ph.D.
Rena Orenstein, M.P.H.
Pamela L. Viele, Ph.D.

Adjunct Professors
Martin Anderson, M.D., M.P.H.
Daniel H. Ershoff, Dr.P.H.
Neal Kaufman, M.D., M.P.H.
Steven Rottmann, M.D.
Samuel J. Stratton, M.D., M.P.H.

Adjunct Associate Professors
Carol L. Archie, M.D.
Marion Taylor Baer, Ph.D., R.D.
Diana M. Bontá, Dr.P.H., R.N.
Ronald J. Halbert, M.D.
C. Kevin Malotte, Ph.D.
Michael L. Preli, D.P.A., M.P.H., C.H.E.S.
Michael Regalado, M.D.
Valentine M. Villa, Ph.D.

Adjunct Assistant Professors
Alina Dorian, Ph.D.
Helen M. Du Plessis, Ph.D.
Janet Frank, Ph.D.
Dena R. Herman, M.P.H., Ph.D., R.D.
Carolyn A. Mendez-Luck, Ph.D.
Wendelin M. Slusser, M.D.
Bennie Taub, Ph.D.
Paula A. Tavrow, Ph.D.

Field Program Supervisor
Michael L. Preli, D.P.A., M.P.H., C.H.E.S.

Scope and Objectives
The Department of Community Health Sciences focuses on the determinants of health within the context of the social structure, community, healthcare systems, and family units.

Of particular interest is how health-related behaviors of individuals are influenced by and interact with conditions in the social, cultural, physical, and biological environment to influence health status, with particular emphasis on identifying, evaluating, and encouraging health-damaging behaviors and facilitating health-promoting behaviors. The curriculum seeks to integrate basic and applied public health theories and methods in applying them to real problems of human populations. Assessment, planning, and evaluation are common themes in the department’s educational programs.

The department offers both schoolwide professional (M.P.H. and Dr.P.H.) and academic (M.S. and Ph.D.) degree programs. Graduates of the professional programs generally assume positions in the planning, administration, and evaluation of public health programs and policies, both in the U.S. and abroad, that have as their objective the maintenance and improvement of the health of individuals, families, communities, and populations. Graduates of the doctoral programs assume teaching, research, and managerial positions in a wide variety of settings, including universities, government agencies, nongovernmental organizations, international health agencies, and research centers.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/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 Community Health Sciences offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Public Health.

Community Health Sciences

Lower Division Courses
90. Aging Frontier: Public Health Perspective. (4) Lecture, three hours; discussion, one hour. Introduction to gerontology from public health perspective, emphasizing prevention of illness and promotion of healthy aging. Special attention to health and aging in community 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 experience. May be repeated for credit. Individual contract with supervising placement sponsor required. P/NP or letter grading.

91. Peer Health Counselor Training. (4) Lecture, four hours. Limited to students in Peer Health Counselor Program. Analysis of student healthcare issues as related to campus healthcare delivery system and to healthcare consumer. Identification of health needs, determination of appropriate resources, delivery of preventive and self-care education, and delineation of peer health counselor’s role. P/NP or letter grading.

Upper Division Courses
100. Introduction to Community Health Sciences. (4) Lecture, three hours; discussion, one hour. Development of broad appreciation of community, cultural, developmental, and psychosocial factors as they affect health, health-related behavior, and implications for public health. Review of theories, models, and modalities of interventions and policies for health promotion and disease prevention. Letter grading.

130. Nutrition and Health. (4) Lecture, three hours; laboratory, one hour. Preparation: one biology course, one chemistry course. Basic and clinical nutrition theory and practice for students in health sciences curricula. P/NP or letter grading.

132. Health, Disease, and Health Services in Latin America. (4) Lecture. 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) (Formerly Asian American Studies M129.) Lecture, three hours; fieldwork, one hour. Introduction to mental and physical health issues of Asian Americans and Pacific Islanders; identification of gaps in health status indicators and barriers to both care delivery and research for these populations. Letter grading.


180. Field Studies in Cancer Control. (4) (Formerly numbered 195.) Lecture, two hours; discussion, one hour; fieldwork, four hours. Required. May be repeated for credit. Individual contract required. P/NP or letter grading.

181. Campus/Community Health and Wellness Promotion: From Theory to Practice. (4) (Formerly numbered 196A.) 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; community or corporate internship service, two to six hours. Course 187A is requisite to 187B. Required. Course 187A is required for juniors/seniors. Health and social needs/services from primarily public health perspective, drawing on related academic/professional disciplines. Community-based service learning strategy used to enhance knowledge of concepts covered. As part of service portion, students trained as case workers 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 setting in community 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 experience. May be repeated for credit. Individual contract with supervising placement sponsor required. P/NP or letter grading.

197. Individual Studies in Community Health Sciences. (2 to 4) Requires 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

209. Global Health Problems. (4) Lecture, three 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.


210. Community Health Sciences. (4) Lecture, three hours. Preparation: one social sciences course. Basic concepts, relationships, and policy issues in field of community health, variability in definitions of health and illness, correlates of health and illness behavior, impact of social and community structure on health status, and 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. 211A. Requisite: course 210; 211B. Requisites: courses 210, 211A, and Biostatistics 100A or Epidemiology 100.

212. Advanced Social Research Methods in Health. (4) Lecture, four hours; laboratory, two hours; outside assignments, eight hours. Requisites: courses 211A, 211B, Biostatistics 100B, 406. Problems of health survey design and data collection; measurement issues in data analysis and interpretation; use of computer for analysis of large-scale survey data using various statistical techniques. Letter grading.

213. Research in Community and Patient Health Education. (4) Lecture, three hours; discussion, one hour; outside assignments, eight hours. Requisites: courses 211A, 211B, Biostatistics 100B, 406. Problems of health survey design and data collection; measurement issues in data analysis and interpretation; use of computer for analysis of large-scale survey data using various statistical techniques. Letter grading.


M216. Qualitative Research Methodology. (4) (Same as Anthropology M284.) Discussion, three hours; laboratory, one hour. Intensive seminar/course in qualitative research methodology. Emphasis on using qualitative methods and techniques in research and evaluation related to 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. Enforced requisites: Biostatistics 100A, 100B. Transformation of theoretical premises into data 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 multiple regression and logistic regression, multivariate analysis of variance and covariance. Use of computer in analysis. S/U or 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 four major status characteristics: age, ethnicity, gender, and social class, and their description of epidemiological patterns and discussion of social meaning of those four characteristics. Letter grading.

M222. Understanding Fertility: Theories and Methods. (4) (Same as Sociology M206.) Lecture, three hours. Preparation: formal or social demography course. Requisite: Biostatistics 100A. Application of demographic theories and methods to describe fertility, methods to measure proximate determinants of fertility, with emphasis on understanding key proximate determinants. For advanced students interested in population, demography of health, and fertility. Letter grading.

M223. Tobacco: Prevention, Use, and Public Policy. (4) (Same as Health Services 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 interventions, cessation interventions, anti-tobacco efforts in U.S., and international trends in tobacco use. Letter grading.


229. Policy and Public Health Approaches to Violence Prevention. (4) Lecture, four hours. How policies relate to violence and development of skills to transmit this knowledge. Examination of wide range of policies and their implications for reduction/increase in violence/violent injury. Letter grading.

230. Family and Sexual Violence. (4) Lecture, three hours; community, three to four hours. Examination of rape, incest, and spouse and elder abuse. Presentation of definitions, causes, outcomes of research on family and sexual violence, as well as response of social service, medical, and criminal justice systems. Letter grading.

231. Maternal and Child Nutrition. (4) Lecture, four hours. Nutrition of mothers, infants, and children in countries at various levels of socioeconomic development; measures for prevention and treatment of protein/calorie malnutrition; relationship between nutrition and mental development; impact of ecological, socioeconomic, and cultural factors on nutrition, nutrition education, and service. Letter grading.

232. Determinants of Health. (4) (Same as Health Services M242.) Lecture, three hours; discussion, one hour. Designed for graduate students. Critical analysis of models for what determines health and illness (biological, economic, social, and environmental determinants). Emphasis on the social and economic determinants of health and how they influence the health of populations and defined subgroups. Letter grading.

233. Hunger and Food Insecurity as Public Health Issues. (4) Lecture, three hours. Designed for graduate students. Multidisciplinary introduction at graduate level to epidemiology, physiology, and current state of preventive and therapeutic interventions for obesity in adults and children, including public health policy approaches to healthy nutrition and physical activity promotion. S/U or letter grading.

234. Obesity, Physical Activity, and Nutrition Seminar. (4) (Same as Health Services M255.) Seminar, three hours. Designed for graduate students. Multidisciplinary introduction at graduate level to epidemiology, physiology, and current state of preventive and therapeutic interventions for obesity in adults and children, including public health policy approaches to healthy nutrition and physical activity promotion. S/U or letter grading.

235. Managing Drug Abuse from Public Health Perspective. (4) Lecture, four hours. Exploration of numeraire areas of public health impacted by drug use; public health options for controlling associated problems; positive and problematic aspects of drug use in terms of costs and benefits; variety of information resources such as scientific literature, surveys, institutional databases, key indicators, key informants, and expert opinions; and use and application of specific decision-tools such as decision tree analyses, benefit-cost analyses, Delphi panels or other consensus-building approaches, and basic epidemic models when developing public health policies having to do with substance use and misuse. Letter grading.


238. Evolving Paradigms of Prevention: Interventions in Adolescence. (2 to 4) Lecture, three hours. Designed for graduate students. Introduction to organizing principles that underlie health assessment and intervention in adolescents populations (identity formation, access to care, knowledge/attitudes/behavior influences) and provide basis for understanding pivotal issues in health enhancement, morbidity, and mortality. Letter grading.

239. Race and Ethnicity as Concept in Practice and Research. (4) (Same as Asian American Studies M239.) Lecture, three hours. Integration of cross-cultural findings in healthcare with current American (U.S.) healthcare system paradigms to facilitate designing culturally based public health programs and train culturally competent practitioners. Letter grading.

M244. Advanced Seminar: Medical Anthropology. (2 to 4) (Same as Anthropology M230Q, Nursing M273, and Psychiatry M273.) Lecture, three hours. Limited to 15 students. Examination of interrelationships between society, culture, ecology, health, and illness. Bases for written critical analysis and discussion provided through key theoretical works. S/U or letter grading.


246. Women's Roles and Family Health. (4) Lecture, two hours; discussion, one hour. Rapidly changing roles of women throughout world are having important effects on women's own health and that of their families. Analysis of multidisciplinary research from both developed and industrialized countries to provide basis for in-depth discussion of programmatic and policy implications. Letter grading.

247. Population Change and Public Policy. (4) Lecture, four hours. Examination of international population change, population projection, and public health implications of demographic processes. Letter grading.
248. Women’s Mental Health. (4) Discussion, three hours. Designed for graduate students. Prevalence of psychological distress and psychiatric disorder among women, with emphasis on impact of social and cultural factors, including gender roles and socialization, stratification and inequality, work and family roles, diagnosis, help-seeking behavior, and treatment. Letter grading.

M249L. Ethical Issues in Public Health. (4) (Same as Health Services M249L) Lecture, four hours. Requires: Health Services 200A, 200B. Case conferences, based on real-life experience, focus on ethical issues in health services organization and management, including ethical issues related to conflict of interest, quality of care, health insurance selection, choice of drugs, reproductive rights, AIDS, and resource allocation. Letter grading.

M251. Human Resources and Economic Development. (4) (Same as Education M252C.) Lecture, four hours. Examination, in context of developing countries, of interactions among economic development, population growth, levels of health and nutritional status, and educational investments. S/U or letter grading.


M253. Advanced Topics in Health Services Research: Access to Care. (4) (Same as Health Services M253.) Lecture, three hours. Requires: courses 210, 270A, or 270B, or Health Services 237A, 237B, and 237C. Doctoral seminar designed to explore health services research regarding access to healthcare and policies to enhance access. Topics include conceptual frameworks, measurement issues, study designs, analytic approaches, and substantive findings and trends in access and access-related policies. Letter grading.

254. Intentional Disasters: War and Refugees. (2) Lecture, two hours. Recommended requisites: courses 211A, 211B, 295, Epidemiology 100, one survey course method course. Previous international experience strongly encouraged. Overview of intentional disasters, with focus on technically underdeveloped areas and consequent population migration. Principal focus on health consequences of these events and strategies to address health issues. Letter grading.

M255. Keeping Children Safe: Causes and Prevention of Pediatric Injuries. (2) (Same as Epidemiology M255.) Lecture, two hours. Injuries have been leading killer of children in U.S. for 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.

M256. Interdisciplinary Response to Infectious Disease Emergencies: Public Health Perspective. (4) (Formerly numbered 256.) Lecture; three hours; discussion, one hour. Designed to instill in professional students ideas of common emergency health problems and coordinated response, with specific attention to bioterrorism. Examination of tools to help students prevent, detect, and intervene in infectious disease emergencies. Interdisciplinary sessions also attended. Emphasis on tools of Disease Medicine, and Nursing during weeks two through five. Letter grading.

M257. Cooperative Interagency Management in Disasters. (4) Lecture, four hours. Requires: courses 211A, 211B, 295. OVERVIEW OF DISASTER MANAGEMENT. How different agencies work together to respond to impact of disasters on public’s health. Discussion of difficulties inherent in emergency management, as well as policy and program strategies. Letter grading.

M258. Cooperative Interagency Management in Disasters. (4) (Same as Anthropology M258 and Latin American Studies M258.) Lecture, three hours. Recommended requisites: courses 210, 211A, 211B, 211C, 237A, 237B, and 237C. Recommended preparation: course 132, bilingual English/Spanish skills. Examination of role of tradition health issues throughout 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.

265. Images of Aging and Illness. (4) Lecture, three hours. Designed for graduate students. Images of aged that students hold, images that serve various professional and commercial interests in society, and images aged themselves use to make sense out of their experiences. Letter grading.

270A-270B. Foundations of Community Health Sciences. (4-4) Lecture, four hours. Requires: course 210. Course 270A is required to 270B. Designed for doctoral students. In-depth analysis of theories, methods, and research on which community health sciences are based. Letter grading.


272. Social Epidemiology. (4) Lecture, two hours; discussion, one hour. Requires: Epidemiology 100. Relationship between sociological, cultural, and psychosocial factors in etiology, occurrence, and distribution of morbidity and mortality. Emphasis on lifestyles and other sociocultural factors associated with general susceptibility to disease and subsequent mortality. Letter grading.

273. Social Epidemiology of Chronic Disease. (4) Lecture, two hours; discussion, one hour. Requires: Epidemiology 100. Relationship between sociological, cultural, and psychosocial factors in etiology, occurrence, and distribution of chronic diseases. Topics include hypertension, coronary heart disease, and cancer. Emphasis on lifestyles and other sociocultural factors associated with chronic diseases. Letter grading.

M274. Health Professions. (4) (Same as Sociology M249B.) Lecture, three hours. Requires: course 210. Sociological examination of concepts “health” and “illness” and role of various health professionals, especially physicians. Attention to meaning of specialization and professional/client relationships within range of organizational settings. Letter grading.

M275. Health and Illness Behavior. (4) (Same as Sociology M249B.) Seminar, three hours. Designed for graduate students. Seminar discussion based on students’ experiences to explore biocultural contexts for health promotion as moral enterprise and consumerism, and preoccupation with body. S/U or letter grading.

276. Complementary and Alternative Medicine. (4) Lecture, three hours. Requires: course 100 or 210, Health Sciences 100. Analysis of use and acceptance of complementary and alternative medicine (CAM) among patients and providers. Core beliefs around CAM, relationship of CAM to spirituality, licensing and certification of CAM providers, relationship of CAM and conventional medicine, impact of CAM on client identity. Letter grading.

277. Advanced Community Health Education. (4) Lecture, two hours; discussion, two hours. Requires: course 210. Before planning educational components of health program, one must assess behaviors and factors influencing health problem. Conceptual, theoretical, and evaluative skills developed and applied in constructing community-based educational program. Letter grading.

M278. Building Stronger Communities for Los Angeles. (4) (Same as Public Policy M273.) Lecture, four hours. Designed for graduate students. Introduc- tory survey course on family-centered community building (FCCB) to introduce graduate students as well as community practitioners to range of issues, issues, and frameworks to help build stronger, more cohesive, and family-centered communities. Letter grading.

M280. Drugs of Abuse from Neurobiology to Policy and Education. (4) (Same as Neuroscience CM277.) Lecture, four hours. Enforced requisite: Neu- roscience M101A. Course ranges from synapse to society, provides intensive exposure to the current neuroscientific basis for understanding substance abuse and blends that material with relevant topics such as epidemiology, co-occurring disorders, treatment options, prevention, and public policies, with emphasis on communication of course materials to general public. Letter grading.

281. Capstone Seminar: Health Promotion and Education. (4) Seminar, 90 minutes; discussion, 90 minutes. Requires: course 210. Current problems and findings in health promotion and education (e.g., nutrition, family health, AIDS/HIV, minority health); learning from presentations and critical discussions of master’s project reports completed under faculty supervision. Letter grading.


284. Sociocultural Aspects of Mental Health. (4) Seminar, three hours. Designed for graduate students. Examination of how society shapes mental health of its members and lives of those who have been identified as mentally ill. Group differences (e.g., gender, ethnicity) in disorder and how it is socially constructed. Letter grading.

285. Aging, Health, and Society. (4) Lecture, three hours; discussion, one hour. General introduction to major social issues affecting health of elderly in America. Leading gerontological theories and major issues that affect aged, showing how these theories and issues influence health status, health promotion, and illness among elderly. S/U or letter grading.
286. Doctoral Roundtable in Community Health Sciences. (4) Seminar, two hours. Designed for departmental doctoral students who must enroll every term until they are advanced to candidacy. Interactive seminar with focus on research process and social mechanisms in science. May be repeated for credit. S/U or letter grading.

M287. Politics of Health Policy. (4) (Same as Health Services M287.) Lecture, three hours; discussion, one hour. Requisites: course 210, or Health Services 200A and 200B. Examination of politics of health policy, effects of political structures and institutions; economic and social factors; interest groups, classes, and social movements; media and public opinion; and other factors. Letter grading.

288. Health Communication in Popular Media. (4) Lecture, three hours; discussion, one hour. Requisites: course 210 or prior social sciences courses. Designed for graduate public health students. Topics include how popular media portray health issues, how people use these media, and impact of these media on health behaviors and perceptions. Strategies to influence or understand media, such as media advocacy, health communication, and entertainment education. Case examples include both domestic and global health issues. Media content analysis, audience research, and assessment of media effects. Letter grading.

289. Drug Abuse in Pregnancy: Special Focus on Adolescents and Utilizing Secondary Data Sources. (4) Lecture, three hours; clinical placement. Designed for graduate students. Multidisciplinary graduate seminar combining didactic material on substance abuse in pregnancy, participation in ongoing research, and clinical experience in on- and off-campus settings. Medical, social, economic, and legal issues affecting pregnant substance abusers. Letter grading.

290. Race, Class, Culture, and Aging. (4) Lecture, three hours; discussion, one hour. Experience of aging for African American, Latino, and Asian elderly examined in context of their families, communities, and nation. Exploration of cultural and structural influences on health and lived experiences of those elders. Letter grading.

291. Health Policy and Age. (4) Lecture, three hours; discussion, one hour. Examination of political, economic, and social forces that shape health policy for aged, identifying failings in those policies within framework of broader health policy problems. Letter grading.

292. Communication and Media Development in Health Promotion/Education. (4) Lecture, three hours; field practice, one hour. Requisites: course 210 or prior social sciences courses. Design of health communication materials using digital media that integrate practice and theory. Letter grading.

293. Social and Behavioral Research in AIDS: Roundtable Discussion. (2 to 4) Discussion, two hours; individual consultation, two hours. Review and discussion of research programs directed toward identification of psychosocial, biobehavioral, environmental, and community factors related to prevention and control of AIDS/HIV. Letter grading.

M294. Social and Behavioral Factors of HIV/AIDS: Global Perspective. (4) (Same as Psychiatry M288.) Lecture, four hours. Requisites: course 100 and Epidemiology 100, or prior social sciences courses. Overview of social and behavioral factors that influence both transmission and prevention of HIV/AIDS throughout world. Letter grading.


296. Advanced Research Topics in Community Health Sciences. (2 to 4) Discussion, two to four hours. Topics for courses 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 apprentice in active field. 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 in degree.

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 them, ethics in measurement of sensitive topics, review of current best practices in measuring important public health content areas. Letter grading.

4M06. 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 Services 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.

M418. Rapid EpiSAS in Developing Countries. (4) (Same as Epidemiology M418.) Lecture, four hours. Requisites: Biostatistics 100A, Epidemiology 100 and 200. 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.

M420. Children with Special Healthcare Needs: Systems Perspective. (4) (Same as Health Services M420 and Social Welfare M290L.) Lecture, three hours; fieldwork, one hour. Examination and evaluation of principles, policies, and practices that have evolved to identify, assess, and meet special needs of infants, children, and adolescents with developmental disabilities or chronic illness and their families. Letter grading.

425. Child Advocacy: Skills for Effective Action. (4) Seminar, three hours; fieldwork, one hour. Designed for graduate students. Use of case method approach to involve students both in classroom discussion of content and practice of skills, 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, four hours. Preparation: four hours. 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/deliverers of comprehensive services and factors that influence development of appropriate school service models. Letter grading.

427. Reproductive Health in Sub-Saharan Africa. (4) Lecture, four hours. Requisites: prior social sciences courses. Focus on specific leadership competencies that are or should be employed by organizations effective in shaping maternal and child health programs and policies (or any population-level policies and programs). Leaders from CBOs in Los Angeles meet with students, comment on their practicum experiences, and underscore community leadership concepts demonstrated by those CBOs. S/U grading.

432. Perinatal Healthcare: Principles, Programs, and Policies. (4) Lecture, three hours; discussion, one hour. Comprehensive examination of perinatal healthcare, including perinatal epidemiology, outcome measurement, public programs, controversies surrounding new technology, regionalization, organization of services at federal, state, and county levels, and medical/legal issues. S/U or letter grading.

433. Reproductive Health: Demographic Applications. (4) Lecture, four hours. Introductory aspects of population dynamics; reproductive biology (male and female); contraceptive methods; fertility-related behaviors and STDs; methods to measure contraceptive (life tables) and program (evaluation) effectiveness. Letter grading.


435. Seminar: Advanced Issues in Women’s Health. (4) Seminar, three hours. Preparation: at least one prior women’s health course, one to two biostatistics courses, one research methods course. Provides more advanced and in-depth understanding of ways in which scientists “know” and considerations of women’s place in scientific discourse. Examination of series of case studies as starting point for discussion. Letter grading.


438. 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. (2) Lecture, two hours. Designed for graduate students. Exploration of community and environmental health and health services issues that are present along U.S.-Mexico and coastal California borders. Integrated within public health framework are issues and mitigation of national security and disaster risks and hazards. Letter grading.

441. Planning and Evaluation of Global Health Programs. (4) Lecture, four hours. Theory, guidelines, and team exercise for planning community health/health promotion 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.


443. Anthropometric and Dietary Aspects of Nutritional Assessment. (4) Lecture, two hours; laboratory, two hours. Requisite: course 442. Practicum: skills in anthropometric and dietary assessment, including selection of appropriate methods, data gathering and handling, and analysis and presentation. Letter grading.

444. Nutrition Education and Training: Third World Considerations. (4) Lecture, two hours; discussion, one hour; student participation, one hour. Requisite: course 434A. Problems and priorities in nutrition education and training for families and health workers in Third World countries, including new concepts in primary healthcare services, mass media, communications, and governmental and international interventions. S/U or letter grading.

445. 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 variation of region to provide background for discussion of trends and patterns of health and nutritional status of population in area. Letter grading.

446. Nutrition Policies and Programs: Domestic and International. (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.

447. Nutrition and Chronic Disease. (4) Lecture, four hours. Preparation: one graduate or undergraduate course each in chemistry or biochemistry, physiology, and nutritional sciences, 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.

448. Post-Disaster Community Health. (4) Lecture, four hours. Requisite: course 295. Examination of how public health research and practices can be combined to address post-disaster community health needs. Topics include: disaster-related disease problems, data collection strategies, and service delivery approaches in post-disaster environment. Letter grading.

449. Nutrition in 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.

450. Introduction to Occupational and Environmental Health Education. (2 or 4) (Same as Urban Planning 470) Lecture, three hours. Preparation: at least three social sciences courses. Designed to provide students with understanding of problem areas of occupational and environmental health and health education interventions that can be applied. Letter grading.


452. Practicum: Community Health Sciences. (4) Discussion, two hours; fieldwork, up to 20 hours. Requisites: courses 210, 211A, 211B. Understanding of professional practice in health-related organizations. Letter grading.

453. 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 support for health promotion in multicultural and distressed communities (e.g., southern Los Angeles). Letter grading.

454. 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. Environmen tal, product safety, food-borne and infectious diseases, disasters, and bioterrorism communications. Letter grading.

455. Resource Development for Community Health Programs. (4) Lecture, three hours; fieldwork, one hour. Requisite: for graduate students. Overview of course and resource development for public health and community-based programs. Lectures and workshops include developing grant proposals, researching funding sources, evaluating proposals, developing volunteer and in-kind resources, and implementing capital campaigns. Letter grading.


457. Teaching in Public Health. (4) Lecture, three hours. Preparation: a degree from School of Public Health doctoral students. Preparation of advanced doctoral students for teaching responsibilities as part of university career. Although classroom teaching to be emphasized, information and ideas can be applied to other educational and training settings. S/U grading.

458. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. No more than 8 units may be applied toward master's degree minimum total course requirement; may not be applied toward minimum graduate course requirement. S/U grading.

459. 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 grading.

460. 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.

COMPARATIVE LITERATURE

College of Letters and Science

UCLA

350 Humanities Building

Box 951536

Los Angeles, CA 90095-1536

(310) 825-7650

fax: (310) 794-5997

http://www.complit.ucla.edu

Ali Behdad, Ph.D, Chair

Professors

Ali Behdad, Ph.D

Massimo Ciavolella, Ph.D

Teshome H. Gabriel, Ph.D

Stathis Gourgouris, Ph.D

Michael H. Hein, Ph.D

Andrew R. Hewitt, Ph.D

Katherine C. King, Ph.D

Kathleen L. Komar, Ph.D

Ersin Kristal, Ph.D

Francoise Lionnet, Ph.D

Dorie M. McClure, Ph.D

Saree Makdisi, Ph.D

Jennifer A. Sharpe, Ph.D

Ross P. Shideler, Ph.D

Shu-mei Shih, Ph.D

Dominic R. Thomas, Ph.D

Professors Emeriti

Arnold J. Band, Ph.D

Samuel Weber, Ph.D

Associate Professors

Eleanor K. Kaufman, Ph.D

Aamir R. Mufti, Ph.D

Andrew R. Hewitt, Ph.D

Kenneth Reinhard, Ph.D

Assistant Professors

Michelle A. Clayton, Ph.D

Nouri Gana, Ph.D

Gil Z. Hochberg, 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...
Required transfer selection for admission.

Preparation for the Major

Comparative Literature B.A.

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an 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 world or English literature survey courses, and two years of one foreign language.

Undergraduate Study

Comparative Literature B.A.

Preparation for the Major

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an 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 world or English literature survey courses, and two years of one foreign language.

Undergraduate Study

Comparative Literature B.A.

Preparation for the Major

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an 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 world or English literature survey courses, and two years of one foreign language.

Undergraduate Study

Comparative Literature B.A.

Preparation for the Major

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an 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 world or English literature survey courses, and two years of one foreign language.

Undergraduate Study

Comparative Literature B.A.

Preparation for the Major

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an 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 world or English literature survey courses, and two years of one foreign language.

Undergraduate Study

Comparative Literature B.A.

Preparation for the Major

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an 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 world or English literature survey courses, and two years of one foreign language.

Undergraduate Study

Comparative Literature B.A.

Preparation for the Major

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an 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 world or English literature survey courses, and two years of one foreign language.

Undergraduate Study

Comparative Literature B.A.

Preparation for the Major

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an 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 world or English literature survey courses, and two years of one foreign language.

Undergraduate Study

Comparative Literature B.A.

Preparation for the Major

Required: Two courses from the Comparative Literature 1 or 2 series or comparable lower division courses in other departments; completion of the College Writing requirement; literary proficiency in at least one language other than English, to be demonstrated by successful completion of (1) two years of the college language sequence or its equivalent or (2) an upper division literature course in the original language.
Comparative Literature / 243

2CW. Survey of Literature: Age of Enlightenment to 20th Century. (5) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1C or 4CW. Study of 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, Flaubert, Ibsen, Strindberg, M. Shelley, Dosto­eysky, Kafka, James Joyce, Garcia Marquez, and Jamaican Jerwood. Satisfies Writing II requirement. Letter grading.

2DW. Survey of Literature: Great Books from World at Large. (5) Lecture, two hours; discussion, two hours: for credit to students with credit for course 1D or 4DW. Study of major literary texts usually overlooked in courses that focus only on canon of Western litera­ture, with emphasis on literary analysis and expository writing. Texts from at least three of following areas read in any given term: African, Caribbean, East Asian, Latin American, and Middle Eastern literature. Satisfies Writing II requirement. Letter grading.

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 of selected texts from Middle Ages to 17th century, with emphasis on literary analysis and expository writing. Texts may include works and authors such as Chaucer, Dante's Divine Comedy, Cervantes' Don Quixote, Shakespeare, 1001 Nights, Christine de Pi­zan, Pope Vull, Molécque, and Racine. Satisfies Writing II requirement. Letter grading.

4CW. 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 1B or 2BW. Study and discussion 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, M. Shelley, Flaubert, Ibsen, Strindberg, Dosto­eysky, Gogol, Kafka, Joyce, Beck­ett, L. Hughes, and Garcia Marquez. Satisfies Writing II requirement. Letter grading.

4DW. Literature and Writing: Great Books from World at Large. (5) Discussion, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1D or 2BW. Study and discussion of major literary texts usually overlooked in courses that focus only on canon of Western litera­ture, with emphasis on literary analysis and expository writing. Texts from at least three of following areas read in any given term: African, Caribbean, East Asian, Latin American, and Middle Eastern literature. Texts may include works by authors such as Ngugi, Desai, Kinczaid, Emchész, El Saadawi, Achebe, Pak, Can Xue, Neruda, and Rushdie. Satisfies Writing II requirement. Letter grading.

Upper Division Courses

100. Introduction to Comparative Literature: History, Theory, and Method. (5) Lecture, four hours. Preparation: satisfaction of Entry­Level Writing and College Writing requirements. Re­quires: two courses from Comparative Literature 1 or 2 series or English 10 series or Spanish 60 series or French 60 series, etc. Seminar-style introduction to discipline of com­parative literature presented through series of texts il­lustrative of its formation and practice. Letter grading.

101. Hebrew Literature in English — Literary Traditions of Ancient Israel: Bible and Apocrypha. (4) (Same as Jewish Studies M150A.) Lecture, three hours. Study of literary culture of ancient Israel through examination of principal compositional strate­gies of Hebrew Bible and Apocrypha (read in transla­tion). P/NP or letter grading.

102. Classical Tradition: Epic. (4) Seminar, three hours. Designed for upper division literature majors. Analysis of Iliad, Odyssey, Aeneid, Gerusalemme Lib­erata, and Paradise Lost both in relation to their con­temporary societies and to literary traditions. Empha­sises how poets build on work of their predecessors. P/NP or letter grading.

103. Colonial Encounters. (5) Lecture, four hours. Designed for majors in Comparative Literature. Study of texts that explore literary, cultural, and historical connections to national history or nation language or narrative? Readings from James Joyce, John Ban­ville, James, James, T.S. Eliot, Paul Valéry, R.M. Rilke, Gunnar Ekelöf, and Wallace Stevens. May be concurrently scheduled with course C253. Undergraduate students may read all works in translation. P/NP or letter grading.


C152. Symbolism and Decadence. (5) Seminar, four hours. Designed for upper division literature majors. History of symbolistic 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. Undergraduate students may read all works in translated French texts in translation. P/NP or letter grading.

C153. Post-Symbolist Poetry and Poetics. (5) Seminar, four hours. Designed for upper division liter­ature majors. Study of 20th-century literary movements re­lated to them during first half of 20th century. Texts may include poets such as W.B. Yeats, Ezra Pound, T.S. Eliot, Paul Valéry, R.M. Rilke, Gunnar Ekelöf, and Wallace Stevens. May be concurrently scheduled with course C253. Undergraduate students may read all works in translation. P/NP or letter grading.

C155. Comparative Literature / 243


C156. Comparative Literature / 243

155. Memory and Forgetting. (5) Seminar, four hours. Designed for upper division literature majors. Time and again in modern literature, corpses become con­ductors of traumatic events for readers that fiction cannot bring home. Readings include works by writers from both hemispheres and ex­amination of consequences of these preliminary translations for later development of poetry on both sides of continental divide. Concurrently scheduled with course C255. P/NP or letter grading.

C157. Memory and Forgetting. (5) Seminar, four hours. Reading of theoretical accounts of nature of traumatic memory and consideration of relationship between memory and history, meanings of both writing and reading about traumatic events, and discussion of ethical (personal and communal) commitment to memory. Reading of memoirs of survivors and questioning of importance of authenticity in regard to representations of past, is memory necessarily based on actual past? How is our testimony in mainte­nance of ethical (personal and communal) memory? How is our testimony judged? What are criteria on which authenticity is claimed? Concurrently scheduled with course C257. P/NP or letter grading.

158. Colonial Encounters. (4) Seminar, three hours. Discussion of how Western textual system restricts cultures of colonized peoples to encounter with Euro­peans. As means of understanding limits to European frame of reference, reading of English literary works alongside their postcolonial counterparts. Investiga­tion of how reversal of perspective affects telling of tale. P/NP or letter grading.
158. Exilic Pleasures: Memory, Writing, and Belonging in Contemporary Thought and Writings. (B) Lecture, four hours. Engagement of theoretical and literary texts with experience of living in exile and questioning of political and poetic possibilities and limitations that this condition brings about. Exploration of relationships between political expression, history, memory, writing, and collective identification. Clarification of difference between "exile by choice" and "forced exile," proceeding to distinguish between exile, estrangement, and alienation. Examination of "exile by choice" in terms of (modernist) literary trope — and sociohistorical condition of living in exile, asking what does it mean to think about exile in comparative terms? P/NP or letter grading.

C160. Literature and Visual Arts. (4) Lecture, three hours. Designed for majors. Knowledge of art history valuable but not required. Assuming that literature and visual arts are in some degree expressions of cultural and philosophical patterns of eras, study of relationships between writers and movements in painting, architecture, and sculpture. Interdisciplinary investigation of similarities and differences between plastic and verbal arts in comparative study. May be repeated for credit with instructor and/or topic change. May be concurrently scheduled with course C260. Undergraduate students read all works in translation. P/NP or letter grading.

C161. Fiction and History. (4) Seminar, three hours. Designed for upper division majors. Analysis of use of historical events, situations, and characters in literary works of Renaissance and/or modern period. Texts and individual assignments range from Renaissance historical intertexts (Italian humanists, Machiavelli) to 19th- and 20th-century novels by authors such as Stendhal, Verga, Tomasi di Lampedusa, Proust, and Kundera. Use of fictional methods by historians. Emphasis on relationship of fiction to historical truth and on political influences authors’ choice and use of historical material. May be concurrently scheduled with course C261. P/NP or letter grading.

C163. Crisis in Modern Literature. (5) Seminar, three hours. Designed for upper division majors. Study of modern European and American works that are concerned both in subject matter and artistic methods with "otherness" and "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 C263. Undergraduate students may read all works in translation. P/NP or letter grading.

C164. Modern European Novel. (5) Seminar, three hours. Designed for upper division literature majors. Study of modern European and American novels of 19th to 21st century. Study 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 C264. Undergraduate students may read all works in translation but are encouraged to read in original language whenever possible. P/NP or letter grading.

C165. Holocaust in Literature. (4) Same as Jewish Studies M167.) Lecture, three hours. Requisite: History M182D or 183A or 183B. 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.

C166. Modern Jewish Literature in English: Diaspora Literature. (4) Same as Jewish Studies M151A.) Lecture, three hours. 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 aspects of each work. P/NP or letter grading.


C169. Continental African Authors. (4) Lecture, three hours. Requisite: one course from 1A, 1B, 1C, 2AW, 2BW, 2CW, or English Composition 3 or 3H. Introduction to new set of African authors and attempt to discern similarities or differences they may have with major authors such as Achebe, Ngugi, Armatu, Soyinka, etc. P/NP or letter grading.

C170. Alternating Traditions: In Search of Female Voices in Contemporary Literature. (5) Same as Women’s Studies C170.) Seminar, three hours. Described for upper division literature majors. Investigation of narrative texts by contemporary French, German, English, American, Spanish, American, African, and Asian women writers from cross-cultural perspective. Common themes, problems, and techniques. May be concurrently scheduled with course C270. Undergraduate students 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 defined in three different 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, Fuentes, Grass, Boll, and Calvino. Concurrently scheduled with course C272. Undergraduate students read all works in translation. P/NP or letter grading.

C173. Postmodernism and Third World. (4) Seminar, three hours. Exploration of intersection 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.

C175. 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.


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 variety in Indian culture by such figures as Rabindranath Tagore, Satyajit Ray, Faiz Ahmed Faiz, and U.R. Ananth Murthy, including novels, short stories, poetry, films, music, and works in cultural criticism and historical scholarship. Central and defining issue for 20th-century Indian culture is experience of British colonial rule and massive cultural and material changes that it demanded. Exploration of manner in which literature and culture have developed in interaction with powerful social forces, such as struggle for national independence from Britain under leaders like Mahatma Gandhi and exploration of Indian diaspora. Concurrently scheduled with course C278. P/NP or letter grading.

C187. Reading across Culture. (5) Seminar, three hours. What is it we do when we try to understand works, histories, genres, and beliefs not our own? Do we understand something foreign to us by immersing ourselves in it or by standing apart? Does ability to understand something foreign imply taking universal standpoint? Can we make judgments about beliefs other than our own? Questions of cultural interpretation have long history in both Western and non-Western cultures. Discussion of history of questions about cross-cultural interpretation and comparative interpretation of cultures in both comparative literature and cultural anthropology. Reading of some very complex and influential works by such writers as Claude Levi-Strauss, Amitav Ghosh, James Clifford, Edward Said, Gayatri Spivak, and Erich Auerbach. Concurrently scheduled with course C287. P/NP or letter grading.

C200. Research Colloquia in Comparative Literature. (2 to 4) Tutorial, 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 or letter grading.

C202. Individual Studies in Comparative Literature. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Study and discussion of limited periods 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 term. May be repeated for credit with topic change. P/NP or letter grading.

C203. 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.

C204. 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 grade only.

C205. 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 chair. Individual contract required. P/NP or letter grading.
Graduate Courses

200A. Theory of Comparative Literature. (6) Seminar, three hours. Study of theory of literature, with emphasis on genealogy of theoretical problems. S/U or letter grading.

200B. Methodology of Comparative Literature. (6) Seminar, three hours. Requisite: course 200A. Study of methodology of comparative literature, with emphasis on its history. S/U or letter grading.

202. Classical Tradition: Epic, Tragedy, or Comedy. (4) Seminar, three hours. Preparation: reading knowledge of Greek, Latin, or Italian. Analysis of Greek and Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

C205. Comic Vision. (4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Literary masterpieces, both dramatic and nondramatic, selected to demonstrate varieties of comic expression. May be concurrently scheduled with course C105. Graduate students required to prepare papers based on texts read in original languages and to meet as group one additional hour each week. S/U or letter grading.

206. Archetypal Heroes in Literature. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Survey and analysis of function and appearance of such archetypal heroes as Achilles, Ulysses, Prometheus, Oedipus, and Orpheus in literature from antiquity to modern period. S/U or letter grading.

210. Comparative Studies in Autobiography. (5) Seminar, three hours. Limited to graduate students. Introduction to theories of autobiography and subjectivity and postcolonial autobiography in literature in French and English and across centuries. Topics include early modern approaches to self-writing, Rousseau and emergence of modern self, women’s autobiog- raphy, postcolonial autobiography, cultural studies and turn to personal, fictions of self-representation, serial autobiography, and virtual selves. Theorists may include Georges Gurdon, Philippe Lejeune, Paul de Man, Jacques Derrida, Helene Cixous, Michel Foucault, Pierre Bourdieu, and Toril Moi. S/U or letter grading.

C222. Renaissance Drama. (4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. An introduction to subject matter and types of plays in Renaissance, with consideration of historical and literary influences on plays. Readings include works of such dramatists as Tasso, Machia- velli, Lopez de Vega, Racine, Jonson, Shakespeare. May be concurrently scheduled with course C122. Graduate students required to prepare papers based on texts read in original languages and to meet as group one additional hour each week. S/U or letter grading.

C252. Symbolism and Decadence. (5) Seminar, four hours. Preparation: reading knowledge of French. Study of symbolist and decadent movements in 19th- and 20th-century English and French poetry and prose, including authors such as Baudelaire, Rimbaud, Verlaine, Mallarmé, Wilde, Yeats, and Eliot. May be simultaneously scheduled with course C152. Graduate students required to prepare papers based on texts read in original languages and may meet as group one additional hour each week. S/U or letter grading.

C255. Hemispheric Exchanges. (5) Lecture, three hours. In “Reading North by South,” Neil Larsen claims that North American interest in Latin American Boom literature was of sinister intent, being large product of U.S. Cold War politics, investing in fiction that could produce images of areas ripe for develop- ment. From poetry perspective, dynamic was quite different. In 1930s, North American poets became in- volved in labor of love, reading, circulating, and trans- lating recent or contemporaneous poetry by their counterparts to south, producing lingua franca with unexplored consequences for poetry north and south of border. Study of poetry translations by writers from both hemispheres and examination of consequences of these preliminary translations for later development of poetry on both sides of bi-nationality. May be concurrently scheduled with course C155. Graduate stu- dents may meet as group one additional hour each week. S/U or letter grading.

C256. Fantastic Fantasies. (4) Seminar, three hours. Time and again in modern literature, corpuses become conduits or catalysts for revelation. What are ghosts that fiction frequently cannot put to rest, and what is their connection to national history or nation language or narrative? Readings from James Joyce, John Banville, Henry James, Toni Morrison, Adolfo Bloy Casa- res, Juan Carlos Onetti, Juan Rulfo, and Carlos Fuente- s. Preparation: reading knowledge of one appropriate foreign language. Designed for graduate students. May be concurrently scheduled with course C156. Graduate students have additional meetings and theoretical readings by Ben- jar, Frenes, Delfina, Rabate, Ricketts, and Caruth. S/U or letter grading.

C257. Memory and Forgetting. (5) Seminar, four hours. Reading of theoretical accounts of nature of traumatic memory and consideration of relationship between memory and history, meanings of both writ- ing and reading about traumatic events, and discus- sion of ethical (personal and communal) commitment to memory. Reading of memoirs of survivors and questions of lethal individualism toward representations of past. Is memory necessarily based on actual past? What is role of testimony in mainte- nance of collective memory? How is value of testimo- ny judged? What are criteria on which authenticity is claimed? Concurrently scheduled with course C157. Graduate students required to give 20-minute presen- tation as basis for seminar paper. S/U or letter grading.

C260. Literature and Visual Arts. (4) Lecture, three hours. Knowledge of art history valuable but not re- quired. Assuming that literature and visual arts are in some sense co-existent, and that historical and philo- sophical patterns of eras, study of relationships between writers and movements in painting, architecture, and sculpture. Interdisciplinary investigation of similarities and differences between plastic and verbal arts. Artistic, comparative study. May be repeated for credit with in- structor and/or topic change. May be concurrently scheduled with course C160. Graduate students re- quired to read works in original languages. S/U or letter grading.

C261. Fiction and History. (3) Seminar, three hours. Analysis of use of historical events, situations, and characters in literary works of Renaissance and/or modern period. Investigation of range from Renaissance historical narratives (Italian humanists, Machiavelli) to 19th- and 20th-century novels by authors such as Stendhal, Verga, Tomasi di Lampedusa, Carpenter, and Kundura. Use of fictional methods by historians. Emphasis on how aesthetic, ideological, and political influences influence authors’ choice and use of historical material. May be concur- rently scheduled with course C161. Graduate stu- dents required to prepare papers based on texts read in original languages. S/U or letter grading.

C263. Crisis of Consciousness in Modern Litera- ture. (5) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Study of modern European 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, Eliot, Joyce, Sartre, and Pynchon. May be concurrently scheduled with course C163. Graduate students re- quired to prepare papers based on texts read in origin- al languages and 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 Euro- pean 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 develop- ment of themes such as shifting identity, gender conflicts, change versus stability, formal experimenta- tion, and self-consciousness in narrative. May be con- currently scheduled with course C164. Graduate stu- dents 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) Semi- nar, three hours. Preparation: knowledge of one ap- propriate foreign language. Examination of narrative texts by contemporary French, German, English, American, Spanish American, African, and Asian women writers from cross-cultural perspective. Common themes, problems, and techniques. May be concurrently scheduled with course CM170. Graduate students re- quired to prepare papers based on texts read in original languages whenever possible. S/U or letter grading.

C270. Alternate Traditions: In Search of Female Voices in Contemporary Literature. (5) (Same as Women’s Studies CM270.) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Examination of archetypal female figures in classical/traditional literatures and their re- currence in modern American, Anglo-Ameri- canian, Asian American, European, Native American, and Spanish-American literatures. Particular empha- sis on position of women in cultures and ideology of authors. S/U or letter grading.

C271. Imaginary Women. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Study of modern European novels. Investigation of intertextual relations between writing and photography in American and Euro- pean contexts. Study rests on premise that photo- graphic image public domain formed by writing and dis- course and that, in turn, some forms of writing are framed by photographic modes of representation. S/U or letter grading.

C272. Postmodernism and Third World. (4) Semi- nar, three hours. Preparation: reading knowledge of one appropriate foreign language. Study of postmodern novel as it de- veloped out of modernism. Postmodernism defined in three different 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, Fuentes, Grass, Böll, and Calvino. Concurrently scheduled with course C172. Graduate students required to meet as group one ad- ditional hour each week. S/U or letter grading.

C273. Postmodernism and Third World. (4) Semi- nar, three hours. Preparation: reading knowledge of one appropriate foreign language. Exploration of in- tersection 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 C173. S/U or letter grading.

Comparative Literature / 245
246 / Computational and Systems Biology

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.

275. 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 representations, 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.


C278. 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 cultural criticism and historical scholarship. Central and defining issue for 20th-century Indian culture is experience of British colonial rule and massive cultural and material changes that accompanied it. Exploration of manner in which literature and culture have developed in interaction with powerful social forces, such as struggle for national independence from Britain 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 by exploration of manner in which literature and culture have developed in interaction with powerful social forces, such as struggle for national independence from Britain under leaders like Mahatma Gandhi and expansion of Indian diaspora. Concurrently scheduled with course C178. S/U grading.

280. Latin American Literature in Comparative Contexts. (4) Seminar, three hours. Preparation: reading knowledge of one foreign language. In-depth study of one topic of Latin American literature in comparative context. May be repeated for credit. S/U or letter grading.

284. Theories of Translation. (4) Seminar, three hours. Examination of 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.


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. How do they advance their knowledge of language to stage where they can use it more effectively in all aspects of their research, as well as take advantage of translation techniques they have learned. S/U or letter grading.

287. Reading across Culture. (5) Seminar, three hours. What is it we do when we try to understand words, habits, gestures, and beliefs not our own? Do we understand something foreign to us by immersing ourselves in it or by stepping 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 history in both Western and non-Western cultures. Discussion of history of questions about cross-cultural interpretation and comparative interpretation of cultures in both comparative literature and cultural anthropology. Reading of some very complex and influential works by such writers as Claude Lévi-Strauss, Arimatsu Ghosh, James Clifford, Edward Said, Gayatri Spivak, and Erich Auerbach. Concurrently scheduled with course C187. S/U or letter grading.

289. Theory of Film and Literature. (5) Seminar, three hours; film screening, two hours. Study of redefinition and aims of theories of film and literature. Approach to theory of film writer and critic advance their knowledge of language to stage where they can use it more effectively in all aspects of their research, as well as take advantage of translation techniques they have learned. S/U or letter grading.


292. Theories of Empire. (4) Seminar, three hours. History of theorization 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.

299. 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.


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

Interdepartmental Program

College of Letters and Science

UCLA
4436 Boelter Hall
Box 951596
Los Angeles, CA 90095-1596
(310) 825-7482
http://www.cs.ucla.edu/C&S/COMPUTATIONAL_AND_SYSTEMS BIOLOGY

Joseph J. DiStefano III, Ph.D., Chair
Elliot M. Landaw, M.D., Ph.D., Vice Chair

Faculty Advisory Committee
Thomas Chou, Ph.D. (Biomathematics, Mathematics)
Joseph J. DiStefano III, Ph.D. (Computer Science, Medicine)
Jack W. Judy, Ph.D. (Electrical Engineering)
Elliot M. Landaw, M.D., Ph.D. (Biomathematics)
Christopher J. Lee, Ph.D. (Chemistry and Biochemistry)
Matteo Pellegatti, Ph.D. (Molecular, Cell, and Developmental Biology)
Marc A. Suchard, M.D., Ph.D. (Biomathematics, Human Genetics)

Scope and Objectives

The major in Computational and Systems Biology is designed primarily for highly motivated undergraduate students interested in interdisci-
disciplinary 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 psychology and computing. The major itself provides foundations in mathematical modeling, information processing, and control and system analysis, with an emphasis on quantitative ideas and methodologies. Mathematical and other analytical skills are essential in the major.

Computational and Systems Biology majors have several options for in-depth studies: a coherent integration of courses selected from one of five designated concentrations in bioinformatics, biomedical systems, computer systems, neurosystems, or systems biology, or from the broader concentration areas of life sciences, behavioral sciences, or engineering and applied mathematical sciences, or an integration of courses from these areas. 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 medicine, public health, management, dentistry, and engineering.

Undergraduate Study

Computational and Systems Biology B.S.

Precomputational and Systems Biology Major

Students entering UCLA directly from high school and first-term transfer students who declare the Precomputational and Systems Biology major 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 to declare the premajor. All students are then identified as premajors until they (1) satisfy the preparation for the major requirements and (2) file a petition to declare the Computational and Systems Biology major.

Preparation for the Major

Required: A minimum of 81 to 83 units (depending on the computer programming course and physics sequence selected), including Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL; Computer Science 31 or Program in Computing 10A; Life Sciences 2, 3, 4; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 115A; Physics 1A, 1B, and 1C (or Electrical Engineering 1), or 1AH, 1BH, and 1CH. For the bioinformatics concentration, Computer Science 32 and 180, or Program in Computing 10B, 10C, and 60 are also required; for the computer systems concentration, Computer Science 32, 33, and 180, or Program in Computing 10B, 10C, 30, and 60 are also required.

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 all preparation for the major courses).

The major consists of a methodology core of six courses (23 units), a concentration of six to seven upper division courses (24 or 28 units minimum), and one one-course research and communication requirement (4 units). Each course in the major must be passed with a grade of C or better.

Methodology Core

Required: Four subject areas as follows:

1. One overview course: Computational and Systems Biology M186A
2. Two courses in probability and statistics 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
3. Two courses in signals, systems, and control systems: (a) Electrical Engineering 102 and (b) Electrical Engineering 141 or Mechanical and Aerospace Engineering 171A
4. One course in biomodeling and computer simulation: Computational and Systems Biology M186B

Concentrations

Required: Six to seven upper division courses (24 or 28 units minimum), depending on the concentration selected. An approved list of courses for each concentration is available in the program office and at http://www.cs.ucla.edu/C&SB/.

For a concentration in the broader areas of life sciences, behavioral sciences, or engineering and applied mathematical sciences, or an integration of courses from these areas, seven courses must be selected from the approved lists in consultation with a faculty mentor and approved by the program chair.

For the bioinformatics concentration, six courses must be selected from the bioinformatics approved list in consultation with a faculty mentor and approved by the program chair.

For the biomedical systems concentration, seven courses must be selected from the biomedical systems approved list in consultation with a faculty mentor and approved by the program chair.

For the computer systems concentration, six courses must be selected from the computer systems approved list in consultation with a faculty mentor and approved by the program chair.

For the systems biology concentration, Neuroscience M101A, M101B, 102, and at least 14 units from the systems biology approved list selected in consultation with a faculty mentor and approved by the program chair are required.

For the systems biology concentration, Molecular, Cell, and Developmental Biology 100, 144, Biomedical Engineering CM102/CM103 or Ecology and Evolutionary Biology 170 or Physiological Science 168, and at least 12 units from the systems biology approved list selected in consultation with a faculty mentor and approved by the program chair are required.

Research and Communication Requirement

Required: One 4-unit independent research course, such as a 199 mentored by a faculty member affiliated with the program, or another formal course with a major research component, such as Computational and Systems Biology M186C. The course must include a research communication component (written report and oral presentation of the research) and must be selected in consultation with a faculty mentor and approved by the program chair.

Honors Program

Junior and senior majors who have completed all preparation for the major courses and have an overall grade-point average of 3.0 or better and a 3.5 or better in required major courses may apply for admission to the honors program. Students are required to take Computational and Systems Biology M186B with a corequisite adjunct honors course (189 or 189HC). Students pursuing highest honors must, in addition, complete a senior thesis.
Computational and Systems Biology

Upper Division Courses

M186A. Introduction to Computational and Systems Biology. (2) (Formerly numbered Cybernetics M186A.) (Same as Biomedical Engineering M186A and Computer Science CM186C.) Lecture, two hours; outside study, four hours. Requisite: Computer Science 31 or Program in Computing 10A, Mathematics 31A, 31B. Survey course designed to introduce students to computational and systems modeling and computing in biology and medicine, providing flavor, culture, and cutting-edge contributions of burgeoning computational multidisciplinary biosciences and aiming for more informed basis for joining them. Comprehensive introduction with emphasis on ongoing computational and systems biology research at UCLA in systems biology, bioinformatics, genomics, neuroengineering, tissue engineering, systems biology software, knowledge systems, biosystem simulation, and other computational and systems biology/biomedical engineering areas. P/NP grading.

M186B. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Formerly numbered Cybernetics M186B.) (Same as Biomedical Engineering CM186B and Computer Science CM186C.) Lecture, four hours; laboratory, three hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multicompartamental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems 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.

M186C. Biomodeling Research and Research Communication Workshop. (2 to 4) (Formerly numbered M186L.) (Same as Biomedical Engineering CM186C and Computer Science CM186C.) Lecture, one hour; discussion, two hours; laboratory, one hour; outside study, eight hours. Requisite: course M186B. Closely directed, interactive, and real research experience in active quantitative systems biology research laboratory. Direction on how to focus on topics of current interest in scientific community, appropriate to student interests and capabilities. Critiques of oral presentations and written progress reports explain how to proceed with search for research results. Major emphasis on effective research reporting, both oral and written. Letter grading.

198. Honors Research in Cybernetics. (4) (Formerly numbered Cybernetics 198.) 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

UCLA
4732 Boelter Hall
Los Angeles, CA 90095-1596
(310) 825-3886
fax: (310) 825-2273
http://www.cs.ucla.edu

Jason (Jingsheng) Cong, Ph.D., Chair
Adrian Darwineh, Ph.D., Vice Chair
Richard R. Munzt, Ph.D., Vice Chair

Professors
Rajive L. Bagrodia, Ph.D.
Alfonso F. Cardenas, Ph.D.
Tony F. Chan, Ph.D.
Wesley W. Chu, Ph.D.
Jason (Jingsheng) Cong, Ph.D.
Adnan Y. Darwineh, Ph.D.
Joseph J. DiStefano III, Ph.D.
Michael G. Dyer, Ph.D.
Midos L. Ercegovac, Ph.D.
Deborah L. Estrin, Ph.D. (Jonathan B. Postel Professor of Networking)
Eliezer M. Gafni, Ph.D.
Mario Gerla, Ph.D.
Sheila A. Greibach, Ph.D.
Richard E. Korf, Ph.D.
Richard R. Munzt, Ph.D.
Stanley J. Osher, Ph.D.
Rafael Ostrovsky, Ph.D.
Jens Palsberg, Ph.D.
D. Stott Parker, Ph.D.
Miodrag Potkonjak, Ph.D.
Majid Sarrafzadeh, Ph.D.
Stefano Soatto, Ph.D.
Mani B. Srivastava, Ph.D.
Demetri Terzopoulos, Ph.D.
Alan L. Yuille, Ph.D.
Carlo A. Zaniolo, Ph.D. (Norman E. Friedman Professor of Knowledge Sciences)
Lixia Zhang, Ph.D.
Song-Chun Zhu, Ph.D.

Professors Emeriti
Aligridas A. Avizienis, Ph.D.
Bertram Russell, Ph.D.
Jack W. Carlyle, Ph.D.
Gerald Estrin, Ph.D.
Theima Estrin, Ph.D.
Leonard Kleinrock, Ph.D.
Allen Klinger, Ph.D.
Lawrence P. McNamee, Ph.D.
Michel A. Melkanoff, Ph.D.
Lawrence P. McNamee, Ph.D.
Rafael Ostrovsky, Ph.D.
Richard R. Munzt, Ph.D.

Associate Professors
Amit Sahai, Ph.D.
Yuval Tamir, Ph.D.

Assistant Professors
Eleazar Eskin, Ph.D.
Petros Faloutsos, Ph.D.
Edward Kohler, Ph.D.

Associate Professors
Amit Sahai, Ph.D.
Yuval Tamir, Ph.D.

Assistant Professors
Eleazar Eskin, Ph.D.
Petros Faloutsos, Ph.D.
Edward Kohler, Ph.D.
Rupak Majumdar, Ph.D.

Adam A.W. Meyerson, Ph.D.
Tod Millstein, Ph.D.
Glen D. Reinman, Ph.D.

Senior Lecturer
Leon Levine, M.S., Emeritus

Lecturers P.S.O.E.
Paul R. Eggert, Ph.D.
David A. Smallberg, M.S.

Adjunct Professors
Boris Kogan, Ph.D.
Peter L. Reiher, Ph.D.
M. Yahya Sanadidi, 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, engineering 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).

Department Mission

The Computer Science Department strives for excellence in creating, applying, and imparting
knowledge in computer science and engineering through comprehensive educational programs, research in collaboration with industry and government, dissemination through scholarly publications, and service to professional societies, the community, state, and nation.

Computer Science and Engineering Undergraduate Program Objectives

The computer science and engineering undergraduate program educational objectives are that our alumni (1) make valuable technical contributions to design, development, and production in their practice of computer science and computer engineering, in related engineering or application areas, and at the interface of computers and physical systems, (2) demonstrate strong communication skills and the ability to function effectively as part of a team, (3) demonstrate a sense of societal and ethical responsibility in their professional endeavors, and (4) engage in professional development or postgraduate education to pursue flexible career paths amid future technological changes.

Computer Science Undergraduate Program Objectives

The computer science undergraduate program educational objectives are that our alumni (1) make valuable technical contributions to design, development, and production in their practice of computer science and related engineering or application areas, particularly in software systems and algorithmic methods, (2) demonstrate strong communication skills and the ability to function effectively as part of a team, (3) demonstrate a sense of societal and ethical responsibility in their professional endeavors, and (4) engage in professional development or postgraduate education to pursue flexible career paths amid future technological changes.

Undergraduate Study

Computer Science and Engineering B.S.

The ABET-accredited computer science and engineering curriculum at UCLA provides the education and training necessary to design, implement, test, and utilize the hardware and software of digital computers and digital systems. The curriculum has components spanning both the Computer Science and Electrical Engineering Departments. Within the curriculum students study all aspects of computer systems from electronic design through logic design, MSI, LSI, and VLSI concepts and device utilization, machine language design, implementation and programming, operating system concepts, systems programming, networking fundamentals, higher-level language skills, and application of these to systems. Students are prepared for employment in a wide spectrum of high-technology industries.

The computer science and engineering curriculum is also accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (410) 347-7700.

Preparation for the Major

Required: Chemistry and Biochemistry 20A; Computer Science 1, 31, 32, 33, 35L, M51A (or Electrical Engineering M16); Electrical Engineering 1, 2, 10; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61; Physics 1A, 1B, 4AL, 4BL.

The Major

Required: Computer Science 101, 111, 118, 131, M151B (or Electrical Engineering M116C), M152A (or Electrical Engineering M116L), 152B, 180, 181, Electrical Engineering 102, 110, 110L, 115A, 115C. Statistics 110A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and three upper division computer science elective courses (12 units), one of which must be selected from Computer Science 143 or 161 or 174A. Electrical Engineering 103 may be substituted for one elective (credit is not given for both Computer Science 170A and Electrical Engineering 103), and either Computer Science 194 or one 4-unit 199 course 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.

The computer science curriculum is designed to accommodate students who want professional preparation in computer science but do not necessarily have a strong interest in computer systems hardware. The curriculum consists of components in computer science, a minor or technical support area, and a core of courses from the social sciences, life sciences, and humanities. Within the curriculum, students study subject matter in software engineering, principles of programming languages, data structures, computer architecture, theory of computation and formal languages, operating systems, distributed systems, computer modeling, computer networks, compiler construction, and artificial intelligence. Majors are prepared for employment in a wide range of industrial and business environments.

The computer science curriculum is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (410) 347-7700.

Preparation for the Major

Required: Chemistry and Biochemistry 20A; Computer Science 1, 31, 32, 33, 35L, M51A (or Electrical Engineering M16); Electrical Engineering 1; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61; Physics 1A, 1B, 4AL, 4BL.

The Major

Required: Computer Science 101, 111, 118, 130 (or 152B), 131, M151B (or Electrical Engineering M116C), M152A (or Electrical Engineering M116L), 180, 181, Statistics 110A; three upper division science and technology courses (12 units) not used to satisfy other requirements, that may include three computer science courses, three courses to augment the technical breadth courses requirement, or three courses selected from one of the following: astronomy, atmospheric and oceanic sciences, biological chemistry, biomathematics, chemical and biomolecular engineering, chemistry and biochemistry, civil and environmental engineering, Earth and space sciences, economics, electrical engineering, information studies, linguistics, management, materials science and engineering, mathematics, mechanical and aerospace engineering, microbiology, immunology, and molecular genetics, molecular biology, molecular, cell, and developmental biology, physics — courses selected from outside the school must be approved by petition; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and six upper division computer science elective courses (24 units), two of which must be selected from Computer Science 143, 161, 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). Students who select Electrical Engineering 103 may not receive credit for Mathematics 151A under the science and technology electives; if students have not taken Computer Science 130, one elective course must be 132; and either Computer Science 194 or one 4-unit 199 course 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.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of 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.
Computer Science

Lower Division Courses

1. Freshman Computer Science Seminar. (1) Seminar, 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 computer science theory, technology, and implications, including neural machine intelligence, computability limits, virtual reality, cellular automata, artificial life, programming languages survey, and philosophical and societal implications. P/NP or letter grading.


112. Computer System Fundamentals. (4) Lecture, four hours; outside study, eight hours. Requisite: Statistics 110A. Designed for juniors/seniors. Probability and stochastic process models as applied in computer science. Basic methodological tools include random variables, conditional probability, expectation and higher moments, Bayes theorem, Markov chains. Applications include probabilistic algorithms, evidence reasoning, analysis of algorithms and data structures, reliability, communication protocol and queueing models. Letter grading.

113. Introduction to Distributed Embedded Systems. (4) Lecture, four hours; laboratory, four hours; outside study, six hours. Requisite: course 111. Introduction to basic concepts needed to understand, design, and implement wireless distributed embedded systems. Topics include design implications, programming and implementation, cyber-physical systems: network protocols, network stacks, network stack simulation, embedded operating systems, embedded hardware, embedded applications. Letter grading.


35M. Logic Design of Digital Systems. (4) Same as Electrical Engineering M116T. Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 31. Fundamentals of commonly used software tools and environments, particularly open-source tools to be used in upper division computer science courses. Letter grading.

51A. Advanced Topics in Computer Science. (1 to 4) Lecture, one to four hours; discussion, zero to two hours. Designed for freshmen/sophomores. Variable topics in computer science not covered in regular computer science courses. May be repeated once for credit with topic or instructor change. Letter grading.

Upper Division Courses

101. Upper Division Computer Science Seminar. (1) Seminar, one hour; discussion, one hour. Introduction to current research, trends, emerging areas, and contemporary issues in computer science and engineering. Assignments given to bolster independent study and writing skills. Letter grading.

CM124. Computational Genetics. (4) Same as Human Genetics CM124.) Lecture, three hours; discussion, one hour; outside study, three hours. Preparation: one statistics course and familiarity with any programming language. Designed for undergraduate and graduate engineering students, as well as students from biological sciences and medical school. Introduction to current quantitative understanding of human genetics and computational interdisciplinarly research in genet. Topics include introduction to genetics, human population history, linkage analysis, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genotyping technologies. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM224. Letter grading.

130. Software Engineering. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Requisite: course 32. Recommended: course 35L, and Engineering 183 or 185. Structured programming, program specification, program proving, modularity, abstract data types, composite design, software tools, software control, program testing, team programming. Letter grading.

131. Programming Languages. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Requisites: courses 32, 33. Recommended: course 35L. Basic concepts in design and use of programming languages, including abstraction, modularity, control mechanisms, types, declarations, syntax, and semantics. Study of several different language paradigms, including functional, object-oriented, and logic programming. Letter grading.

132. Compiler Construction. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 32, 131, 181. Recommended: course 35L. Compiler structure: lexical and syntactic analysis; semantic analysis and code generation; theory of parsing. Letter grading.

133. Parallel and Distributed Computing. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 111 (may be taken concurrently), 131. Distributed memory and shared memory parallel architectures; asynchronous parallel languages; MPI, Maise, primitives for parallel computation: specification of parallelism, interprocess communication and synchronization; design of parallel programs for scientific computation and distributed systems. Letter grading.

136. Introduction to Computer Security. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 111, 118. Introduction to basic concepts of information security necessary for students to understand risks and mitigations associated with protection of systems and data. Topics include security models and architectures, security threats and risk analysis, access control and authentication/authorization, cryptography, network security, secure application design, and ethics and law. Letter grading.


144. Web Applications. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: course 143. Important concepts and theory for building effective and safe Web applications and first-hand experience with basic tools. Topics include basic Web architecture and protocol, XML and XML query languages, mapping between XML and relational models, information retrieval model and theory, security and user model, Web services and distributed transactions. Letter grading.
M151B. Computer Systems Architecture. (4) (Same as Electrical Engineering M116C.) Lecture, four hours; discussion, two hours; outside study, six hours. Preparation: courses 3, 5, and 116. May not be taken for credit by students who have received credit for course M152B. Recommended: courses 111, and M152A or Electrical Engineering M116L. Computer system organization and design, implementation of computer instructions, system software, assembly language programming, and interfaces. Letter grading.


M152A. Introductory Digital Design Laboratory. (2) (Same as Electrical Engineering M116L.) Laboratory, four hours; outside study, two hours. Requisite: course M151A or Electrical Engineering M151C. 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.

152B. Digital Design Project Laboratory. (4) (Formerly numbered M152B.) Laboratory, four hours; discussion, two hours; outside study, six hours. Requisite: course M151B or Electrical Engineering M151C. Design and implementation of complex digital subsystems using field-programmable gate arrays (e.g., processors, complex-logic processors, device controllers, and input/output interfaces). Students work in teams to develop and implement designs and to document and give oral presentations of their work. Letter grading.

161. Fundamentals of Artificial Intelligence. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Requisite: course 2. Introduction to fundamental problem solving and knowledge representation paradigms of artificial intelligence. Introduction to Lisp with regular programming assignments. State-space and problem reduction methods, brute-force and heuristic search, planning techniques, two-player games. Knowledge structures including predi cate logic, frames, semantic networks 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.) Laboratory, four to eight hours; outside study, two to four hours. Preparation: program-recorded on pulse transmitters and receivers. Limited to seniors. Introduction of analog-signalizing aspects of digital systems and data communications through experience in using contemporary test instruments to generate and display signals in relevant laboratory setups. Use of oscilloscopes, pulse and function generators, baseband spectrum analyzers, digital and function generators, baseband spectrum analyzers, digital and computer, terminals, modems, PCs, and other equipment on pulse transmitters and terminas and play signals in relevant laboratory setups. Letter grading.

174A. Introduction to Computer Graphics. (4) Lecture, four hours; discussion, two hours. Requisite: course 62. Basics and implementations of two- and three-dimensional computer graphics systems, including complete set of steps that modern graphics pipelines use to create realistic images in real time. How to position and manipulate objects in scene using geometric transformations, use of perspective, forward and inverse geometric (shape) and photometric (reflectance, illumination) properties of objects and scenes, and for rendering and manipulating novel views. Letter grading.

174B. Introduction to Computer Graphics: Three-Dimensional Dimensionality and Rendering. (4) Lecture, four hours; discussion, two hours. Requisite: course 174A. State of art in three-dimensional photorealistic and image-based rendering. How to use cameras and light to capture shape and appearance of real objects and scenes. Process provides simple way to acquire three-dimensional models of unparaleeled detail and realism. Applications of techniques from entertainment (reverse engineering and postproduction) and computer graphic modeling, and other disciplines. Introduction to ray tracing, light path tracing, global illumination, and interreflection techniques. Letter grading.

174C. Computer Animation. (4) Lecture, four hours; discussion, two hours. Requisite: course 174A. Designed for seniors/juniors. Introduction to computer animation, including basic principles of character modeling, animation, lighting, and shading. Use of computer-aided design tools for forward and inverse dynamics, motion capture animation techniques, physics-based animation of particles and systems, and design of control and rendering system. Concurrently scheduled with course CM186B. Letter grading.

180. Introduction to Algorithms and Complexity. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 32, and Mathematics 61 or 113. Designed for junior/senior Computer Science majors. Introduction to design and analysis of algorithms. Design techniques: divide-and-conquer, greedy method, dynamic programming; selection of prototypical algorithms; choice of data structures and representations; complexity measures: time, space, upper, lower bounds, asymptotic complexity; 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. Requisite: course 180. Introduction to cryptography, computer security, and basic concepts and techniques. Topics include notions of hardness, one-way functions, hard-coin protocols, pseudorandom generators, pseudorandom functions and pseudorandom permutations, semantic security, public-key and private-key encryption, key-agreement, homomorphic encryption, protocols, and digital signatures. Emphasis on 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.

M186A. Introduction to Computational and Systems Biology. (2) (Same as Biomedical Engineering M186A and Computational and Systems Biology M186A.) Lecture, two hours; outside study, four hours. Requisites: course 31 (or Program in Computing 10A), Mathematics 31A, 31B. Survey course designed to introduce students to computational and systems modeling and computing in biology and medicine, the uses of computer-aided design tools, and for them formed basis for joining them. Integrative introduction with emphasis on ongoing computational and systems biology research at UCLA in systems biology, bioinformatics, genomics, proteomics, and disease modeling. Letter grading.

CM186B. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Formerly numbered M188B.) (Same as Biomedical Engineering CM186B and Computational and Systems Biology M186B.) Lecture, four hours; laboratory, three hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biological/chemical processes and systems at multiple scales and in real-time. Introduction to Control system, multicompartamental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems at molecular and cellular levels. Current advances in three-dimensional pathways/networks, organ, and organ-level simulation. Both theory- and data-driven modeling, with focus on translating biomodeling goals and data into mathematically 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 CM288B. Letter grading.

CM186C. Biomodeling Research and Research Communication Workshop. (2 to 4) (Formerly numbered CM186CL.) (Same as Biomedical Engineering CM186C and Computational and Systems Biology M186C.) Lecture, one hour; discussion, two hours; laboratory, one hour; outside study, eight hours. Requisite: course CM186B. 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. Topics of current research 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 CM288C. Letter grading.

Special Courses, Computer Science. (4) Lecture, four hours; outside study, eight hours. Special topics in computer science for undergraduates who are taking one laboratory course in computer science, except for students who are part of research group. Discussion of research methods and current literature in field or of research of faculty members or students. May be repeated once for credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Computer Science. (4) Seminar, four hours; outside study, eight hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field or of research of faculty members or students. May be repeated once for credit. Letter grading.

199. Directed Research in Computer Science. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit with school approval. Individual contract required; enrollment 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 graduate computer science students. Seminars on current research topics in computer science. May be repeated 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 intelligent systems. Each member completes one tutorial and one or more original pieces of work in the specialized 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. Requisite: course 118. Designed for graduate students. In-depth study of network protocol and systems software design in area of wireless and mobile Internet. Topics include (1) networking fundamentals: design philosophy of TCP/IP; end-to-end arguments, and protocol design principles; IP; 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 typical studies: energy-efficient design, security, location management, and quality of service. Letter grading.


212B. Queueing Applications: Scheduling Algorithms and Queueing Networks. (4) Lecture, four hours; outside study, eight hours. Requisite: course 212A. Priority queueing, Applications to time-sharing scheduling algorithms: FB; Round Robin, Conserva- tion Law, Bounds. Queueing networks: definitions, job flow balance, product form solutions — local balance, M/M, M/M models, computational algorithms for performance measures; asymptotic behavior and bounds; approximation techniques — diffusion — iterative techniques; applications. Letter grading.

M213A. Embedded Systems. (4) (Formerly numbered 213A.) (Same as Electrical Engineering 202A.) Lecture, four hours; outside study, eight hours. Requisite: course 111. Designed for graduate computer science and electrical engineering students. Methodologies and technologies for design of embedded systems. Topics include hardware and software platforms for embedded systems, techniques for modeling and specification of system behavior, software organization, real-time operating system scheduling, real-time communication and packet scheduling, low-power battery and energy-aware system design, timing synchronization, fault tolerance and debugging, and techniques for hardware and software architecture optimization. Theoretical foundations as well as practical design methods. Letter grading.

M213B. Distributed Embedded Systems. (4) (Same as Electrical Engineering M202B.) Lecture, four hours; outside study, eight hours. Requisites: courses 112, 118, and Electrical Engineering 135B. Designed for graduate computer science and electrical engineering students. Interdisciplinary course with focus on study of distributed embedded systems concepts needed to realize systems such as wireless sensor and actuator networks for monitoring and control of physical world. Topics include network self-configurations with localization and synchronization; energy-aware system design and operation; protocols for MAC, routing, transport, disruption tolerance; protocol analysis and issues with models and language. OS, database, and middleware; in-network collaborative processing; fundamentals such as coverage, connectivity, capacity, latency; techniques for exploitation and management of actuation and mobility; data and system integrity issues with calibration, faults, debugging, and security; and usage issues such as human interfaces and safety. S/U or letter grading.

214. Data Transmission in Computer Communications. (4) Lecture, four hours; outside study, eight hours. Requisite: course 112. Limited to graduate computer science students. Discrete data streams, formats, rates, transductions; digital data transmis- sions via analog computer communication; media characteristics, systems methodologies, performance analysis; modern designs; physical interfaces in computer communication links; national/international standards; tests and measurements. Letter grading.

215. Computer Communications and Networks. (4) Lecture, four hours; outside study, eight hours. Requisite: course 112. Resource sharing; computer traffic characterization; network struc- ture; packet switching and other switching techniques; ARPANET and other computer network examples; network delay and analysis; network design and optimization; network protocols and flow control; satellite and ground radio packet switching; local net- works; commercial network services and architectures. Optional topics include extended error control techniques; modems; SDLC, HDLC, X.25, etc.; proto- col verification; network simulation and measurement; integrated networks; communication processors. Let- ter grading.

216. Distributed Multiaccess Control in Networks. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 212A, 215. Topics from the field of distributed control and access in computer net- works, including peer-to-peer computer net- works; satellite packet switching; ground radio packet switching; local network architecture and control. Let- ter grading.

217A. Internet Architecture and Protocols. (4) Lecture, four hours; outside study, eight hours. Requisite: course 118. Focus on mastering existing core set of Internet protocols, including IP, core transport pro- tocols, routing protocols, DNS, NTP, and security pro- tocols such as DNSSEC; to understand principles be- hind design of these protocols, appreciate their de- sign tradeoffs, and learn lessons from their operations. Letter grading.

217B. Advanced Topics in Internet Research. (4) (Formerly numbered 217A.) Lecture, four hours; outside study, eight hours. Requisite: course 217A. De- signed for graduate students. Overview of Internet de- velopment history and fundamental principles underlying TCP/IP protocol design. Discussion of current Internet research topics, including latest research re- sults in routing protocols, transport protocols, network measurements, network security protocols, and clean-slate approaches such as overlay networks. Fundamental issues in network protocol design and implementations. Letter grading.


219. Current Topics in Computer System Modeling Analysis. (2 to 12) Lecture, four hours; outside study, eight hours. Requisite: course 218. Literature in an area of computer system modeling analysis in which instructor has developed special proficiency as a con- sequence of research interests. Students report on selected topics. May be repeated for credit with con- sent of instructor. Letter grading.

CM221. Introduction to Bioinformatics. (4) (Same as Chemistry CM260A and Human Genetics CM260A.) Lecture, three hours; discussion, one hour. Enforced requisites: course 180 or Program in Computing 60 with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A or 110A. Introduction to bioinformatics and methodologies. Emphasis on new bioinformatic methods. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM121. S/U or letter grading.

M222. Control and Coordination in Economics. (4) (Same as Economics M222A.) Lecture, three hours. Recommended preparation: appropriate math- ematics course. Designed for graduate economics and engineering students. Stabilization policies, short- and long-run dynamics and stability analysis; decentralization, coordination in teams; certainty equivalence and separation theorems; stochastic and learning models. Bayesian approach to price and output and price adjustment. S/U grading.

CM224. Computational Genetics. (4) (Same as Hu- man Genetics CM224.) Lecture, three hours; discus- sion, one hour; outside study, eight hours. Preparation: one statistics course and familiarity with any program- ming language. Designed for undergraduate and grad- uate engineering students, as well as students from bi- ological sciences and medical school. Introduction to current investigative frontiers in research in human genetics and computational interdisciplinary research in genet- ics. Topics include introduction to genetics, human population history, linkage analysis, association analy- sis, linkage disequilibrium, and admixed populations, population substructure, human structural variation, model organisms, and genotyping technolo- gies. Computational techniques include those from statistics and computer science. Concurrently sched- uled with course CM124. Letter grading.

M229S. Seminar: Current Topics in Bioinformatics. (4) (Same as Human Genetics M229S.) Seminar, four hours; outside study, eight hours. Designed for graduate engineering students as well as students from biological sciences and medical school. Intro- duction to current topics in bioinformatics, genomics, and computational genetics and preparation for com- putational interdisciplinary research in genetics and genomics. Topics include genome analysis, regulato- ry genomics, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organ- isms, and genomic technologies. Computational techniques include those from statistics and computer science. May be repeated for credit with topic change. Letter grading.

230A. Models of Information and Computation. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 131, 181. Paradigms, models, frameworks, and problem solving: UML and meta- modeling; basic information and computation models: axiomatic systems; domain theory; least fixed point theory; well-founded induction. Logical models: sen- tences, axioms and rules, normal forms, derivation and proof, Lambda calculus, propositional logic, first-order logic, logic programming. Functional mod- els: expressions, equations, evaluation; combinators; lambda calculus; functional programming. Program model development using Hoare logic, object models, standard templates, de- sign patterns, frameworks. Letter grading.
231. Types and Programming Languages. (4) Lecture, four hours. Requisite: course 131. Introduction to static type systems and their usage in programming language design and software reliability. Operation, correctness, semantics, simply-typed lambda calculus, type soundness proofs, types for mutable references, types for exceptions. Parametric polymorphism, let-bound polymorphism, higher-order inference. Types for objects, subtyping, combining parametric polymorphism and subtyping. Types for modules, parameterization and implementation of type systems. Examples of modern applications, as well as readings from recent research literature. Letter grading.

232. Static Program Analysis. (4) Lecture, four hours; outside study, eight hours. Requisite: course 132. Introduction to static analysis of object-oriented programs and its usage for optimization and bug finding. Class hierarchy analysis, rapid type analysis, equality-based analysis, subset-based analysis, flow-insensitive and flow-sensitive analyses, context-insensitive and context-sensitive analysis. Soundness proofs for static analyses. Efficient data structures for static analysis information such as directed graphs and binary decision diagrams. Flow-directed method of inlining, type-safe method inlining, synchronization, optimization, deadlock detection, security vulnerability detection, and implementation and performance of new analysis techniques. Class hierarchy analysis, rapid type analysis, and sharing between static analyses, as well as readings from recent research literature on modern applications of static analysis. Letter grading.

233A. Parallel Programming. (4) Lecture, four hours; outside study, eight hours. Requisite: courses 111, 131. Mutual exclusion and resource allocation in distributed systems; primitives for parallel computation; implementation of parallelism; interprocess communication; atomic operations, and mechanisms for synchronization; and implementation of parallelism of systems and applications. Letter grading.

233B. Verification of Concurrent Programs. (4) Lecture, four hours; outside study, eight hours. Requisite: course 233A. Formal techniques for verification of concurrent systems include safety, liveness, program and state assertion-based techniques, weakest precondition semantics, Hoare logic, temporal logic, and axiomatic semantics for concurrent programming languages. Letter grading.

234. Computer-Aided Verification. (4) Lecture, four hours. Requisite: course 181. Introduction to theory and practice of formal methods for design and analysis of concurrent and embedded systems, with focus on algorithms and data structures and implementation of algorithms and design properties of systems and software systems. Topics include verification of reactive systems, invariant verification, temporal logic model checking, theorem of omega automata, state-space reduction techniques, compositional and hierarchical reasoning. Letter grading.


236. Computer Security. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 111, 118. Basic and research material on computer security. Topics include security principles and analysis of computer security, common security tools, use of cryptographic protocols for security, security tools (firewalls, virtual private networks, honeypots), virus and worm protection, security assurance and testing, design of secure programs, privacy, applying security principles to realistic problems, and new and emerging threats and security tools. Letter grading.

239. Current Topics in Computer Science: Programming Languages and Systems. (2 to 12) Lecture, four hours; outside study, eight hours. Review of current literature in an area of computer science programming languages and systems in which instructor has developed special proficiency as a consequence of research interests. May be repeated for credit with topic change. Letter grading.

240. Databases and Knowledge Bases. (4) Lecture, four hours; outside study, eight hours. Requisite: course 143. Theoretical and technological foundation of In Database Systems, which merge database technology, knowledge-based systems, and advanced programming environments. Rule-based knowledge representation, spatio-temporal reasoning, and logic-based declarative querying/programming are salient features of this technology. Other topics include object-related systems and data mining techniques. Letter grading.


241A. Object-Oriented and Semantic Database Systems. (4) Lecture, three and one-half hours; discussion, 30 minutes; laboratory, one hour; outside study, seven hours. Requisite: course 143. Object database principles and requirements. Data models, accessing, and query languages. Object data management standards. Extended relational-object systems. Database design, organization, indexing, and performance. Future directions. Other topics at discretion of instructor. Letter grading.

241B. Pictorial and Multimedia Database Management. (4) Lecture, three and one-half hours; discussion, 30 minutes; laboratory, one hour; outside study, seven hours. Requisite: course 143. Multimedia data: alphanumeric, text, image, picture, video, and voice. Multimedia information systems requirements. Data models. Searching and accessing databases and across Internet by alphanumeric, image, video, and audio content. Query languages, multimedia integration, and communication. Database design and organization, logical and physical. Indexing methods. Internet multimedia streaming. Other topics at discretion of instructor. Letter grading.

244A. Distributed Database Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 215 and/or 241A. File allocation, intelligent directory design, transaction management, deadlock, strong and weak concurrency control, commit protocols, semantic query answering, multidatabase systems, fault recovery techniques, network partitioning, examples, trade-offs, and design experiences. Letter grading.

245A. Intelligent Information Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 241A, 255A. Knowledge discovery in database, knowledge-base maintenance, knowledge base and database integration architectures, and scale-up issues and applications to cooperative database systems, intelligent decision support systems, and intelligent planning and scheduling systems: computer architecture for processing large-scale knowledge-base/database systems. Lecture grading.

246. Web Information Management. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 112, 143, 180, 181. Designed for graduate students. Scale of Web data requires novel algorithms and principles for their management and retrieval. Study of Web characteristics and new management techniques needed to build computer systems suitable for Web environment. Web measurement techniques, large-scale data mining algorithms, efficient page refresh techniques, Web-search ranking algorithms, and query processing techniques on independent data sources. Letter grading.

249. Current Topics in Data Structures. (2 to 12) Lecture, four hours; outside study, eight hours. Review of current literature in an area of data structures in which instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. May be repeated for credit with consent of instructor. Letter grading.

251A. Advanced Computer Architecture. (4) Lecture, four hours; outside study, eight hours. Requisite: course M151B. Recommended: course 111. Design and implementation of high-performance systems, advanced memory hierarchy techniques, static and dynamic pipelining, superscalar and VLIW processors, branch prediction, speculative execution, software support for instruction-level parallelism, simulation-based performance analysis and evaluation, state-of-the-art design examples, introduction to parallel architectures. Letter grading.

251B. Parallel Computer Architectures. (4) Lecture, four hours; outside study, eight hours. Requisite: course 251A. Recommended: course 251A. SIMD and MIMD systems, symmetric multiprocessors, distributed-shared-memory systems, multicores, chips, clusters, interconnection networks, and modern chip multiprocessor, network interfaces, switching element design, communication primitives, cache coherence, memory consistency models, synchronization primitives, state-of-art design examples. Letter grading.

252A. Algorithmic Algorithms and Processors. (4) Lecture, four hours; outside study, eight hours. Requisite: course M151B. Recommended: course 251A. SIMD and MIMD systems, symmetric multiprocessors, distributed-shared-memory systems, multicores, chips, clusters, interconnection networks, and modern chip multiprocessors, network interfaces, switching element design, communication primitives, cache coherence, memory consistency models, synchronization primitives, state-of-art design examples. Letter grading.


254A. Computer Memories and Memory Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 251A. Generic types of memory systems; control, access modes, hierarchies, and allocation algorithms. Characteristics, system organization, and device considerations of ferme memories, thin film memories, and semiconductor memories. Letter grading.

Lecture, four hours; outside study, eight hours. Requisite: course 251A. In-depth investigation of research operating system for PC machines and consideration of recent literature. Memory management and protection, interrupts and traps, processes, file systems, virtualization, networking, profiling, research operating systems. Series of laboratory projects, including extra challenge work. Letter grading.

255A. Knowledge Discovery in Databases. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 241A, 255A. Knowledge discovery in database, knowledge-base maintenance, knowledge-base and database integration architectures, and scale-up issues and applications to cooperative database systems, intelligent decision support systems, and intelligent planning and scheduling systems: computer architecture for processing large-scale knowledge-base/database systems. Lecture grading.

255B. Current Topics in Data Mining. (4) Lecture, four hours; outside study, eight hours. Requisite: course 255A. Advanced techniques needed to build computer systems suitable for Web environment. Web measurement techniques, large-scale data mining algorithms, efficient page refresh techniques, Web-search ranking algorithms, and query processing techniques on independent data sources. Letter grading.
25A. Distributed Processing Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 251A and/or 251A. Task partitioning and allocation, interprocess communication, task response time model, process scheduling, message passing protocols, replicated file systems, interface, cache memory, actor model, fine grain multiprocessors, distributed computing, system microarchitecture, and system architecture. High-performance building blocks, such as chip multiprocessors (CMPs). On-chip and off-chip communication. Mechanisms for exploiting parallelism at all levels. Current research areas. Examples of chips and systems. Letter grading.


258B. Foundations of VLSI CAD Algorithms. (4) Lecture, four hours; outside study, eight hours. Preparatory course should cover in-depth studies of VLSI architectures and VLSI design tools. In Progress (M258B) and S/U or letter (M258C). Letter grading.

258E. Foundations of VLSI CAD Algorithms. (4) Lecture, four hours; outside study, eight hours. Preparatory course should cover in-depth studies of VLSI architectures and VLSI design tools. In Progress (M258B) and S/U or letter (M258C). Letter grading.

258F. Physical Design Automation of VLSI Systems. (4) Lecture, four hours; outside study, eight hours. Detailed study of various physical design automation problems of VLSI circuits, including logic partitioning, placement, global routing, channel and switchbox routing, planar routing and via minimization, compaction and performance-driven layout. Discussion of applications of a number of important optimization techniques, such as network flows, Steiner trees, simulated annealing, and generic algorithms. Letter grading.

258G. Logic Synthesis of Digital Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses M51A, 180. Detailed study of various problems in logic-level synthesis of VLSI digital systems, including two-level Boolean network minimization, technology mapping for standard cell design and field-programmable gate-array (FPGA) design; retiming for sequential circuits; and applications of binary decision diagrams (BDDs) and other technologies. Letter grading.

258H. Analysis and Design of High-Speed VLSI Interconnects. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 252A, 258F. Detailed study of various problems in analysis and design of high-speed VLSI interconnects at both integrated circuit (IC) and packaging levels, including interconnect capacitance and resistance, lossy and lossless transmission lines, cross-talk and power distribution noise, delay models and power dissipation models, interconnect topology and geometry optimization, and clocking for high-speed systems. Letter grading.

259. Current Topics in Computer Science: System Design/Architecture. (2 to 12) Lecture, four hours; outside study, eight hours. Instructor. Literature in an area of computer science system design in which instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. May be repeated for credit with topic change. Letter grading.


262A. Reasoning with Partial Beliefs. (4) Lecture, four hours; outside study, eight hours. Requisite: course 112 or Electrical Engineering 131A. Review of several formalisms for representing and managing uncertainty in reasoning systems; presentation of comprehensive descriptive probability Bayesian inference using belief networks representation. Letter grading.


262C. Causal Inference. (4) (Same as Statistics M221.) Lecture, four hours; outside study, eight hours. Requisite: course 112 or equivalent probability theory course. Techniques of using computers to interpret, summarize, and form theories of empirical observations. Mathematical analysis of trade-offs between computational complexity, storage requirements, and precision of computerized models. Letter grading.

262Z. Current Topics in Cognitive Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 262A. Additional requisites for each offering announced in advance by department. Theory and implementation of systems which emulate or support human reasoning. Current literature and individual studies in artificial intelligence, knowledge-based systems, decision support systems, computational psychology, and heuristic programming theory. May be repeated for credit with topic change. Letter grading.

263A. Language and Thought. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130 or 131 or 161. Introduction to natural language processing (NLP), with emphasis on semantics. Presentation of processing models of a variety of tasks, including question answering, paraphrasing, machine translation, word-sense disambiguation, narrative and editorial comprehension. Examination of both symbolic and statistical approaches to language processing and acquisition. Letter grading.

263B. Connectionist Natural Language Processing. (4) Lecture, four hours; outside study, eight hours. Requisite: course 161 or 263A. Examination of connectionist/ANN architectures designed for natural language processing. Issues include localist versus distributed representations, variable binding, instantiation and inference via spreading activation, acquisition of language knowledge (for instance, via back propagation in PDP networks and competitive learning in self-organizing feature maps), and grounding of symbols in sensory/motor experience. Letter grading.

264A. Automated Reasoning: Theory and Applications. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Introduction to theory and practice of automated reasoning using propositional and first-order logic. Topics include syntax and semantics of formal logic; algorithms for logical reasoning, including satisfiability and entailment, syntactic and semantic restrictions on knowledge bases; effect of these restrictions on expressiveness, compactness, and computational tractability; applications of automated reasoning to diagnosis, planning, design, formal verification, and reliability analysis. Letter grading.


267A. Neural Models. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Review of major neurophysiological milestones in understanding brain functioning and processes. Focus on brain theories that are important for modern cybernetics and, in particular, on models of sensory perception, sensory-motor coordination, and cerebellar and cerebral motor control. Students required to prepare a paper analyzing research in one area of interest. Letter grading.

267B. Artificial Neural Systems and Connectionist Computing. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Review of major connectionist computing paradigms and underlying models of biological and physical processes. Examination of past and current implementations of artificial neural networks along with their applications to associative knowledge processing, general multi-sensor pattern recognition including speed and vision, and adaptive robotic control. Students required to prepare a paper analyzing research in one area of interest. Letter grading.


268S. Seminar: Computational Neuroscience. (2) Seminar, two hours; outside study, six hours. Designed for students undertaking thesis research. Discussion of advanced topics and current research in computational neuroscience. Neural networks and connectionism as a paradigm for parallel and concurrent computation in application to problems of perception, vision, multimodal sensory integration, and robotics. May be repeated for credit. S/U grading.

269. Seminar: Current Topics in Artificial Intelligence. (2 to 4) Seminar, to be arranged. Review of current literature and research practice in an area of artificial intelligence in which instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. May be repeated for credit with topic change. Letter grading.

270A. Computer Methodology: Advanced Numerical Methods. (4) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 103 or Mathematics 151B or comparable experience with numerical computing. Designed for graduate computer science and engineering students. Principles of computer treatment of selected numerical problems in algebraic and differential systems, transforms and spectra, data acquisition and design, emphasis on concepts pertinent to modeling and simulation and the applicability of contemporary developments in numerical software. Computer exercises. Letter grading.


271C. Seminar: Advanced Simulation Methods. (2) Seminar, two hours; outside study, six hours. Required courses: 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 other engineering modeling techniques. Topics vary each term. May be repeated for credit. S/U grading.

272. Advanced Discrete Event Simulation and Modeling Techniques. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Introduction to discrete-event simulation and modeling, including building valid and credible simulation models, output analysis, systems, selection of appropriate simulation program, and simulation environments. Subtitles of some current sections: Approximation techniques for number of different problems, algorithm design techniques that include primal-dual method, linear program rounding, greedy algorithms, and local search. Letter grading.


274C. Computer Animation. (4) Lecture, four hours; recitation, two hours. Required: 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 Biomedical Engineering 102. Letter grading.

275. Artificial Life for Computer Graphics and Vision. (4) Lecture, four hours; outside study, eight hours. Introduction to artificial life, emerging discipline that spans computational and biological sciences, can play in construction of advanced computer graphics and vision models for virtual reality, animation, interactive games, active vision, visual sensor networks, medical image analysis, etc. Focus on comprehensive models that can realistically emulate variety of living things (plants and animals) from lower animals to humans. Exposure to effective computational modeling of natural phenomena of life and their incorporation into sophisticated, self-animated graphical entities. Specific modeling techniques are using L-systems, biomechanical simulation and control, behavioral animation, reinforcement and neural-net work learning of locomotion, cognitive modeling, artificial animals and human facial animation, and artificial evolution. Letter grading.

M276A. Pattern Recognition and Machine Learning. (4) (Same as Statistics M231.) Lecture, three hours. Designed for graduate students. Fundamental concepts, theorems, 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 Bayes’ theory, parametric and nonparametric learning, clustering, convexity (VC-dimension, MDL, AIC), PCA/ICA/CTCA, MDS, SVM, boosting, SU or letter grading.

M276B. Structured Computer Vision. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Mathematical techniques for 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 M276A or M276B. Topics in human-computer communication: interaction with pictorial information systems, sound and symbol generation by humans and machines, semantics of data, systems for speech recognition and understanding. Use of speech and text for computer input and output in applications. Letter grading.

279. Current Topics in Computer Science: Methodology. (2 to 12) Lecture, outside study, eight hours. Review of current literature in an area of computer science methodology in which instructor has developed special proficiency as a consequence of research interests. Students report on recently 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 announced in advance by department. Selections from design, analysis, optimization, and implementation of algorithms and data structures. Subtitles of some particular areas. Letter grading.

280AP. Approximation Algorithms. (4) Lecture, four hours; outside study, eight hours. Required: course 180. 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 in feasible running time. Coverage of approximation techniques for number of different problems, with algorithm design techniques that include primal-dual method, linear program rounding, greedy algorithms, and local search. Letter grading.

281A. Computability and Complexity. (4) Lecture, four hours; outside study, eight hours. 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 in feasible running time. Coverage of approximation techniques for number of different problems, with algorithm design techniques that include primal-dual method, linear program rounding, greedy algorithms, and local search. Letter grading.

281D. Discrete State Systems. (4) Lecture, four hours; outside study, eight hours. Recommended requisites: course 181. Finite-state machines, transducers, and their generalizations; regular expressions, transduction expressions, realizability; decomposition, synthesis, and design considerations; topics in state and system identification and fault diagnosis, linear machines, probabilistic machines, applications in coding, communication, computing, system modeling, and simulation. Letter grading.

M282A. Cryptography. (4) (Same as Mathematics M209A.) Lecture, four hours; outside study, eight hours. Introduction to cryptography, stressing rigorous definitions and proofs of security. Topics include notions of hardness, one-way functions, hardness of bits, pseudorandom generators, pseudorandom functions and pseudorandom permutations, semantic security, public-key and private-key encryption, secure key-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.

M282B. Cryptographic Protocols. (4) (Same as Mathematics M209B.) Lecture, four hours; outside study, eight hours. Required: course M282A. Consideration of advanced cryptographic protocol design and analysis. Topics include interactive zero-knowledge proofs; zero-knowledge arguments; concurrent zero-knowledge; public-key encryption, including chosen-ciphertext security; secure multiparty computation; dealing with dynamical adversary; non-black-box security of secure protocols; software protection; threshold cryptography; identity-based cryptography; private information retrieval; protection against man-in-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. (4-4) Lecture, four hours; outside study, eight hours. Required: course 180. Additional requisites announced in advance by department. Selections from families of formal languages, grammars, automata, machines, operators; pushdown automata, context-free languages and their generalizations, parsing; multidimensional grammars, developmental systems; machine-based complexity. Subtitles of some current and planned sections. Context-Free Languages (284A), Parsing Algorithms (284P). May be repeated for credit with consent of instructor and with topic change. Letter grading.

CM286A. Computational Systems Biology: Modeling and Simulation of Biological Systems. (3) (Same as Biomedical Engineering CM286A.) Lecture, four hours; laboratory, three hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multipartmental, control-oriented, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems at molecular, cellular (biochemical pathways/networks), organ, and organismic levels. Basics of computer simulation and computer simulation methods for studying biomodeling methods developed for research results. Major emphasis on effective research results. Concurrently scheduled with Biomedical Engineering CM286C. Letter grading.

CM286B. Computational Systems Biology: Modeling and Simulation of Biological Systems. (3) (Same as Biomedical Engineering CM286B.) Lecture, four hours; laboratory, three hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multipartmental, control-oriented, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems at molecular, cellular (biochemical pathways/networks), organ, and organismic levels. Basics of computer simulation and computer simulation methods for studying biomodeling methods developed for research results. Major emphasis on effective research results. Concurrently scheduled with Biomedical Engineering CM286C. Letter grading.

CM286C. Biomodeling Research and Research Communication Workshop. (2 to 4) (Formerly numbered CM286L.) (Same as Biomedical Engineering CM286C.) Lecture, one hour; discussion, two hours; laboratory, one hour; outside study, eight hours. Required: course CM286B. Closely directed, interactive, and research oriented project-based research laboratory, emphasizing systems biology research laboratory. Direction on how to focus on topics of current interest in scientific community, appropriate to student interests and capabilities. Oral reports. Required: course CM286B 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 CM286A. Letter grading.

287A. Theory of Program Structure. (4) Lecture, four hours; outside study, eight hours. Required: course 181. Models of computer programs and their syntax and semantics; control-oriented algorithms and recursion schemes; equivalence, optimization, correctness, and translatable programs; expressive power of program constructs and data structures; selected current topics. Letter grading.
289A-289ZZ. Current Topics in Computer Theory. (2 to 12 each) Lecture, four hours; outside study, eight hours. Review of current literature in an area of computer theory in which instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. Letter grading.

289CO. Complexity Theory. (4) Lecture, four hours; outside study, eight hours. Diagonalization, polynomial-time hierarchy, PNP 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.

289OA. Online Algorithms. (4) Lecture, four hours; outside study, eight hours. Requisite: course 180. Introduction to decision making under uncertainty and competitive analysis. Review of current research in online algorithms for problems arising in many areas, such as data and memory management, searching and navigating in unknown environments, and server systems. Letter grading.

289RA. Randomized Algorithms. (4) Lecture, four hours; outside study, eight hours. Basic concepts and design techniques for randomized algorithms, such as probabilistic theory, random walks, and probabilistic method. Applications to randomized algorithms in data structures, graph theory, computational geometry, number theory, and parallel and distributed systems. Letter grading.

M296A. Advanced Modeling Methodology for Dynamic Biomedical Systems. (4) (Same as Biomedical Engineering M296A and Medicine M270C.) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 141 or 142 or Mathematics 115A or Mechanical and Aerospace Engineering 171A. Development of dynamic systems modeling methodology for physiological, biomedical, pharmaco-logical, chemical, and related systems. Control system, multicompartmental, noncompartmental, and input/output models. Linear and nonlinear. Emphasis on model applications, limitations, and relevance in biomedical sciences limited data environments. Problem solving in PC laboratory. Letter grading.

M296B. Optimal Parameter Estimation and Experiment Design for Biomedical Systems. (4) (Same as Biomedical Engineering M296B and Medicine M270D.) Lecture, four hours; outside study, eight hours. Requisite: course M296A 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 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 Biomedical Engineering M296D.) Lecture, four hours; outside study, eight hours. Requisite: course CM186B. Introduction to mathematical modeling and computer simulation of cardiac electrophysiological process. Ionic models of action potential (AP). Theory of AP propagation in one-dimensional and two-dimensional cardiac tissue. Simulation of sequential and parallel supercomputers, choice of numerical algorithms, to optimize accuracy and to provide computational feasibility. Letter grading.

298. 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, six hours. Limited to graduate Computer Science Department teaching assistants. Seminar on communication of computer science materials 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 classroom. S/U grading.

497D-497F. Field Projects in Computer Science. (4-4) Fieldwork, to be arranged. Students are divided into teams led by instructor; each team is assigned an external company or organization which they investigate as a candidate for possible computerization, submitting a team report of their findings and recommendations. In Progress (497D) and S/U or letter (497E) grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate computer science students. Petition forms to request enrollment may be obtained from assistant dean. 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 computer science students. 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. Supervised independent research for Ph.D. candidates, including thesis prospectus. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate computer science 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 computer science 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 computer science students. Petition forms to request enrollment may be obtained from assistant dean. Graduate Studies. S/U grading.
nership with indigenous communities in relevant aspects of the conservation process. The partnership between UCLA and the Getty in creating the program ensures that both a major research university and an institution with a major mandate for conservation of the artistic heritage of the world are working to create a rich and vibrant conservation training opportunity. The program helps students develop working relationships with a wide array of colleagues in the Getty Conservation Institute, the J. Paul Getty Museum, and the UCLA Departments of Anthropology, Art History, Chemistry and Biochemistry, and Earth and Space Sciences, and the Interdepartmental Program in Archaeology.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gsasaa/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 Degree

The Conservation of Archaeological and Ethnographic Materials Program offers a Master of Arts (M.A.) degree in Conservation of Archaeological and Ethnographic Materials.

Conservation of Archaeological and Ethnographic Materials

Graduate Courses

M210. Introduction to Archaeological Materials Science: Scientific Methodologies, Techniques, and Interpretation. (4) (Formerly numbered 210.) (Same as Materials Science CM210.) Lecture, three hours; laboratory, two hours. Preparation: general and organic chemistry, or inorganic and organic chemistry. Several basic scientific techniques employed for examination of archaeological and cultural artifacts to answer questions of anthropological significance and their state of preservation. Theoretical and hands-on instruction to provide fundamentals of imaging and analytical techniques, examination and analysis protocols, sample preparation techniques, and methods of scientific analysis and interpretation for study of organic and inorganic materials. Letter grading.

M215. Digital Imaging and Documentation for Art and Archaeology. (4) (Formerly numbered 215.) (Same as Art History M204A.) Seminar, two hours; laboratory, three hours. Designed for graduate conservation and art history students. Introduction to techniques and methods in digital photo-documentation and diagnostic imaging to enhance descriptive documentation, including photogrammetry and laser scanning. Letter grading.

M216. Science of Conservation Materials and Methods I. (4) (Formerly numbered 216.) (Same as Materials Science M216.) Seminar, one hour; laboratory, three hours. Recommended requisites: Materials Science 104. Introduction to physical, chemical, and mechanical properties of conservation materials (emphasized for particular groups of objects). Conservation of metallic materials and objects. Letter grading.

M218. Conservation and Ethnography. (4) Laboratory, four hours. Designed for graduate conservation students. Introduction to work as conservators with indigenous repositories housing cultural collections. Students learn different models for tribal museums and cultural centers, and importance of material selection and properties in baskets they are treating. Letter grading.

M222. Conservation and Ethnography. (4) Laboratory, four hours. Designed for graduate conservation students. Introduction to work as conservators with indigenous repositories housing cultural collections. Students learn different models for tribal museums and cultural centers, and importance of material selection and properties in baskets they are treating. Letter grading.

M224. Issues in Preservation and Management of Archaeological and Cultural Sites. (4) Seminar, three hours. Designed for graduate conservation students. Cultural resource management, development of policies and legislation, international charters, and conventions by national and international agencies to reflect and protect these values. Knowledge and skills necessary in conservator work, such as understanding of presentation and management of sites, ability to gather, synthesize, and contextualize information, and development of problem-solving, assessment, cross-disciplinary thinking, and decision-making skills. Letter grading.


M232. Deterioration and Conservation of Organic Materials I. (4) Seminar, two hours; laboratory, three hours. Requisites: 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 wood, gourd, paper, leather, and plastics and rubber. Letter grading.


M236. Deterioration and Conservation of In Situ Archaeological and Cultural Materials. (4) (Formerly numbered 236.) (Same as Materials Science M213.) Seminar, two hours; laboratory, three hours. Designed for detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs. Examination of degradation processes of porous materials, causes and sources of deterioration of buildings and archaeological sites, methodologies for environmental monitoring and preventive measures, and appropriate conservation materials for remedial treatments. Letter grading.

M238. Deterioration and Conservation of Organic Materials II. (4) Seminar, two hours; laboratory, three hours. 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 leather. Letter grading.

M240. Principles of Preventive Conservation I. (4) Lecture, two hours; laboratory, one hour. Required of graduate conservation students. Primary concern with archaeological objects rather than with structures and sites. Introduction to environmental management and to some practical aspects of preventive conservation. Examination of some underlying issues, such as appropriateness and feasibility of prescriptive guidelines for environmental control. Letter grading.

M241. Deterioration and Conservation of Organic Materials III. (4) Seminar, two hours; laboratory, three hours. Required of 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 wood, gourd, paper, leather, and plastics and rubber. Letter grading.

M242. Managing Collections for Conservators. (4) Lecture, two hours; activity, two hours. Designed for graduate conservation students. How conservators work together with curators, collections managers, mount makers, designers, and registrars to permit collections to be both accessed and preserved. Letter grading.

M246. Ancient and Historic Metals: Technology, Microstructure, and Corrosion. (4) (Same as Materials Science CM233.) Lecture, two hours; laboratory, nine hours. Recommended requisites: Materials Science CM233. Lecture, two hours; laboratory, nine hours. Designed for graduate conservation and materials science students. Processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure of ancient and historic metallic materials. Extensive laboratory work in preparation and examination of metallic samples under microscope, as well as lectures on technology of metallic works of art. Practical construction in metallography. Exploration of phase and stability diagrams of common alloying systems and environments and analytical techniques appropriate for examination and characterization of metallic artifacts. Letter grading.

M250. Materials and Techniques of Archaeological Wall Paintings, Rock Art, and Mosaics. (4) (Formerly numbered 250.) (Same as Art History M250.) Lecture, two hours; laboratory, eight hours; tutorial laboratory, four hours. Designed for graduate conservation and art history students. Study of techniques and materials used for rock art and ancient wall paintings. Hands-on experience in replicating ancient paintings and pigment preparation (synthesis) based on scientific data and ancient treatises. Letter grading.

M251 Contemporary Development in Conservation. (4) Seminar, two hours. Designed for graduate conservation students. Seminar led by limited international experts in archaeology and ethnographic conservation, who address contemporary issues in conservation of cultural materials. Letter grading.

596. Directed Individual Studies. (4) Tutorial, seven hours. Limited to graduate conservation students. Individual guided studies that may include research and/or surveys or treatment projects carried out at Villa laboratories or at local collections or analytical facility. To be arranged with program faculty members, and supervision may be shared between faculty members and outside specialists. Letter grading.
DENTISTRY

School of Dentistry

UCLA
A0 -111 Dentistry
Box 951688
Los Angeles, CA 90095-1668
(310) 825-9789
http://www.dent.ucla.edu

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


M422. Health Policy Issues for Dental Professionals. (2) [Same as Health Services M448D.] Lecture, two hours. Requisites: Biostatistics 100A, Epidemiology 100, Health Services 100. Current public health policy issues in dental health, including cost, financing, role of government, and quality assurance. S/U grading.

M433A. Case Studies in Dental Practice. (2) [Same as Health Services M448D.] Lecture, two hours. Provides students with practice methodology for evaluation of dental care settings. Didactic and field experience, providing foundation for evaluation of programs. S/U grading.

441C. Introduction to Health Care. (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.

DESIGN | MEDIA ARTS

School of the Arts and Architecture

UCLA
2275 Broad Art Center
Box 951456
Los Angeles, CA 90095-1456
(310) 825-9007
fax: (310) 206-8676
e-mail: dmainfo@arts.ucla.edu
http://www.dma.ucla.edu

C.E.B. Reas, M.S., Chair

Professors

Rebecca Allen, M.S.
Erikki I. Huhtamo, Licensiate in Philosophy
Robert A. Israel, M.F.A.
Willem Henri Lucas
Rebeca Mendez, M.F.A.
Vasa V. Mihić
Christian A. Moeller, Dipl. – ING
Jennifer J. Steinkamp, M.F.A.
Victoria Vesna, M.F.A., Ph.D.

Professors Emeriti

James W. Bassier, M.A.
William C. Brown, M.A.
Mitsuru Kataoka, M.A.
J. Bernard Kester, M.A.
Lionel J. March, Sc.D.
Alice E. McCloskey, M.A.
John A. Neuhart
Nathan H. Shapira, Dottore in Architettura

Associate Professors

Mark H. Hansen, Ph.D.
C.E.B. Reas, M.S.

Assistant Professor

Ramesh Srinivasan, Ph.D.

Scope and Objectives

The Department of Design | Media Arts offers the Bachelor of Arts, Master of Arts, and Master of Fine Arts degrees. The B.A. degree focuses on visual communication design, with emphasis on digital media. The M.A. and M.F.A. degrees focus on media arts. These programs explore current uses of interactive media and new directions in visual communication design, including the study of time and motion, as well as virtual form and space in computer-generated environments. Through a balance of courses in theory, criticism, and practice, students develop an understanding of design principles. Most courses are taught as studios of no more than 20 students, which encourages individual growth and fosters a sense of community within the department.

The two-year Master of Arts (M.A.) program explores the history, theory, and criticism of digitally driven media arts and design, with focus on interactive works that span personal expression to public works. The required courses provide a solid foundation in the history of media arts and design and with contemporary work in process. Students interact and collaborate with their M.F.A. peers and acquire a broad interdisciplinary base that allows for many areas of concentration, including the history of technology and issues of representation, as well as training to curate media arts shows.

The two-year Master of Fine Arts (M.F.A.) program fosters mature, professional-quality work utilizing the most current technologies in the field of media arts. The program focuses on developing an individual thesis project that incorporates in-depth research and theoretical exploration of a topic, culminating in a final exhibition of work.

Facilities and equipment in the department enable students to create work in two, three, and four dimensions. They expand opportunities for students to develop interactive media applications in a networked environment and advanced computer graphics. The department's equipment combines high-end PC and Macintosh computers with facilities for sound and video editing.

The Department of Design | Media Arts reserves the right to hold for exhibition purposes examples of any work done in classes and to retain for the permanent collection of its galleries such examples as may be selected.

Undergraduate Study

Design | Media Arts B.A.

Preparation for the Major

Required: Design | Media Arts 10, 11A, 11B, 21, 22, 23, 24, 25, 28.

The Major

Required: Nine upper division courses, including Design | Media Arts 101, 104, 153A, 154A, 161A, four additional courses selected from 152A through 162, and a minimum of 12 additional upper division elective units selected from...
Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gradnet.ucla.edu/gasaas/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 Design | Media Arts offers Master of Arts (M.A.) and Master of Fine Arts (M.F.A.) degrees 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-

6. Art/Science and Technology Studio/Laboratory. (4) Studio/laboratory, 40 hours. Limited to high school students. Two-week summer course, including lectures, required screening of free-form, field trips, and outside study. Exploration of creative aspects of scientific research and innovation to gain broad understanding of impact of science on contemporary art and media. Focus on major scientific and technological issues. Opportunities for experimental work and collaboration on projects. Open to nonmajors who have completed C206. P/NP grading.

2. Web Design. (2) Studio, 30 hours. Limited to high school students. How Web design works: basic hand coding and creation of personalized homepages with Macromedia Director and Flash software. Photograph scanning and manipulation of images in Adobe Photoshop to incorporate student Web designs. Critique of various Web pages to analyze successful use of Web design and understand enormous potential of Internet. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

3. Game Design. (2) Studio, 30 hours. Limited to high school students. Design and creation of student digital games, beginning with storyboard and learning how to bring game design to life. Creation and animation of three-dimensional characters and objects by using Maya, same software used by professional game developers. Analysis of popular games to understand what is involved in producing modern games. Visits from professional game designer to help guide students in creating their own games. 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. Students shoot and edit their own work by learning fundamentals of preproduction and postproduction using latest digital software, Adobe Premiere and After Effects, to create their work. Burning of DVD of finished production. Visits from professional video producer to help guide students in creating their own videos. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

23. Drawing. (4) Studio, six hours. Translation of perception through delineation, drawing, and other descriptive media. Emphasis on development of student’s motor control by means of freehand and mechanical drawing and by development of analytical and objective observation from life and three-dimen-

24. Media | Studio. Six hours; concurrent introduction and integration of traditional design tools, camera, and digital technologies for application to visual thinking and fundamentals of design. P/NP or letter grading.

25. Typography. (4) Lecture/studio, four hours; laboratory, two hours; outside study, six hours. Focus on three typographic basics: letter, text, and grid. Intro-

26. Interactivity. (4) Studio, six hours; outside study, six hours. Introduction to concept of interactivity and field of media art that follows history of computer as media for artistic exploration in relation to print, animation, and interactivity. Discussion of potential and ideas related to interactivity, with focus on required skills for creating interactive work. Development of programming skills in service of creating examples of media art. Concepts and skills taught enhance student ability to excel in future courses about Internet, animation, interactive media, and game design. Discussion and readings on four themes — form/programming, motion, interactivity/programming, and interface. P/NP or letter grading.

Upper Division Courses

101. Media Arts: Introduction. (5) Formerly numbered C101.) Lecture, three hours; outside study, 12 hours. Limited to and required 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 technolog-

102. Introduction to Digital Image Creation and Manipulation. (5) Lecture, three hours; outside study, 12 hours. Overview of digital imaging technology and its application in design, media arts, and entertain-

104. Design and Society: Society and Design. (5) Lecture, three hours; outside study, 12 hours. Preparation: completion of preparation for major courses. Open to nonmajors with consent of instructor. Histori-

105. Media Studies. (5) Lecture, two hours; outside study, 12 hours. Prepara-

106. Programming Computer Applications in Architecture and Urban Design. (4) 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. Concurrently scheduled with course CM241. P/NP or letter grading.
154B. Communication Design II. (5) Studio, six hours; outside study, nine hours. Enforced requisite: course 154A. Focus on creating compelling messages and appropriate communication strategies. Development of coherent verbal and visual systems, research, concept and content development, and articulation of methodology for visualization across various media. May be repeated once for credit. P/NP or letter grading.

155. Dynamic Typography. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisites: courses C101 or 104 or C106, and 154A. Integration of print and digital information technology, with continued emphasis on fully integrating visual vocabulary with mastery of conceptual and creative procedures. P/NP or letter grading.

156A. Three-Dimensional: Design of Virtual Form. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: course C101 or 104 or C106. Through lectures, discussions, and studio work, introduction to basic elements of three-dimensional computer visualization, including modeling, image mapping, lighting, project construction, and rendering. P/NP or letter grading.

156B. Three-Dimensional: Time and Motion in Virtual Space. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisites: courses C101 or 104 or C106, and 156A. Extension of study of virtual three-dimensional form to include motion, time, and rhythm. Storyboard development, modeling of articulated characters and objects, virtual camera movement, and motion capture. May be repeated once for credit. P/NP or letter grading.

157A. Design for Interactive Media. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisites: courses C101 or 104 or C106, and 154A. Emphasis on graphic and information design for interactive active media applications. Introduction to multimedia and hypertext. Focus on learning role of conceptual designer as visual communicator and design manager. P/NP or letter grading.

157B. Advanced Interactive Media. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisites: courses C101 or 104 or C106, and 154A. Extension of study of interactive media design focus on development of advanced conceptual skills in interface design and nonlinear narrative utilizing program- ming techniques such as lists and objects. Builds on skills and concepts acquired in course 157A. May be repeated once for credit. P/NP or letter grading.

158. Design for Environmental Communication. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisites: courses C101 or 104 or C106, and 154A. Introduction to environmental communication design through experience in design studio. Focus on aesthetic issues concerning creation of design elements incorporating concepts of spatial dimension, human/environmental scale, emotion, and time. Overview of history, technologies, and future of environmental graphics. P/NP or letter grading.

159. Senior Project. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisites: course C101 or 104 or C106, and three courses from 153A through 158. Limited to seniors. Individual studies organized and conceptualized by senior students. Proposed project must demonstrate ability and judgment in design and production of body of work. May be repeated once for credit. Letter grading.

160. Special Topics in Area Studies. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisites: course C101 or 104 or C106. Selected topics in design and media 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 15 units. Only 10 units may be applied toward area studies. Letter grading.

161A. Creative Internet. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: course 28. Emphasis on gaining deeper understanding of technical concepts in networking while learning history of Internet and becoming familiar with state-of-art tools of moment. Storyboard and project development integrated into all aspects of class. Letter grading.

161B. Dynamic Internet. (5) Studio, six hours; outside study, nine hours. Requirement: course 161A. Intermediate-level course exploring creative production through networked multimedia environments, with focus on Worldwide Web. Builds on skills and concepts acquired in course 161A. May be repeated once for credit.

161C. Networked Public Spaces. (5) Studio, six hours; outside study, nine hours. Requisites: courses 161A, 161B. Advanced-level course exploring creative production through networked multimedia environments and telepresence. Focus on design of multimedia collaborative spaces. Builds on skills and concepts acquired in course 161B. Letter grading.

162. Introduction to Sound, Recording, and Audio Design Techniques. (5) Studio, six hours. Enforced preparation: completion of preparation for major courses. Limited to majors. Basic concepts pertaining to sound and digital audio; exploration of how sound impacts human perception. Emphasis on learning practical techniques in creating original sound assets for integration with other media. Topics include physics of sound, DAW (Digital Audio Workstation), recording tools and techniques, electronic sound synthesis, MIDI (Musical Instrument Digital Interface), digital audio formats and standards, how we hear, sound and impact on human orientation. Basic understanding of how to conceptualize and execute sound design. Students learn techniques to create original sound design elements at intermediate level. Letter grading.

170. Topics in Design. (2 to 8) Lecture, four hours. Examination by faculty members of specific problems relevant to design theory. Topics announced in advance. May be repeated for maximum of 16 units. Letter grading.

180. Prosenimar: Design | Media Arts. (5) Seminar, six hours; outside study, nine hours. Open to seniors and advanced students. Examination in seminar format of specific problems relevant to design theory and performance. Topics announced in advance. Letter grading.

182. Design Processes. (5) Studio, six hours; outside study, nine hours. Introduction to early development of tools, cloth, shelters, symbols, and embellishments. P/NP or letter grading.

184. Material Processes. (5) Studio, six hours; outside study, nine hours. Use of hand processes and variety of materials to develop simple to complex surfaces and other physical objects as means for creative expression. P/NP or letter grading.

195A-195B. Community or Corporate Internships in Design | Media Arts. (2-4) Seminar, six and 12 hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business related to design. Students meet on regular basis with instructors and provide periodic reports of their experiences. Courses 195A and 195B may be repeated for combined maximum of 8 units. Individual contract with supervising faculty member required. P/NP or letter grading.
198. Research in Design I | 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 I | Media Arts. (2 to 8) Tutorial, four hours. Preparation: 3.0 grade-point average in major. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be taken for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Design I | Media Arts Faculty Seminar. (2) Seminar, two hours. Limited to graduate design I | media arts students. Designed to familiarize new graduate students with departmental faculty members and their creative work and research to help students select their faculty advisers. S/U grading.

201. Media Arts: Introduction. (5) Formerly numbered C201. Lecture, 12 hours; outside study, 12 hours. Limited to and required of Design I | 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. S/U or letter grading.

CM206. Media Studies. (5) Lecture, three hours; outside study, six hours. Designed for graduate design I | media arts students. Overview and contextual understanding of influences and origins of media, communciation, and technology. Concepts 150 years through reading and discussion of theoretical and historical works. May be repeated for credit with consent of adviser. Concurrently scheduled with course C106. Letter grading.

207. Mathematical Techniques in Design and Media Arts I. (4) Lecture, three hours. Designed for graduate students. Survey of mathematical techniques used in design and computation theory. Sets, relations, posets, lattices, Boolean and Heyting algebras, formal languages and production systems. May be repeated for credit with consent of adviser. S/U or letter grading.

208. Mathematical Techniques in Design and Media Arts II. (4) Lecture, three hours. Designed for graduate students. Survey of mathematical techniques used in design and computation theory. Theory of descriptive geometry, spatial transformations, matrix representations, symmetry and groups, graphs, maps and triangulations. May be repeated for credit with consent of adviser. S/U or letter grading.

CM241. Programming Computer Applications in Architecture and Urban Design. (4) Same as Architecture and Urban Design M227A.) Lecture, three hours; outside study, nine hours. Introductory course in logic of computing through experiments in computer graphics programming. Investigation of both procedural and object-oriented approaches to programming. May be repeated for credit with consent of adviser. Concurrently scheduled with course C141. S/U or letter grading.

CM242. Introduction to Geometric Modeling. (4) (Same as Architecture and Urban Design M227B.) Lecture, three hours; outside study, nine hours. Requisite: course CM241. Survey of geometric and three-dimensional modeling, with emphasis on implementation of three-dimensional solids constructions and editing operations. Basic representations and operations on shapes and solids. May be repeated for credit with consent of adviser. Concurrently scheduled with course C142. S/U or letter grading.

CM243. User Interaction Techniques in Design. (4) (Same as Architecture and Urban Design M227C.) Lecture, three hours; outside study, nine hours. Requisite: course CM241 or knowledge of C++ programming language. Programming techniques for implementing modern computer user interfaces, specifically looking at issues related to building software tools for computer-aided problem solving in architecture and design. May be repeated for credit with consent of adviser. Concurrently scheduled with course C143. S/U or letter grading.

249. Advanced Seminar: Computer Applications. (4) Seminar, three hours. Requisite: course C141 or CM241 or Architecture and Urban Design M227A. Survey of various roles computers may play in design; repeated once for new applications. Topics include representation, search, evaluation functions, and communication. May be repeated for credit with consent of adviser. S/U or letter grading.

CM252A. Programming Media I. (5) Formerly numbered C252A.) Studio, six hours; outside study, nine hours. Limited to majors. Introduction to computer programming within context of art and design. Exploration of conceptual space enabled by electronic media, through exercises, presentations, discussions, and critiques. Weekly exercises balance concept and technique to reveal potential of computer as medium and tool. Experience with programming basics includes procedural and object-oriented programming. History of two- and three-dimensional graphics, file I/O, color models, and image processing. Letter grading.

C252B. Programming Media II. (5) Studio, six hours; outside study, nine hours. Requisite: course CM252A. Limited to majors. Computer programming to develop dynamic interactive art and design. Exploration of conceptual space to be enabled by electronic media and through exercises, presentations, discussions, and critiques, culminating in self-motivated final project. Prototyping with diverse software materials and advanced programming techniques. May be repeated once for new applications. Topics include representation, search, evaluation functions, and communication. May be repeated for credit with consent of adviser. Letter grading.


256. Interactive Environments. (4) Lecture/studio, six hours. Designed for graduate design I | media arts majors. Emphasis on creation of dynamic, art and design. Exploration of conceptual space to be enabled by electronic media and through exercises, presentations, discussions, and critiques, culminating in self-motivated final project. Prototyping with diverse software materials and advanced programming techniques. May be repeated once for new applications. Topics include representation, search, evaluation functions, and communication. May be repeated for credit with consent of adviser. Letter grading.

258. Current State of Technology. (4) Lecture/studio, six hours. Designed for graduate design I media arts majors. Introduction to state-of-art software programs and techniques necessary for design of interactive and multimedia applications. May be repeated for credit with consent of adviser. Letter grading.

M259. Data and Media Arts. (4) (Same as Statistics M237.) Studio, six hours. Requisites: courses C201 or C206, 254. Designed for graduate design I | media arts majors. Emphasis on comprehension of fundamental principles of interactivity and networked environments. May be repeated for credit with consent of adviser. Letter grading.

265. Interactive Environments. (4) Lecture/studio, six hours. Designed for graduate design I | media arts majors. Emphasis on creation of dynamic, digital, and linear models, and image processing. Letter grading.

287. 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.

289. Special Topics in Design. (2 to 8) Seminar, to be arranged. Examination of specific problems relevant to design theory and performance. Topics announced in advance. May be taken for maximum of 8 units. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

401. Design I | Media Arts Studio I. (2 to 8) Studio, to be arranged. Limited to individual graduate design I | media arts students. Introduction to advanced experimentation and integration of media, technologies, and concepts, with emphasis on development of design work of individual graduate students. May be repeated for credit with consent of adviser. Letter grading.

402. Design I | Media Arts Studio II. (2 to 8) Studio, to be arranged. Requisites: courses C206, 254, 256. Continuation of advanced design research based on experimentation integrated into disciplined approach to design process. Focus on development of comprehensive body of work that forms basis of M.F.A. thesis exhibition. May be repeated for credit with consent of adviser. Letter grading.

495. Teaching Assistant Training Practicum. (2) Seminar, three hours; outside study, three hours. Forum for first-year teaching assistants for discussion and exploration of teaching pedagogy and classroom methodology. Problems and strategies 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.
DIsability Studies
Interdisciplinary Minor
College of Letters and Science

UCLA
A316 Murphy Hall
Box 951430
Los Angeles, CA 90095-1430
(310) 825-3223
fax: (310) 267-5166
e-mail: disabilitystudies@college.ucla.edu
http://www.disabilitystudies.ucla.edu

Helen Deutsch, Ph.D., Chair
Faculty Advisory Committee
Emily K. Abel, Ph.D. (Health Services, Women’s Studies)
Bruce L. Baker, Ph.D. (Psychology)
Helen Deutsch, Ph.D. (English)
Joan E. Hahn, R.N., D.N.Sc. (Nursing)
Rachel C. Lee, Ph.D. (English, Women’s Studies)
Victoria E. Marks, B.A. (World Arts and Cultures)
Mary J. O’Conor, Ph.D. (Psychiatry and Biobehavioral Sciences)

Scope and Objectives

The Disability Studies minor introduces undergraduate students to the emerging interdisciplinary field of disability studies, offering a new lens for thinking about the body, society, and culture. The field reorients a marginalized phenomenon at the center of our experience, transforming what is often misconceived as an abnormality of daily life into one of its most basic realities. Faculty members from applied fields in the professional schools (e.g., education, law, medicine, nursing, public health, public policy, and urban planning) collaborate with faculty from academic disciplines across the College of Letters and Science and the School of the Arts and Architecture (e.g., anthropology, English, history, linguistics, psychology, and world arts and cultures) to provide a critical framework for questioning and connecting topics related to disability in these established disciplines.

Through a core course, carefully selected electives, a required two-term internship or search apprenticeship, and a senior capstone project, students in the minor obtain both breadth and depth in their understanding of the concept and practical implications of disability.

Undergraduate Study
Disability Studies Minor

To enter 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. To help plan the internship and course schedule, students are expected to select faculty sponsors with relevant expertise in the academic or service area related to disability studies in which they intend to concentrate. Applications are available at and must be filed with the College Academic Counseling Office, A316 Murphy Hall. For information and questions, e-mail disabilitystudies@college.ucla.edu or call (310) 825-3223.

Required Upper Division Courses (29 to 33 units):
(1) Disability Studies 101, (2) two elective courses selected from Anthropology 147, M168, Asian American Studies M117, Community Health Sciences 100, 132, Disability Studies M121, Education 132, English 180, Gerontology M119O, M140, History 179A, Honors Collegium 142, Linguistics C135, Nursing M158, Psychiatry and Biobehavioral Sciences M180, Psychology M107, M119O, 129C, 132A, 133I, M140, M180, Social Welfare M140, 162, Sociology 148, Spanish M165SL, Women’s Studies M121, (3) two-term internship or research apprenticeship — Disability Studies 195A or 195B, or 196A and 196B — in a community-based agency that provides services or support for persons with disabilities or in an institution or agency at the local, state, or federal level responsible for policy on disability issues or collaboration on a research project focused on an area of disability studies scholarship (a department-based 195 or 196 for two terms may be substituted by petition approved by the faculty advisory committee); students also enroll concurrently in Disability Studies 194 during one term of the internship/research, and (4) disability studies capstone requirement in which students enroll in either Disability Studies 198 or 199 or an approved department 198 or 199 for 6 to 8 units and complete a senior project or honors thesis on a disability studies topic.

No more than one upper division course may be applied toward both this minor and a major or minor in another department or program. All minor courses (except internships) must be taken for a letter grade, with an overall grade-point average of 3.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Disability Studies

Upper Division Courses

101. Perspectives on Disability Studies. (5) Seminar, three hours. Creation of critical framework for understanding concept of disability from sampling of disciplinary perspectives. Organized around productive and central tension in disability studies — between disability as lived subjective experience that is both individual and communal, and disability as objective, medical, legal, and sometimes stigmatized category. Students encouraged to make connections between units and to create their own perspectives on disability in field that defines itself by how it changes. Letter grading.

M121. Topics in Gender and Disabilities. (4) (Same as Women’s Studies M121.) Lecture, three and one half hours. Limited to juniors/seniors. Ways in which issues of disability are affected by gender, with particular attention to various roles, positions, and concerns of women with disabilities. Approach is intersectional, exploring how social categories of class, race, ethnicity, religion, age, sexuality, nationality, and citizenship affect and are affected by gender and disability. Topics may include law (civil rights, nondiscrimination), representation (arts, literature), education, public policy, health. May be repeated for credit with topic and instructor change. P/NP or letter grading.

194. Capstone Research Seminar. (2) Formerly numbered M194.) Seminar, two hours. Enforced requisites: course 195A or 195B. Required of students pursuing Disability Studies minor. Integration of off-campus work with academic theories and concepts within field of disability studies. Students report on their internship experiences and analyze relationship between their internships 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.

195A-195B. Community Internships in Disability Studies I, II. (4-4) Tutorial, one hour; fieldwork, eight hours. Limited to juniors/seniors. Designed to provide academic context for off-campus work in one of three types of government or nonprofit settings: (1) direct service to disabled individuals or their families, (2) research related to disability studies, or (3) work on policy issues related to disability studies. Faculty sponsor and teaching assistant (TA) construct series of reading assignments that examine disability studies issues related to meaningful work at internship site, including analysis of issues such as history and development of publicly funded services, public policy-making process, legislation that organizes work of organizations, ethics, or other interdisciplinary contemporary issues. Students must meet biweekly with TA and submit weekly journals. Final paper required each term. Individual contract with supervising faculty member required. P/NP or letter grading.


199. Senior Project in Disability Studies. (6 to 8) Tutorial, one hour. Enforced requisite: course 194. Limited to juniors/seniors. Required capstone course to Disability Studies minor. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. Letter grading.

EARTH AND SPACE SCIENCES
College of Letters and Science

UCLA
3806 Geology
Box 951587
Los Angeles, CA 90095-1567
(310) 825-3880, (888) ESS-UCLA
or oil exploration or in construction. Students attaining the Ph.D. degree are usually employed by universities or governmental and industrial research groups.

The Bachelor of Arts program in Earth and Environmental Science is intended to provide a broad background in Earth sciences that is especially appropriate for students intending to become K through 12 teachers in Earth, physical, or life sciences. It may also be of interest to students who plan careers in environmental sciences, law, government, business, journalism, public health, medicine, or dentistry. Those who intend to become professional geologists, geochemists, or geophysicists and/or to continue into graduate studies in Earth or space sciences are urged to pursue one of the B.S. degrees.

Undergraduate Study

Geology B.S.

Preparation for the Major

**Required:** Earth and Space Sciences 1 or 1F or 1H, 51A, 51B, 61; Chemistry and Biochemistry 14A, 14B, and 14BL, or 20A, 20B, and 20L; Life Sciences 1; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4A, and 4B, or 6A, 6B, and 6C; Civil and Environmental Engineering 15 or Mechanical and Aerospace Engineering 20 or Program in Computing 10A or knowledge of Fortran or C++ demonstrated by examination. All courses 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](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

The Major

**Required:** Earth and Space Sciences 103A, 103B, 111, 112, 121, 135, 139; Civil and Environmental Engineering 108, 120, 121, 150; one course from Earth and Space Sciences C126, C132, 134, 136C, 137, C141, 150, Civil and Environmental Engineering 128L, 151, 155, Geography 100.

Geology/Paleobiology B.S.

Preparation for the Major

**Required:** Earth and Space Sciences 1 or 1F or 1H, 3, 16 or 17, 51A, 51B, 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 4A, or 6A and 6B. All courses 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](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.
The Major


Geophysics/Applied Geophysics B.S.

Preparation for the Major

Required: Earth and Space Sciences 1 or 1F or 1H, 51A, 51B, 61; Chemistry and Biochemistry 20A; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL; Civil and Environmental Engineering 15 or Mechanical and Aerospace Engineering 20 or Program in Computing 10A or knowledge of Fortran or C++ demonstrated by examination. All courses must be passed with a minimum grade of C–.

Transfer Students

Transfer applicants to the Geophysics/Applied Geophysics 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; 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.

Earth and Environmental Science B.A.

Preparation for the Major

Required: Earth and Space Sciences 1 or 1F or 1H, 5, 61; Chemistry and Biochemistry 14A, 14B, and 14BL, or 20A, 20B, and 20L; Life Sciences 1; Mathematics 3A, 3B, and 3C, or 31A and 31B; Physics 1A, 1B, and 4AL, or 8A, 6B, and 6C, or 6AH, 6BH, and 6CH. All courses must be passed with a minimum grade of C–.

Transfer Students

Transfer applicants to the Earth Sciences 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 and one year of calculus-based physics with laboratory 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.

Geophysics/Geophysics and Space Physics B.S.

Preparation for the Major

Required: Earth and Space Sciences 1 or 1F or 1H, 9; Chemistry and Biochemistry 20A, 20B, 20L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL, 17, 18L; Civil and Environmental Engineering 15 or Mechanical and Aerospace Engineering 20 or Program in Computing 10A or knowledge of Fortran or C++ demonstrated by examination. All courses 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: Three courses from Earth and Space Sciences 111, 112, 116, 119; three additional upper division courses from Earth and Space Sciences other than 100; three courses from Geography 100 and 100A, 101 and 101A, 104, 105 and 105A, M107, M109, 110, 120, 121, 124, 125, M127, 131.

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.

Geochemistry Minor

Geochemistry emphasizes use of minerals, magmas, elements, and isotopes to date events, determine rates, and track matter through its cycles in the planets and biosphere. These skills are valuable in environmental and natural-resource work and anthropology, as well as in studying the histories of the planets.

To enter the Geochemistry minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (12 units): Earth and Space Sciences 1, 51A, 51B.

Required Upper Division Courses (20 to 26 units): Two courses from Earth and Space Sciences C106, C107, C109, and three courses from 103A, 103B, 103C, C106 or C107 or C109 (whichever course was not applied above), 152, 153.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

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 or 1F, 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.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

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.
Required Upper Division Courses (20 units):
- Earth and Space Sciences 134, 135, and three courses from M140, 152, 153, 154, 155.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmnrintro.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.) and Doctor of Philosophy (Ph.D.) degrees in Geochemistry, Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Geology, and Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Geophysics and Space Physics.

Earth and Space Sciences

Lower Division Courses

1. Introduction to Earth Science. (4) Lecture, three hours; laboratory, two hours. Not open to students with credit for or currently enrolled in course 1F, 1H, or 100. Elements of Earth science; study of Earth materials; nature and interpretation of geologic evidence; study of geologic processes; historical aspects of geology. P/NP or letter grading.

1F. Earth Science with Fieldwork. (5) Lecture, three hours; laboratory, two hours; two field days. Not open to students with credit for or currently enrolled in course 1 or 100. Elements of Earth science; study of Earth materials; nature and interpretation of geologic evidence; study of geologic processes; historical aspects of geology. Introduction to field study of selected problems in geologic history. P/NP or letter grading.

1H. Fundamentals of Earth Science. (4) Lecture, three hours; laboratory, two hours; two field days. Not open to students with credit for or currently enrolled in course 1 or 100. Particularly recommended for future physical sciences majors with strong high school or some lower division preparation. Introduction to Earth materials, physical geology, and mineralogy, with examples of geophysical and geochemical methods. P/NP or letter grading.

11. Geologic Maps. (4) Lecture, three hours; laboratory, one hour; one field day. Enforced requisite: completion of course 1 or 1F or 1H. Planning, creation, and interpretation of geologic maps, including both practical and philosophical problems that arise. Topographic and geologic mapping in field. Interpretation of published maps in laboratory. P/NP or letter grading.

10. Exploring Mars, the Red Planet. (4) Lecture, three hours; laboratory, two hours; field trips. Designed for nonmajors. Not open to students with credit for course 1 or 1H. Fundamentals of physical geology and Earth history; major problems of geology, such as continental drift and development of large-scale features of Earth; physical and biological evolution. P/NP or letter grading.

103A. Igneous Petrology. (6) Lecture, two to three hours; laboratory, six hours; field trips. Requisites: courses 51A, 51B, Chemistry 14B and 14BL, or 20B and 20L, Mathematics 3B or 31B. Mineralogy, chemical composition, and field occurrence of igneous rocks with reference to their origin by melting in Earth. Introduction to thermodynamics as applied to petrology. Formation of magma, its movement, eruption, crystallization, and chemical evolution. Petrologic structure of crust and mantle and its relation to seismology. Overview of petrological and chemical evolution of Earth, moon, and other planets from their origin to the present. P/NP or letter grading.

103B. Sedimentary Petrology. (6) Lecture, two to three hours; laboratory, six hours; field trips. Requisites: courses 51A, 51B, Chemistry 14B and 14BL, or 20B and 20L, Mathematics 3B or 31B. 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. (6) Lecture, two to three hours; laboratory, six hours; field trips. Requisite: course 103B. Interpretation of metamorphic rocks based on field occurrence, mineralogical composition, texture, and application of physical and chemical principles. P/NP or letter grading.

C106. Physical Geochemistry. (4) Lecture, three hours. Requisite: course 51B. Basic principles of physical chemistry for geologic applications. Thermodynamics and kinetics of reactions among minerals, natural waters, and magmas; construction and interpretation of phase diagrams; case studies of important geochemo- and environmental issues. Concurrently scheduled with course C206. P/NP or letter grading.
117. Petroleum Geology. (4) Lecture, three hours. Requisites: courses 61, 111. Geology applied to exploration of natural gas and petroleum; techniques of surface and subsurface geology; problems of petroleum geology.

119. 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 subsidence, landslides, earthquakes, and other geologic aspects of urban planning and subsurface disposal of liquids and solid wastes. P/NP or letter grading.


C141. Basin Analysis. (4) Formerly numbered 141.) Lecture, three hours; laboratory, three hours; field trips. Requisites: courses 103B, 111. Mechanisms of sedimentary basin development, flexural and thermal subsidence, isostasy, subsidence analysis and basin modeling, sediment provenance, tectonic settings. Concurrently scheduled with course C241. P/NP or letter grading.


152. Physics of Earth. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 31A, 31B, Physics 1A or 1A, 1B or 1B, 1C or 1C. Corequisite: course 111. Structure of Earth, especially North America. One area of Earth to be investigated in detail, with emphasis on its geologic evolution through time. P/NP or letter grading.

153. Oceans and Atmospheres. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 31A, 31B, 32A, Physics 1A, 1B, and 1C or 1A, 1B, 1H, and 1CH, or 6A, 6B, 6C, and 4AL, 4BL, 5L. Not open for credit to students with credit for course 136A. Physical oceanography, meteorology, atmospheric radiation and climate, energetics and dynamics of oceanic and atmospheric circulation systems. P/NP or letter grading.


155. Planetary Physics. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 31A, 31B, 32A, Physics 1A, 1B, and 1C or 1A, 1B, 1H, and 1CH. Physics of chemistry of Earth’s oceans and atmosphere; origin and evolution of planetary atmospheres; biogeochmical cycles, atmospheric radiation and climate, energetics and dynamics of oceanic and atmospheric circulation systems. P/NP or letter grading.

160. Field Seminar. (2 to 6) Seminar, three hours; discussion, one hour; fieldwork, five to 20 days. Requisite: course 61. Field-based teaching and discussion forum which varies in focus from general geology through structure and tectonics, sedimentology, igneous and metamorphic petrology, volcanology, or other subdisciplines as prescribed. May be repeated for credit. Concurrently scheduled with course C260. P/NP or letter grading.
Introduction to Seismology. (4)
Field area varies from year to year. May be repeated.
Resolution of problems in Southern California geology, one hour; fieldwork, 10 days. Requisite: course 51B. Over
problems of regional tectonics; rheology of mantle; thermal convection.
Lateral inhomogeneities in Earth: seismic velocities, petrology, geothermal and gravitational
properties to crystal structure.
Point, translation, and space group symmetry, diffraction, and experiment. Geological relations, petrography; paleoenviron-
ment, tectonic settings. Concurrently scheduled with course 216. Students required to read
more recommended references, make class presen-
tations on particular topics resulting from that reading, and lead seminar-type discussions on their selected topics. S/U or letter grading.
Introduction to Planetary Dynamos. (4)
Lecture, three hours; laboratory/discussion, 90 minutes. Requisites: courses 200A, 200B, 200C. Designed for graduate students. Basic principles of planetary dyna-
mo generation. Planetary core dynamics and core convection; mean field dynamo theory; kinematic dy-
namo theory; survey of modeling techniques and re-
sults. S/U or letter grading.
Planetary Atmospheres. (4)
Lecture, three hours. Requisite: course 200B. Planetary atmospheric
structure, dynamics, and composition. Topics in-
clude spacecraft observations; origin and evolution of atmospheres; photochemistry, radiation mechanisms, and transport; atmospheric waves and general circula-
tion; wave-mean flow and turbulence; remote sens-
ing and inversion techniques.
X-Ray Crystallography. (4)
Lecture, three hours; laboratory, three hours. Requisite: course 51B. Point, translation, and space group symmetry, diffraction of X-ray, reciprocal lattice theory; single crystal X-
ray methods, diffraction effects at professional level. Examination of groups of rock-forming minerals (e.g.,
feldspars), integrating such aspects as crystal struc-
ture, crystal chemistry, phase equilibria, and petro-
genesis.
Geophysics and Chemistry of Planetary Interi-
ors I. (4) Chemical compositions of Earth and plan-
etrons; rheology of mantle; thermal convection.
Physics and Chemistry of Planetary Interi-
ors II. (4) Lateral inhomogeneities in Earth: seismic velocities, petrology, geothermal and gravitational
variations; evidences of motion; remanent magne-
tatism, seismic motions; postglacial rebound; plate tec-
tonics; rheology of mantle; thermal convection.
Advanced Igneous Petrology. (4)
Lecture, three hours; laboratory; three hours; field trips. Requi-
site: course 103A. Designed for graduate students. Understanding the genesis of igneous rocks based on geochemical, tectonomorphic, and other geological evidence and principles. Concurrently scheduled with course 216. Graduates students required to read
more recommended references, make class presen-
tations on particular topics resulting from that reading, and lead seminar-type discussions on their selected topics. S/U or letter grading.
Physics of Planets. (4)
Lecture, three hours; discussion, four hours; laboratory; three hours. Thermochemistry, Earth's interior, seismic
waves, and planet-forming compounds. Variation of elastic constants with temperature and pressure. Application of shock-wave experiments to equations of state.
 Petrologic Phase Equilibria. (4)
Lecture, three hours; discussion; three hours. Requisites: course 51B, Chemistry 110B. Theory of governing homoge-
neous and heterogeneous equilibria, with selected applications to mineral stability relations in igneous and metamorphic rocks (fractional crystallization, par-
tial melting, hydrothermal solutions, element partition-
ing in coexisting phases). S/U or letter grading.
Metamorphic Petrology. (4)
Lecture, three hours; laboratory; six hours. Preparation: one intro-
ductive petrology course. Modern approach to interpreta-
tion of metamorphic rocks in light of observation, the-
ory, and experiment. Geological relations, petrograph-
ec evidence, thermodynamics of phase equilibria, projections, chromatic relationship
ships, use of piezobirefringent haloes, Rayleigh deple-
tion model, isotopic fractionation, environmental fac-
tors of metamorphism. Laboratory study of represen-
tative metamorphic rocks and suites of rocks selected to illustrate topics discussed in lectures.
Space Plasma Physics. (4)
Lecture, three hours. Requisite: course 200C or Physics 210A. Physics of plasmas in space, including treatments based on magnetohydrodynamics and kinetic theory. Applications to solar or planetary winds, steady-state magnetospheres, magnetospheric convection, sub-
storm processes, magnetic merging, field-aligned cur-
rrents and magnetosphere/ionsphere coupling, ring current dynamics, and wave particle instabilities. S/U or letter grading.
Basin Analysis. (4)
Lecture, three hours; lab-
oratory, three hours. Requisites: courses 103B, 111. Mechanisms of sedimentary basin development, flex-
ural and thermal subsidence, isostasy, subsidence analysis, quantitative basin modeling, sediment prov-
enance, tectonic setting. Course is scheduled with course C141. S/U or letter grading.
Sandstone Petrology. (4)
Lecture, two hours; laboratory, four hours. Requisites or corequisites: course C141. Petrographic study of sandstones, with emphasis on provenance, petrologies, and paleo-
tectonic reconstructions.
Advanced Physical Sedimentology. (4)
Lecture, three hours; field trips. Requisites: courses 103B, 111. Fluid dynamics, sediment transport, and
landform and analytic methods to stress determina-
tion. S/U or letter grading.
Stress in Lithosphere. (4)
Lecture, three hours. Requisite: course 202 or Civil Engineering 108. Over-
continental processes, tectonics, seismic stress drops; effects of erosion, cooling, Earth elliptic-
ty, topography, and density anomalies. State of stress in plate boundaries and interiors. Application of finite element and analytic methods to stress determina-
tion. S/U or letter grading.
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.
Geophysical Prospecting. (4)
Lecture, three hours. Mars geology, geophysics, geochemistry. Cratering history, surface/ atmosphere interaction, volatiles, polar caps, atmos-
pheric, climate. S/U or letter grading.
Mineralogy. (4) Seminar, three hours. Examination of groups of rock-forming minerals (e.g.,
feldspars), integrating such aspects as crystal struc-
ture, crystal chemistry, phase equilibria, and petro-
genesis.
Geochimistry. (4) Seminar, two hours; discussion, two hours. Phase equilibria under crustal conditions, chemistry of ocean waters, recent and ancient sediments, structure and chemistry of up-
per mantle, geochronology, cosmochemistry, and
isotopes.
Planetary Petrology. (4) Seminar, three hours. Problems of igneous or metamorphic petrology: methods of evaluating phase conditions of meta-
morphism; diffusion in mineralogic systems; origin of ultramafic rocks and problems of the mantle; element fractionation among coexisting phases; other current subjects in the field. S/U or letter grading.
Sedimentology. (4) Seminar, three hours. Processes of sediment transport and deposi-
tion; deep sea sediments; deltas and estuaries; pe-
trology of carbonates, sandstones, and lutes; stratig-
raphy; paleo-environmental studies.
Structural Geology and Tectonics. (4) Seminar, three hours. Flow and fracture in Earth's crust from microscopic to continental scale and in ex-
periments. Examples may include metamorphic terranes, glaciers, plutons, volcanoes, and consolidated or unconsolidated sediments. Modern concepts of oceanic basins; processes leading to segregation of continental-type rocks.
Paleontology. (4) Seminar/discus-
sion, three hours. Advanced topics in paleobiology, biostatigraphy, paleoecology, and paleobiogeogra-
phy, with emphasis on relations to other disciplines.
Paleoecology. (4) Seminar, two hours; discussion, two hours. Requisites: course 244. Basin evolution and paleogeography, with emphasis on the Phanerozic of the Western U.S.
Field Seminar. 2 to 6 Seminar, three hours; discussion, one hour; fieldwork, five to 20 days. Requis-
te course 61. Field-based teaching and discus-
sion forum which varies in focus from general geology through structure and tectonics, sedimentology, igneous and metamorphic petrology, volcanology; or other subdisciplines as prescribed. May be repeated for credit. Concurrently scheduled with course C160. S/U or letter grading.
Magnetospheric Plasma Physics. (4) Lectures, discussions, and exercises on specific advanced topics in magnetospheric plasma physics. Previous courses examined magnetic storms, magne-
tospheric substorms, ultralow frequency waves, and adiabatic particle motion in Earth's radiation belts.
Application of Remote Sensing in Field. (3) Fieldwork, four hours; laboratory, one hour. Requisite:
course 150. Application of remote-sensing techniques to field situations. Digital analysis and interpretation of near-infrared, thermal-infrared, and microwave data from satellites and aircraft. Field observation of study site in California desert for testing hypotheses during week between Winter and Spring Quarters. Concur-
rently scheduled with course C162. S/U or letter grading.
282. Seminar: Geophysics. (4) Seminar, two hours; discussion, two hours. Seismology, geophysical prospecting, electromagnetics, and selected topics in Earth physics. Content varies from year to year. May be repeated for credit.

275. Geocomplexity and Earthquake Predictions. (4) Lecture, two hours; discussion, two hours. Understanding and prediction of critical phenomena (defined as abrupt overall changes) in Earth’s crust, mathematical modeling and analysis of data from seismology, remote sensing, and hydrology. Extensions to critical phenomena in engineering and socioeconomic systems. Letter grading.

M285. Origin and Evolution of Solar System. (4) (Same as Astronomy M285.) Dynamical problems of solar system; chemical evidence from geochemistry, meteorites, and solar atmosphere; nucleosynthesis; solar origin, evolution, and termination; solar nebula, hydromagnetic processes, formation of planets and satellite systems. Content varies from year to year. May be repeated for credit. S/U grading.


289. Seminar: Fluid Dynamics. (2) Seminar, one to two hours. Problems of current interest in fluid dynamics, with emphasis on geophysical applications. May be repeated for credit. S/U grading.


295A-295B-295C. Seminars: Climate Dynamics. (2 to 4 each) (Same as Atmospheric and Oceanic Sciences M272A-M272B-M272C and Geography M270A-M270B-M270C) Seminar, two hours. Archaeological, geochemical, micropaleontological, and stratigraphic evidence for climate change throughout geological past. Rheology and dynamics of climatic sub-systems: atmosphere and oceans, ice sheets and marine isotope. Climate change. Climate of other planets. Modeling, simulation, and prediction of modern climate on monthly, seasonal, and interannual time scale. May be repeated for credit. S/U or letter grading.

296A. Research Topics in Earth and Space Sciences. (1 each) (Formerly numbered 269A-269B-269C) 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. May be repeated for credit. S/U grading.

296A. Rock Deformation, Structural Geology, Tectonics. (3) S/U grading.

296B. Volcanology and Geochemistry of Volcanic Rocks. (3) S/U grading.

296C. Seismology and Solid Earth Physics. (3) S/U grading.


296E. Sedimentation and Tectonics. (3) S/U grading.

296F. Seismology. (3) S/U grading.

296G. Planetary and Orbital Dynamics. (3) S/U grading.


296J. Meteoromorphic Petrology. (3) S/U grading.

296K. Space Physics. (3) S/U grading.

296L. Magnetic Phenomena. (3) S/U grading.

296M. Planetary Physics. (3) S/U grading.

296N. Martian Surface and Atmosphere. (3) S/U grading.

296Q. Tectonics and Stratigraphy. (3) S/U grading.

296P. Chemical Geodynamics. (3) S/U grading.

296Q. Paleobiology. (3) S/U grading.

296R. Planetary and Space Physics. (3) S/U grading.

296S. Precambrian Paleobiology. (3) S/U grading.

296T. Geophysical Fluid Dynamics. (3) S/U grading.


296V. Cosmochemistry. (3) S/U grading.

296X. Earthquakes and Earth Structure. (3) S/U grading.

296Z. Structural Geology, Tectonics. (Formerly numbered 296W.)


298. Advanced Topics in Earth and Space Sciences. (2 to 4) Lecture, two to four hours. S/U or letter grading.

M370A. Integrated Science Instruction Methods. (4) (Same as Chemistry M370A and Physics M370A.) Lecture, two hours; discussion, one hour; laboratory, one hour. Preparation: one introductory lower division year (including laboratory) each of chemistry, physics, and physics and at least two Earth science courses, preferably one with field experience. Classroom management, lesson design, assessment, history of science instruction. S/U or letter grading.

M370B. Integrated Science Instruction Methods. (4) (Same as Chemistry M370B and Physics M370B.) Lecture, two hours; discussion, one hour; laboratory, one hour. Require: course M370A or Chemistry M370A or Physics M370A. Application of learning theory to science instruction and classroom management, including use of technology, collaborative learning, laboratory safety, ethical issues, field experiences, and professional development. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Earth and Space Sciences. (2) Seminar, one hour; discussion, two hours. Classroom practice in teaching, with individual and group instruction on related educational methods, materials, and evaluation. Special emphasis on integration of technology in classroom. S/U grading.
their work, the strength of the program is the access it provides to an understanding of regional and global ties that characterize East Asia today.

**Undergraduate Study**

**East Asian Studies B.A.**

Two years of language, two preparation courses, and a total of 13 upper division courses are required. Students must take a minimum of nine courses in the area of their choice. The remaining four courses should be taken in another area of concentration within the major. No more than eight courses may be from a single department. Students should select the courses from the lists below. Courses on East Asia not listed below, offered only on a temporary basis, may also be applied toward the major.

**China Concentration**

**Preparation for the Major**

*Required:* Chinese 1, 2, 3, 4, 5, 6, History 11A or 11B, one lower division social sciences course in an area other than history (see the academic counselor for the list).

**Transfer Students**

Transfer applicants to the East Asian Studies (China) 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, one history of China course, and one lower division social sciences course in an area other than history.

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**


**Korea Concentration**

**Preparation for the Major**

*Required:* Korean 1, 2, 3, 4, 5, 6, 50, one lower division social sciences course (see the academic counselor for the list).

**Transfer Students**

Transfer applicants to the East Asian Studies (Korea) 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, one Korean civilization course, and one lower division social sciences 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**


**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA

---

**ECOLOGY AND EVOLUTIONARY BIOLOGY**

**College of Letters and Science**

**UCLA**

2235 Life Sciences

Box 951606

Los Angeles, CA 90095-1606

(310) 825-1959, Graduate Office

fax: (310) 206-3987

e-mail: eebgrad@eeb.ucla.edu

http://www.eeb.ucla.edu

Victoria L. Sork, Ph.D., Chair

**Professors**

Clifford F. Brunk, Ph.D.

Donald G. Buth, Ph.D.

Arthur C. Gibson, Ph.D.

Malcolm S. Gordon, Ph.D.

Particia A. Gowaty, Ph.D.

Henry A. Hespenheide, 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.

Barnett A. Schlinger, Ph.D.

Thomas B. Smith, Ph.D.

Victoria L. Sork, Ph.D.

Charles E. Taylor, Ph.D.

Blaire Van Valkenburgh, Ph.D.

Robert K. Wayne, Ph.D.

Cheryl Ann Zimmer, Ph.D.

Richard K. Zimmer, Ph.D.

**Professors Emeriti**

AA Barber, Ph.D.

Joseph Cascarino, Ph.D.

Martin L. Cody, Ph.D.

Nicholas E. Collas, Ph.D.

Willur T. Ebersold, Ph.D.

Eric B. Edney, Ph.D.

Franz Engelmann, Ph.D.

Elma González, Ph.D.

William M. Hamner, Ph.D.

J. Lee Kavanau, Ph.D.

Harlan Lewis, Ph.D.

Owen R. Lunt, Ph.D.

Austin J. Macnair, 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.

Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmgrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.
and Evolution and Marine Biology — provide remaining two majors — Ecology, Behavior, and Evolutionary Biology offer 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 Arts degree requires, in addition to specified coursework, completion of either a comprehensive examination or the performance of original research culminating in a thesis. The Ph.D. degree requires independent and innovative research that ultimately results in a dissertation.

**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 the biological subjects, as well as advanced in-depth exposure to some of them. The Master of Arts degree requires, in addition to specified coursework, completion of either a comprehensive examination or the performance of original research culminating in a thesis. The Ph.D. degree requires independent and innovative research that ultimately results in a dissertation.

**Undergraduate Study**

Students may earn a Bachelor of Science degree in one of three different majors within the department: Biology (general biology); Ecology, Behavior, and Evolution; and Marine Biology. The majors build on similar lower division introductory courses and differ primarily in the upper division requirements. The Biology major is designed for students who desire exposure to a wide range of biological subjects. The remaining two majors — Ecology, Behavior, and Evolutionary Biology offer 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 the biological subjects, as well as advanced in-depth exposure to some of them. The Master of Arts degree requires, in addition to specified coursework, completion of either a comprehensive examination or the performance of original research culminating in a thesis. The Ph.D. degree requires independent and innovative research that ultimately results in a dissertation.

**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; 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.

All core courses must be passed with a grade of C– or better and must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade below C– in two core courses, unless they are in separate courses or repetitions of the same course, are subject to dismissal from the major.

**Transfer Students**

Transfer applicants to the Biology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

**Refer to the UCLA Transfer Admission Guide at** [http://www.admissions.ucla.edu/prospect/adm_tr.htm](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 8 units from Ecology and Evolutionary Biology 100, 109, 116, 120, 121
2. At least 8 laboratory units from Ecology and Evolutionary Biology 101, 103, 105, 109, 110, 111, 112, 113A, 114A, 115, 117, 128, 134A, 136, 162, 170, 181 (4 units from the Field Biology Quarter or Marine Biology Quarter may be applied, and one course from Microbiology, Immunology, and Molecular Genetics 101L, Molecular, and Developmental Biology 104, 120L, Physiological Science 107, or 166 may be included)

3. At least 8 units from Ecology and Evolutionary Biology C119, 122, 129, 133, 135, 137, M139, 146, 151A, 154, 168, 198A and 198B, 199 (4 units), Molecular, Cell, and Developmental Biology 138, 165A (8 units from the Field Biology Quarter or Marine Biology Quarter may be included, and any departmental course not applied under item 1 or 2 above may be applied in this category)

4. Chemistry and Biochemistry 153A, 153L

5. At least 12 units from the following: Anthropology 120 and/or one course from 124, 124P, 127P, or 128A, Atmospheric and Oceanic Sciences M105 (or Ecology and Evolutionary Biology M139) or one course from 102, 103, 104, or 130, Biomathematics 110 and/or Biostatistics 100B, chemistry (except Chemistry and Biochemistry 193A through 199), Earth and Space Sciences 116, Ecology and Evolutionary Biology 187, 188, 198A and 198B, 199 (4 units), 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 199C), molecular, cell, and developmental biology (except Molecular, Cell, and Developmental Biology 190A through 199D), Neurosciences 101A, 101B, 101C, 102, 110, 114, 148, physics (except Physics 190 through 199), physiological science (except Physiological Science 191 through 199), Psychology 115 (any course not applied under item 1, 2, or 3 above may be applied in this category).

A maximum of 8 units of the Ecology and Evolutionary Biology 198 series or 4 units of Ecology and Evolutionary Biology 199 may be applied toward the major. Credit for 199 courses from other departments may not be applied.

Courses 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.**

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; Chemistry and Biochemistry 1A, 1B, 14B, 14CL, 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.

All core curriculum courses must be passed with a grade of C– or better and must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade below C– in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

**Transfer Students**

Transfer applicants to the Ecology, Behavior, and Evolution major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

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

**The Major**

Students must complete the following courses:

1. Ecology and Evolutionary Biology 109
2. At least 4 laboratory units from Ecology and Evolutionary Biology 101, 105, 110, 136, 170, 181
3. At least 4 marine organismic biology or physiology units from Ecology and Evolutionary Biology 101 (unless taken under item 2), 105 (unless taken under item 2), 107, 112, 128, 137, 162, 168, 170 (unless taken under item 2), Physiological Science 166
4. At least 4 ecology and behavior units from Ecology and Evolutionary Biology 100, 116, C119, 122, 129, 136
5. At least 4 evolution units from Ecology and Evolutionary Biology 120, 121
6. One field quarter consisting of four courses from the Marine Biology Quarter (MBQ) or equivalent field studies given elsewhere (for a 16-unit equivalent, see undergraduate adviser)
7. One additional physical, chemical, or geological oceanography course from Atmospheric and Ocean Sciences 102, 103, 104, M105 (or Ecology and Evolutionary Biology M139), 130, Chemistry and Biochemistry 103, 153A, Earth and Space Sciences 100, 116, 119, C141, 153, Geology 100, 101, 103, M106, 123, 130, 168, 169, Mechanical and Aerospace Engineering 103, 150A
8. One additional course from item 3, 4, 5, 6, or 7 not applied above

Courses applied toward requirements for preparation for the major and the major must be taken for a letter grade. Marine Biology majors must earn a C– or better in each course taken as preparation for the major, and at least a 2.0 (C) overall average in all courses applied toward the major.

**Preparation for the Major**

**Life Sciences Core Curriculum**

**Required:** Life Sciences 1, 2, 3, 4; Chemistry and Biochemistry 1A, 1B, 14B, 14CL, 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.

All core curriculum courses must be passed with a grade of C– or better and 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.

**Field Biology**

The department offers two quarter-long programs of advanced courses in field biology: the
Field Biology Quarter (FBQ) and the Marine Biology Quarter (MBQ). These programs focus on the biology of organisms living in their natural environments, emphasize independent student research projects, and take place at field sites away from the UCLA campus. The course composition varies somewhat from year to year, but each program always carries 16 units of course credit. The Field Biology Quarter involves some combination of Ecology and Evolutionary Biology 103, 113B, 114B, 115, 118, 124, 125, 126, 132, and 134B. The Marine Biology Quarter includes some combination of Ecology and Evolutionary Biology 102, 106, 123, 147, 148, 163, 164, and 165. 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 CM186B, Geography 168, 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, 3235 Life Sciences. All degree requirements, including the specific requirements for this minor, must be fulfilled within the unit maximum set forth by the College of Letters and Science.

Non-life sciences majors wishing to minor in Conservation Biology should be aware that preparation courses in chemistry, life sciences, mathematics, and physics are requisites to some of the upper division courses accepted for the minor.

Required Lower Division Course (5 units): Life Sciences 1.

Required Upper Division Courses (28 units minimum): Ecology and Evolutionary Biology 100, 116 (or Environment 121), and four to six courses from 101, 103, 105, 109, 111, 112, 114A, 122, 129, 151A, 154, 176, 180.

No more than two upper division required courses may be applied toward both this minor and a major or minor in another department or program, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult the undergraduate counselors before enrolling in any courses for the minor.

All minor courses must be taken for a letter grade, with a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gds.net/ucla.edu/gdasa/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 Ecology and Evolutionary Biology offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Biology.

Ecology and Evolutionary Biology

Lower Division Courses
10. Plants and Civilization. (4) Lecture, three hours; demonstration, one hour. Designed for nonmajors. Origin of crop plants; man's role in development, distribution, and modification of food, fiber, medicinal, and other plants in relation to their natural history. P/NP or letter grading.

11. Biomedical Research Issues in Minority Communities. (5) Discussion, four hours. Limited to 30 students. Discussions and student presentations on biomedical research as it affects minority communities, with emphasis on methodology, design, consequences, and ethics of current research. Discussion leaders provide information on preparation and training for research careers. Fall or winter quarter.

12. Biodiversity and Extinction: Crisis and Conservation. (4) Lecture, three hours; discussion, one hour. Examination of ecological and evolutionary principles necessary to understand nature and importance of worldwide environmental crisis. Research by students of specific conservation issues and presentation of results to class. P/NP or letter grading.

13. Evolution of Life. (4) Lecture, three hours; discussion, one hour. Not open to life sciences majors. Limited to 100 students. Introduction to biology within framework of evolutionary theory. Relationships of evolutionary thought to other areas of knowledge and society. Natural selection and origin of variation examined in context of genetics, molecular biology, physiology, population dynamics, behavior, and ecology. Emphasis on critical role of historical processes. P/NP or letter grading.


21. Field Biology. (4) Lecture, three hours; discussion, two hours, or field trips, three to four hours. Recommended preparation: Life Sciences 15. Not open for credit to students with credit for course 122 or Life Sciences 1. Introduction to natural history of Western North America, especially Southern California. Classification, distribution, and ecology of common plants and animals. P/NP or letter grading.

25. Marine Biology. (5) Lecture, three hours; discussion, two hours; field trips, two hours. Not open for credit to students with credit for Earth and Space Sciences 15. Physical and chemical processes that take place in oceans, with emphasis on their effects on organisms. P/NP or letter grading.

50. Desert Life. (4) Lecture, three hours; laboratory, two hours. Introduction to fundamental structural, physiological, and behavioral features of desert organisms, with special emphasis on deserts of Western North America. P/NP or letter grading.

95. Lower Division Internship in Biology. (4) Tutorial/fieldwork, three hours per week per unit. Internship course for lower division students to be supervised by Center for Community Learning, fieldwork site, and faculty adviser. Consult Undergraduate Office for more information. May be repeated twice. Individual contract with supervising faculty member required. P/NP grading.

97. Variable Topics in Ecology and Evolutionary Biology. (1 to 4) Seminar, three to 12 hours. Current issues in research in ecology and evolutionary biology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with consent of instructor. P/NP or letter grading.

Upper Division Courses
100. Introduction to Ecology and Behavior. (5) Lecture, three hours; discussion, two hours. Required: Life Sciences 1. Not open for credit to students with credit for course 118, C119, 122 through 126, 129, 132 through 134B, 136, or 151B. Introduction to methods and topics in ecology and behavior. Growth and regulation of populations, organization of communities and ecosystems, biogeography, and behaviors animals use to find food, choose mates, and interact in social groups. Understanding scientific method, critical evaluation of research papers, and development of scientific writing skills. 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 mangroves, with focus on form and function of marine plants and their ecological role in different marine habitats and ecosystems. Letter grading.

102. Biology of Marine Invertebrates. (4) Five-
week intensive course. Lecture, five hours; laboratory, 15 hours. Requisite: Life Sciences 1. Morphology, systematics, life histories and natural history, ecology, behavior, and physiology of marine invertebrates. Given off campus at marine science center. P/N or letter grading.

103. Plant Evolution and Systematics. (6) Lecture, three hours; laboratory, three hours; field trip. Requi-
sites: Life Sciences 1, 4. Evolution, systematics, mor-
phology, principles of taxonomy, phylogenography, phylogenetic analysis, speciation, and natural history of plants. Letter grading.

105. Biology of Invertebrates. (6) Lecture, three hours; laboratory/field trips, six hours. Requisite: Life Sciences 1. Introduction to systematics, evolution, natural history, morphology, and physiology of inverte-
brates. P/N or letter grading.

106. Experimental Invertebrate Biology. (4 or 6) Lecture, two hours; laboratory, 12 hours. Requi-
sites: course 105, Physiological Science 166 (may be taken concurrently). Offered either as 6-unit quarter-
long course or as 4-unit Marine Biology Quarter course. Advanced course of natural history, physiolo-
gy, biochemistry of invertebrates, with emphasis on independent laboratory and field investigations. P/N or letter grading.

107. Evolution, Development, and Function of In-
vertebrate Animals. (6) (Formerly numbered C107.) Lecture, three hours; laboratory, three hours; three weekend field trips. Requisite: course 105 or comple-
tion of Marine Biology Quarter. Advanced invertebrate biology course exploring evolutionary relationship of animal groups and evolution of marine species, com-
parative development and developmental genetics of invertebrate form, and form and function as they re-
late to marine invertebrates. Letter grading.

109. Introduction to Marine Science. (5) (Formerly numbered C109.) Lecture, three hours; laboratory, three hours; weekend field trips. Requisite: Life Sci-
ences 1. Strongly recommended for prospective Ma-
rine Biology Quarter students. Introduction to physi-
cal, chemical, and biological aspects of marine sci-

110. Vertebrate Morphology. (6) Lecture, six hours; laboratory, five hours. Requisite: Life Sciences 1, 2, 3, 4. Study of vertebrate morphology, func-
tion, and evolution from viewpoint of comparative anatomy of adult forms, biomechanics, development, and paleontology. Laboratory study of selected verte-
brates. Letter grading.

111. Biology of Vertebrates. (5) Lecture, three hours; laboratory, three hours; four to one- to two-day field trips. Requisite: Life Sciences 1. Adaptations, be-
havior, and ecology of vertebrates. Letter grading.

112. Ichthyology. (6) Lecture, three hours; labora-
tory, six hours; field trips. Requisite: Life Sciences 1. Highly recommended for courses 110. 111. Biology of freshwater and marine fishes, with emphasis on their evolution, systematics, morphology, zoogeography, and ecology. Field trips to examine fishes of Southern California shoreline, tidepools, and coastal streams. Letter grading.

113A. Herpetology. (5) Lecture, three hours; labora-
atory, 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. (8) Requisite: Life Scienc-
es 1. Recommended: courses 100, 111. Two weeks of off-campus research projects followed by lecture course and offered only as part of Field Bio-
ology Quarter. Biology, particularly ecology and behav-
ior, 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.

114A. Ornithology. (5) Lecture, three hours; labora-
tory/field trips, three hours. Requisite: Life Sciences 1. Recommended: course 100. Systematics, distribu-
tion, physiology, behavior, and ecology of birds. Letter grading.

114B. Field Ornithology. (8) Requisite: Life Scienc-
es 1. Recommended: course 100. Two to three weeks of off-campus research projects followed by lecture course and only as part of Field Biology Quarters. Biology, particularly ecology and behavior, of birds in their natural habitat. Letter grading.

115. Malacology. (5) (Formerly numbered C115.) Lecture, three hours; laboratory, three hours; three 

116. Conservation Biology. (4) Lecture, three hours; discussion, two hours. Requisite: Life Sciences 1. Recommended: course 100. Not open for credit to students with credit for Environment 121. Study of ecological and evolutionary principles as they apply to preservation of genetic, species, and ecosystem di-
versity. Discussion sections focus on interactions of science, policy, and economics in conserving biodi-
versity. Oral and written student presentation on spe-
cific conservation issues. Letter grading.

117. Evolution of Vertebrates. (5) Lecture, three hours; laboratory, three hours. Requisite: course 110. Recommended: one general geology course. Fossil record of evolution of vertebrates, with emphasis on paleobiology and morphology of tetrapsids. P/N or letter grading.

118. Plant Adaptations. (8) Lecture, one hour; field 

119. Marine Ecology. (4) Lecture, five hours; labora-
tory, field studies, six hours. Requisite: course 100, Life Sciences 1. Recommended: courses 120, 122. Offered either as 4-unit quarter-long course or as 8-unit Field Biology Quarter course. Four-unit course has lecture, three hours; discussion, two hours. Animal communication behavior, tropical vertebrate biology, and evolution of information pro-
cessing systems. Eight-unit course covers same basic lecture material in five or six intensive weeks, followed by extended field trips with individual projects in animal communication. Letter grading.

120. Evolution. (4) Lecture, three hours; discussion, two hours. Requisite: Life Sciences 1, 2, 3, 4. Mathe-
ematics 3A and 3B, or 31A. Recommended: course 110. Highly recommended for prospective students with credit for Environment 121. Study of biological evolution of major adaptive radiations. Formal instruc-
tion in Mathematics software used to provide powerful and versatile tool to solve diverse quantitative prob-
lems in ecology and life and physical sciences. Con-
currently scheduled with course C219. Letter grading.

121. Molecular Evolution. (4) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 3, 4. Molecular biology, with emphasis on evolution as-

122. Ecology. (4) Lecture, three hours; discussion, two hours. Requisite: course 100, Life Sciences 1, Mathematics 3B or 31A. Mathematics 3B or 31A. Designed for departmental majors specializing in environmental and population biology. Introduction to population and community ecology, with emphasis on growth and distributions of popula-
tions, interactions between species, and structure, dy-
namics, and functions of communities and ecossys-
tems. P/N or letter grading.

123. Marine Ecology. (4 or 8) Lecture, five hours; labora-
tory, three hours; 15 hours. Recommended: requisites: courses 100, 122. Offered either as 8-unit quarter-
long course or as 4-unit five-week intensive course given off campus as part of Marine Biology Quarter. Survey of current topics in ecology, including analysis of primary research literature combined with field study of ecology of marine organisms, popula-
tions, communities, and ecosystems. Original re-
search project required. Letter grading.

124. Field Ecology. (4 or 8) Lecture, two hours; labora-

tory or field trip, 10 hours. Requisites: course 100, Life Sciences 1. Recommended: courses 111, 120, 122. Offered either as 4-unit quarter-long course with weekend field trips or as 8-unit course or as single field trip conducted be-
tween quarters, followed by lectures and tutorials for three weeks. When course is given as part of Field Bi-
ology Quarter, it is 8 units and lasts for five weeks. Field and laboratory research in field ecology, analysis, and write-up of numerical data, with emphasis on de-
sign and execution of field studies. Letter grading.

125. Tropical Animal Communication. (4 or 8) (Formerly numbered C125.) Requisites: course 100, Life Sciences 1. Offered either as 4-unit quarter-long course or as 8-unit Field Biology Quarter course. Four-unit course has lecture, three hours; discussion, two hours. Animal communication behavior, tropical vertebrate biology, and evolution of information pro-
cessing systems. Eight-unit course covers same basic lecture material in five or six intensive weeks, followed by extended field trips with individual projects in animal communication. Letter grading.

126. Behavioral Ecology. (4 or 8) (Formerly num-
bered C126.) Requisites: course 100, Life Sciences 1, Mathematics 3C or 32A. Recommended: course 129. 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 behavior. Five-unit course covers same basic lecture material in five intensive weeks, fol-
lowed by extended field trip where students do individ-
ual projects in behavioral ecology. Letter grading.

127. Soils and Environment. (5) (Same as Envi-
ronment M127 and Geophysics F127.) Lecture, five 

128. Plant Physiological Ecology. (5) Lecture, three hours; laboratory, three hours; one two-day field trip. Requisites: Life Sciences 1, Physics 1C and 4BL, or 5C or 8CH. Study of plant/environment interactions under natural conditions, including photosyn-

129. Animal Behavior. (4) Lecture, three hours; dis-
cussion, two hours. Requisites: course 100, Life Sci-
ences 1. Introduction to behavioral ecology. Methods and results of evolutionary approaches to study of an-
imal behavior, including foraging strategies, social competition, sexual selection, mating systems, coop-
eration, and social organization. Letter grading.

130. Principles of Systematic Biology. (4) Lecture, three hours; discussion, two hours. Requisite: Life Sciences 1. Recommended: courses 120, 135. Con-
cepts, principles, and methods of comparative biology as they apply to inference of evolutionary relations-
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 Biology Quarter. Field research in behavioral ecology, emphasizing animal communication. Design and execution of individual and small group field projects during extended sessions off-campus.

133. Elements of Theoretical and Computational Biology. (4) Lecture, three hours; laboratory, two hours; discussion, one hour. Requisites: Life Sciences 1, 2, 3, 4, Mathematics 3A, 3B, 3C, or 31A and 31B. Strongly recommended: elementary statistics and computer programming.

134A. Physiological Ecology of Desert Animals. (8) Field course. Requisite: Life Sciences 1. Recommended: course 100, Life Sciences 1, 2, 3, 4, Mathematics 3A, 3B, and 32A. Prerequisites: three hours of supervised research projects with two-week lecture course (four hours per day) and offered only as part of Field Biology Quarter. Consideration of physiological, behavioral, morphological, and ecological mechanisms desert animals use to enhance their survival in arid habitat. Students carry out supervised research projects, then write up and orally present their results in class semesters. P/NP or letter grading.


136. Ecology, Behavior, and Evolution Laboratory. (6) Lecture, four hours; laboratory, eight hours; field trips, six and one half days per term. Requisites: course 100, Life Sciences 1, Mathematics 3C or 32A. Designed for Ecology, Behavior, and Evolution majors. Laboratory and field exercises on population genetics, growth, and regulation; competition and predation; behavior and species interactions and distribution. Methodological aspects from theoretical models and computer simulations to laboratory and garden experiments to fieldwork. Mandatory field trips, including two weekend trips. Letter grading.

137. Chemical Communication. (4) Lecture, three hours; discussion, one hour. Requisites: Chemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL, Life Sciences 1, 2, 3. Chemical signals are most important means by which organisms communicate. Exploration of how chemical signals are produced, transported, and influence behaviors of microbes, plants, and animals. Synthesis approach: with emphasis on applications to cell biology, physiology, and ecology. P/NP or letter grading.

M139. Introduction to Chemical Oceanography. (4) (Same as Atmospheric and Oceanic Sciences M105S.) Lecture, three hours. Introductory course for physical sciences, life sciences, and engineering majors interested in oceanic environment. Chemical composition of oceans and natural organic, chemical, and biological processes governing this composition in past and present. Cycles of major and minor oceanic constituents, with focus on those that are most important for life (i.e., carbon, nitrogen, phosphorus, silicon, and iron). Basic aspects of primary production, nutrient export, remineralization, diazgeneis, air-sea gas exchange processes. Letter grading.

M145. Advanced Paleontology. (4) Formerly numbered CM145S.) (Same as Earth and Space Sciences M116S.) Lecture, three hours; laboratory, 10 hours. Prerequisites: Life Sciences 10, 110 or 117 and Earth and Space Sciences 116. Consideration of major factors that have influenced history of life, including evolutionary approaches to analyzing patterns in fossil record, nature of rock record, and contribution of DNA analysis, paleontology, cladistics, phylogenetics, and developmental biology. P/NP or letter grading.

146. Physicochemical Biology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 2, 3, Physics 1C and 4BL, or 6C or 6CH. Physicochemical analysis of physiology of cells and organisms, with emphasis on membranes, thermodynamics of biological systems, and water-structure. Letter grading.


151A. Tropical Ecology. (4) (Formerly numbered C151A.) Lecture, one hour; discussion, two hours. Requisite: Life Sciences 1. Broad introduction to biodiversity, community structure, and dynamics and ecosystem function of range of tropical forest habitats. Discussion of such themes as biogeography, forest structure, plant growth forms, animal communities, herbivory, forest dynamics, and disturbance regimes. P/NP or letter grading.

151B. Field Tropical Ecology. (8) (Formerly numbered C151B.) Lecture, three hours; fieldwork, five hours. Requisites: course 100, Life Sciences 1. Two weeks of off-campus research projects followed by two weeks of laboratory course and offered only as part of Field Biology Quarter. Introduction to biodiversity, community structure, and dynamics and ecosystem function in tropical forest habitat. Letter grading.

154. Marine Ecosystems. (5) Lecture, three hours; laboratory, five hours; fieldtrip, four hours. Requisite: Life Sciences 1. Recommended: course 100. Introduction to structure, biodiversity, and dynamics of California ecosystems, with focus on Southern California, and impact of human activities on these systems. P/NP or letter grading.


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 aspects of plant biology. Topics include plant body, reproduction, plant diversity, gene expression, and basic plant function. Letter grading.

162. Plant Physiology. (4) Lecture, four hours; laboratory, four hours. Requisites: Life Sciences 1, 2, 3. Basic aspects of plant function, including photosynthesis, respiration, translocation, and ionic transport; growth and developmental processes; development; flowering; hormone mediation; and plant responses to stresses. Letter grading.


164. Field Biology of Marine Fishes. (4) Five-week intensive course. Lecture, five hours; laboratory, 15 hours. Requisite: Life Sciences 1. Recommended: Mathematics 3A, 3B, 3C, or 31A and 31B. Prerequisites: two-week lecture course and offered only as part of Field Biology Quarter. Consideration of physiological, behavioral, morphological, and ecological mechanisms desert animals use to enhance their survival in arid habitat. Students carry out supervised research projects, then write up and orally present their results in class semesters. P/NP or letter grading.

165. Ecological Physiology of Marine Vertebrates. (4) Five-week intensive course. Lecture, five hours; laboratory, 15 hours. Requisites: Chemistry 14B and 14BL, or 20A and 30AL, Life Sciences 1, 3. Recommended: Mathematics 3A, 3B, 3C, or 31A and 31B. Prerequisites: two-week lecture course and offered only as part of Field Biology Quarter. Consideration of physiological, behavioral, morphological, and ecological mechanisms desert animals use to enhance their survival in arid habitat. Students carry out supervised research projects, then write up and orally present their results in class semesters. P/NP or letter grading.

166. Marine Phytoplankton Physiology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 2. Key physiological processes, with emphasis on photosynthesis, carbon and nutrient uptake, mineralization, and toxon production of key components of marine phytoplankton, such as cyanobacteria, diatoms, dinoflagellates, and coccolithophores. Letter grading.

170. Animal Environmental Physiology. (6) Lecture, three hours; laboratory, six hours. Requisites: Chemistry 14D, or 30B and 30BL, Life Sciences 1, 2, 3, 4, Mathematics 3C or 32A, Physics 1C and 4BL, or 6C or 6CH. Not open for credit to students with credit for Physiological Science 166. Consideration of Physiology, Behavior, and Evolution majors. Introduction to physiology and mechanics of animals' organs and organ systems, with emphasis on environmental interactions and ecological adaptations. Letter grading.

175. Evolutionary Dynamics of Sexual Conflict. (4) Lecture, three hours; discussion, one hour. Emphasizes the role of sexual conflict, ecological evolution and genetics in the evolution of sperm and egg traits, the evolution of sex and sexual selection, the evolution of sex ratios and the evolution of the sex ratio. Letter grading.


180. Seminar: Biology and Society. (2) Seminar, two hours. Investigations and discussions of current socio-culturally important issues involving substantial biological considerations, either both as background for policy and as consequences of policy. May be repeated once for credit with instructor change. Letter grading.

181. Parasitology. (6) Lecture, three hours; laboratory, six hours. Requisites: Life Sciences 1, 3. Introduction to parasitology, biology, and evolution of infectiousness, symbiosis, and parasitism, emphasizing protozoan and helminth parasites, including those of man. Letter grading.

187. Variable Topics in Ecology and Evolutionary Biology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 2, 3, 4, Mathematics 3C or 32A. Topics under discussion include, but are not limited to, ecological and evolutionary theory, organism evolution, reproductive strategies, species interactions, synthetic approaches to analyzing patterns in fossil record, nature of rock record, and contribution of DNA analysis, cladistics, phylogenetics, and developmental biology. Letter grading.

Ecology and Evolutionary Biology / 275
188. Special Courses in Ecology and Evolutionary Biology. (2) Seminar, two hours. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Ecology and Evolutionary Biology. (1) Seminar, one hour. Designed to bring together students undertaking supervised tutorial or laboratory research or analysis, and stimulate progress in specific research areas for juniors/seniors. May be repeated for credit. P/NP grading.

191. Variable Topics Research Seminars: Ecology and Evolutionary Biology. (4) Seminar, three hours. Seminars on current issues in research in ecology and evolution biology. Consult Schedule of Classes for topics and instructors. If content is approved in advance by Undergraduate Advising Office, undergraduate departmental majors may petition to use course to satisfy or partially satisfy elective requirement. May be repeated for credit with consent of instructor. P/NP or letter grading.

192A-192B. Undergraduate Assistant in Ecology and Evolutionary Biology. (4-2) For course 192A: seminar, 12 hours; for course 192B: seminar, six hours. Limited to juniors/seniors. Training in 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. Designed for juniors/seniors in 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: course 189A or 189B or 189C or 189D or 190. 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 or letter grading.

195. Community or Corporate Internships in Ecology and Evolutionary Biology. (4) Tutorial, 12 hours. Internship course for juniors/seniors to be supervised by Center for Community Learning, fieldwork site, and faculty adviser. Consult Undergraduate Advising Office for more information. Students meet on regular basis with instructor and provide periodic reports of their experience. May not be applied toward requirements for departmental majors. May be repeated twice for credit. Individual contract with supervising faculty member required. 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 mentor. May be repeated for credit. Individual contract required. P/NP grading.

198A-198B. Honors Research in Ecology and Evolutionary Biology. (4 each) Tutorial, 12 hours. Limited to juniors/seniors. Supervised individual research designed to broaden and deepen students' knowledge of some phase of biology. Must be taken with Ecology and Evolutionary Biology Department faculty for at least two terms and for total of at least 8 units. Eight units may be applied toward departmental majors. Individual contract required. In Progress (198A) and letter (198B) grading. Students may elect to enroll in additional courses 199C 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: submission of written proposal outlining study or research to be undertaken. Studies to involve laboratory or field-related research, not literature surveys or library research. Proposed to be in consultation with instructor and submitted for approval to undergraduate adviser before day instruction begins in that term. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. At end of term culminating report describing progress of study or research and signed by student and instructor must be presented to undergraduate adviser. Only one course may be applied toward departmental majors. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

M200A. Graduate Seminar: Advanced Study of Topics in Evolutionary Biology. (4) Seminar, 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.

M200B. 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.

M200C. Animal Behavior. (4) Lecture, two hours; discussion, two hours. Survey of major topics in field of behavioral ecology. Topics include introduction to variety of research pursuits in field and questions and debates at leading edges of research. S/U or letter grading.

M203. 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 ecological physiology and biochemistry. Techniques in culture and physiological, ecological, and biochemical investigation of algae. Given off campus at marine science center. S/U or letter grading.

M204. Advanced Biology of Algae. (4) Lecture, four hours; discussion, one hour. Consideration of current research in experimental phycolgy. Topics include discussion of appropriate aspects of chemical and physical oceanography and limnology; algal physiology; biochemistry; physiological ecology, and algal processes in ocean and freshwater habitats. S/U or letter grading.

M205. Marine Invertebrate Biology. (4) Lecture, four hours; laboratory, eight hours. Functional morphology, life histories, and systemsatics 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.

M206. Advanced Ichthyology. (4) Lecture, three hours; laboratory, two hours. Prerequisite: 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.

M208. Advanced Vertebrate Morphology. (4) Lecture, two hours; laboratory, eight hours. Prerequisite: course 114A. Emphasis on functional morphology in connection with 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.

M209. 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.

M210. Advanced Ornithology. (4) Lecture, two hours; laboratory, two hours; fieldwork, two hours. Prerequisite: course 114A. Advanced study of topics in modern avian biology. Emphasis on experimental approaches to investigations of physiology (energetics, nutrition, osmoregulation), ecology (population and community organization), and behavior (foraging, breeding, sociality). S/U or letter grading.

M216. Statistical Methods for Life Sciences. (4) (Same as Statistics M253.) Lecture, three hours. Prerequisite: Statistics M 110. Topics include descriptive and inferential statistics as applied in life sciences, including statistical inferences for continuous and categorical data (estimation, testing of means and proportions, ANOVA) study design, linear regression, and introduction to principle components analysis. Methods to be implemented on computer with SAS. S/U or letter grading.


M218. Oceanology. (4) Lecture, four hours; discussion, one hour. Designed for graduate students. Ecological, behavioral, population dynamics, and biogeography of component species; associated oceanography and geology. Given off campus at marine science center. S/U or letter grading.

M219. Mathematical Ecology. (6) Lecture, three hours; laboratory, two hours. Prerequisite: Mathematics M 226. Recommended: course 122. Life Sciences 1. Analytical and numerical exploration of differential equation models to study properties and dynamics of individual organisms, single-species populations, multispecies communities, and integrated ecosystems in natural and disturbed environments. Formal instruction in Mathematica software used to provide powerful and versatile tool to solve diverse quantitative problems in ecology and life and physical sciences. Currently scheduled with course C119. Letter grading.


M226. Global Health Measures for Biological Emergencies. (4) (Same as Epidemiology M 226.) Lecture, four hours. Prerequisite: Epidemiology M 220 or 221. Mitigation of bioterrorism falls outside traditional public health programs and public health education. Because of seriousness of such threats, it is important that individuals trained in public health understand problems and responses. Letter grading.
M231. Molecular Evolution. (4) (Same as Earth and Space Sciences M217.) Lecture, two 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 biology, biodiversity, modeling in ecology, habitat selection, community structure and organization, and ecology and evolution of reproductive rates. May be repeated for credit. S/U or letter grading.

235. Population Genetics. (4) (Formerly numbered C235.) 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 forces altering gene frequencies, polygenic inheritance, molecular evolution, and models of quantitative genetics. S/U or letter grading.

M238. Ocean Biogeochemical 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 time-scales from few million years to several years. Anthropicogentic perturbation of global carbon cycle and climate. Response of ocean ecosystems to anthropogenic perturbation of global carbon and climate systems. 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 on cellular, 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. Requisites: 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 communication 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 182 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, organo-structure, development and function, and plant-specific metabolic processes (photosynthesis, nitrogen fixation, and mineral nutrition). S/U or letter grading.

250. Professional Skills for Biological Research. (2 to 3) Seminar, two hours. Preparation, writing, and submission of research proposals. Collection and maintenance of field and laboratory data, preparation of scientific presentations, review of literature, and publishing strategies. Optional field trip offered during some years for 1 extra unit. S/U or letter grading.

251. Seminar: Plant Structure. (2) Seminar, two hours. Current topics in systematic biology, including methods development and specific applications in study of phylogeny. Theme varies from year to year. May be repeated for credit. S/U or letter grading.


255. Seminar: Invertebrate Zoology. (2) Seminar, two hours. S/U or letter grading.

259. Seminar: Herpetology. (2) Seminar, three hours. Seminar on current approaches to herpetology. Main theme varies from year to year in areas such as biogeography, ecology, behavior, environmental physiology. S/U or letter grading.


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 conservation biology of plant populations in natural and disturbed settings, with application to both terrestrial and marine systems. S/U or letter grading.

263. Seminar: Population Genetics. (2 or 4) Seminar, three to six hours. Seminar on topics of current interest in population genetics, such as kin selection, sociobiology, cultural evolution, conservation genetics, etc. S/U or letter grading.

264. Seminar: Stomatal Function. (4) Seminar, two hours; discussion, two hours. Open to undergraduates with consent of instructor. Structure and function of guard cells; gas exchange; environmental and hormonal regulation of stomatal responses; 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.


275. Seminar: Evolutionary Biology. (2) Seminar, two hours. Requisite: course M231. Emphasis on particular issue in evolutionary biology, varying in topic whenever offered. Topics may include advances in phylogenetic methodology; relationship between development and evolution; biogeography, climate change, and faunal evolution; dispersal mechanisms and macroevolutionary patterns; adaptation and diversification; macroevolutionary patterns in fossil record. S/U or letter grading.

282. Seminar: Ichthyology. (2) Seminar, two hours. Requisite: course 111 or 112. Student presentations and discussion of specific topics in ichthyology. Theme varies from year to year. May be repeated for credit. S/U or letter grading.

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 design 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 to six hours. 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. S/U or letter grading.

299. 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 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 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 graduate 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. S/U grading. May not be applied toward M.A. or Ph.D. course requirements. S/U grading.


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 doctorate is awarded to those students who have achieved the level of study and training required for a professional economist. The degree recognizes students' ability to make scholarly contributions in their fields of specialization and to undertake advanced research in those areas.

Undergraduate Study

Economics B.A.

Admission

Application for the 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.

Precoreconomics Major

While students are completing the lower division preparation courses for the major, they may be classified as Precoreconomics majors.

Preparation for the Major

Required: Economics 1, 2, 11, 41; one Writing II course or English Composition 129B; Mathematics 31A, and 31B or 31E. All courses 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 for up-to-date information regarding transfer selection for admission.

The Major

Required: Nine upper division courses in economics which must include Economics 101, 102, and one course from at least three different fields in economics selected from the major fields list below. All courses must be taken for a letter grade. Economics 100, 110, and 120 may not be included among the nine upper division courses. One or two of the nine courses may be selected from Management 120A, 120B, 122, 127A, 130A, 130B.

To graduate, students must have at least a 2.0 grade-point average in their upper division major courses, with grades of C− or better in Economics 101 and 102. Transfer credit is subject to department approval; consult an undergraduate counselor before enrolling in any courses for the major.

Major Fields

Economic theory (courses 101, 102, 105AH, 105BH, 106G, 106P, 107, 138, 139, 187); statistics, mathematical economics, and econometrics (courses 103, 141A, 141B, 141C, 142, 143, 144, 145, 146, 147A, 147B, 148); economic development (courses 111, 112); international economics (courses 121, 122); public finance (courses 130, 133, M134A, 134B, M135, M136); regional economics (course 137); labor economics (courses 150, 151, 152); money and banking (courses 106F, 160, 161); government and industry (courses 106E, 106I, 170, 171, 172); economic institutions (courses 106H, 180, 181A, 181B, 183).
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 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 preparation for the major) cannot be used to satisfy this requirement. 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.) All upper division major courses must be taken for a letter grade.

Economics/International Area Studies B.A.

The 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. All courses 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.

Preeconomics/International Area Studies Major

While students are completing the preparation courses for the major, they may be classified as Preeconomics/International Area Studies majors.

Preparation for the Major

Required: Economics 102, 103, and at least two courses from the 106 series; three other upper division courses in economics in at least two different fields (Economics 100, 110, and 120 may not be included as electives); four upper division courses from Management 108, 120A, 120B, 122, 123, 124, 126, 127A, 127B, 130A, 130B, 140. 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.) All upper division major courses must be taken for a letter grade.

Economics / 279
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

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.

Honors Program

The department 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-term senior 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

Majors in Economics, Business Economics, and Economics/International Area Studies may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the specified major, (2) completing Program in Computing 10A, 10B, Mathematics 61 or 113, and two courses from Program in Computing 10C, 15, 20A, 20B, 30, 40A, 60, and (3) completing at least two courses from Economics 103, 108P, 141A, 141B, 141C, 143, 147A, 147B, 151, with the additional provision that the courses taken must make substantial use of computers. A grade of C– or better is required in each course, with a combined grade-point average of at least 2.0. Students graduate with a bachelor’s degree in their major and a specialization in Computing.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/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 Economics offers Master of Arts (M.A.) 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 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. Not open to students with credit for 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.

5. Introductory Economics. (4) Lecture, three hours. Not open to students with credit for course 1, 2, or 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.

11. Microeconomic Theory. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 1, 2, one course from Mathematics 31B, 31BH, 31E, 32A. Laws of demand, supply, returns, and costs; price and output determination in different market situations. P/NP or letter grading.

41. Statistics for Economists. (4) Lecture, three hours; discussion, one hour. Not open to students with credit for Statistics 11. Introduction to probability and statistics for economists, with emphasis on rigorous arguments. Letter grading.

Upper Division Courses

100. Economic Principles and Problems. (4) Lecture, three hours. Designed for juniors/seniors. Not open to students with credit for course 1, 2, or 5. Principles of economics with application to current economic problems. May not be used to fulfill entrance requirements for any Economics Department major.

101. Microeconomic Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 11. Theory of factor pricing and income distribution; general equilibrium; implications of pricing process for optimum allocation of resources; interest and capital.

103. Introduction to Econometrics. (5) Lecture, three hours; discussion, one hour. Requisites: courses 11 and 41 or Statistics 11 or 100A. Introduction to theory and practice of econometrics, with goal to make students effective consumers and producers of empirical research in economics. Emphasis on intuitive understanding rather than on rigorous arguments; concepts illustrated with applications in economics. P/NP or letter grading.

105AH. Topics in Microeconomics (Honors). (4) Lecture, three hours. Requisite: course 101. Designed for departmental honors program students. Introduction to Walrasian and Nash equilibrium. Modeling of selected applied topics such as peak load pricing, pricing of externalities, strategic pricing. P/NP or letter grading.


106E. Economics of Entrepreneurship. (4) Lecture, three hours. Requisite: course 101. Enrollment priority to Business Economics majors. Application of economic theory to practice of managing new businesses — combining elements of strategy, marketing, and entrepreneurial finance courses. Examination of both strategic decisions of entrepreneurs (pricing, advertising, entering industry) and more practical issues (funding, business plans, patents). Letter grading.


106G. Introduction to Game Theory. (4) Lecture, three hours; discussion, one to two hours (when scheduled). Requisite: course 101. Enrollment priority to Business Economics majors. Introduction to basic ideas of strategic thinking and discussion of ideas such as dominance, backward induction, Nash equilibrium, commitment, credibility, asymmetric information, and signaling, with application to examples from economics, politics, business, and other real-life situations. Letter grading.


106V. Investments. (4) Lecture, three hours. Requisite: course 102. Recommended: course 106F. Enrollment priority to Business Economics majors. Introduction to principles of investment and portfolio theory. Topics include optimal portfolio construction, fixed income analysis, option pricing theory, and active portfolio management. P/NP or letter grading.

107H. History of Economic Theory. (4) Lecture, three hours. Requisite: course 1 or 100. Survey of economic analysis from Grecian antiquity to the early 20th century, concentrating on the 18th and 19th centuries: special attention to selected writers, including Aristotle, mercantilists, Physiocrats, Hume, Smith, Malthus, Ricardo, Marx, marginalists, and Marshall.

110. Economic Problems of Underdeveloped Countries. (4) Lecture, three hours. Requisite: course 101 or 100. Limited to Non-Economics Department majors. Not open for credit to students with credit for course 111 or 112. Survey of major issues of development economics. Economic structure of low-income countries and primary causes for their limited economic growth. Economic goals and policy alternatives open to their leaders. Possible roles of developed countries. May not be applied toward any Economics Department major. P/NP or letter grading.

111. Theories of Economic Growth and Development. (4) Lecture, three hours. Requisite: course 11. Growth models, theory of production under constraints, relative price, change, and choice of technology, investment criteria, role of the market, economic planning in less developed areas. P/NP or letter grading.


113. Gender and Development in Globalizing World. (4) Seminar, three hours. Requisites: courses 11, 101, 102. Designed for juniors/seniors. Critical examination of theoretical debates and discussion of empirical evidence on issues pertaining to current debates on gender, globalization, and development. Topics include household economics; bargaining and gender relations; debates overpaid/unpaid labor; gender differences in wages and employment; trade, multinationals, and feminization; structural adjustment and poverty; gender mainstreaming of economic analysis and policy. P/NP or letter grading.

120. International Economics. (4) Lecture, three hours. Requisite: course 1 of 100. Limited to non-Economics majors. Prepares students to develop a better understanding of international relations by developing an appreciation of the major issues of international commercial and monetary policy confronting national and international agencies. May not be applied toward any Economics Department major. P/NP or letter grading.

121. International Trade Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 101. Not open to students with credit for course 120. Theories of international trade: bases, direction, terms, volume, and gains of trade. Effects 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. Not open to students with credit for course 120. Emphasis on interpretation of balance of payments and adjustment to balance of payments imbalances, costs and benefits through changes in price levels, exchange rates, and national income. Other topics include making international payments, determination of exchange rates under various monetary standards, capital movements, exchange controls, and international monetary organization. P/NP or letter grading.


133. State and Local Finance. (4) Lecture, three hours. Requisites: courses 101, 130. Division of functions and revenues between state and local governments; revenues, expenditures, and indebtedness of these governments. Analyses of state and local tax systems.

M134A. Environmental Economics. (4) Formerly numbered 134A. (Same as Environment M134.) Lecture, three hours. Requisite: courses 11, 12, or Statistics 11 or 100A. Limited to seniors. Not open for credit to students with credit for courses 11, 101, 112 or 113, and course 101 (may be waived with consent of instructor). Introduction to major ideas in natural resources and environmental economics, with emphasis on designing incentives to protect environment. Highlights important resources and empirical data to test hypotheses about pollution's causes and consequences. P/NP or letter grading.

134B. Economics of Environmental Regulation. (4) Lecture, three hours; discussion, one hour. Requisite: course 134A. Social choice theory, efficiency and markets, public goods and externalities, property rights, Pigouvian fees, marketable permits, legal solutions, risk and uncertainty, international and interregional competition, economic-wide effects of environmental regulations, and formal environmental demand theory. P/NP or letter grading.

M135. Economic Models of Public Choice. (4) Formerly numbered 135. (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 the consequences of arriving at collective decisions through political mechanisms. Topics include free-rider problem, voting and majority choice, demand revelation, and political bargaining.


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, lot location decisions of households and firms, transportation, urban labor markets, urban setting. Topics include urbanization and urban growth, housing markets, lot location decisions of households and firms, transportation, urban labor markets, and economic aspects of nuclear energy treating technological, bargaining, and stability issues. Letter grading.
139. Economics of Energy. (4) Seminar, three hours. Requisite: course 102. Topics include pricing and taxation of exhaustible resources, interactions between energy and economy, institutions such as OPEC and oil price controls, oil debt and balance of payments, energy conservation, and future technologies. Letter grading.

141A. Mathematical Finance A. (5) Lecture, three hours; computer laboratory, one hour. Requisites: course 11, Mathematics 33A, either Statistics 100A or Mathematics 170A. Economics of financial markets, competitive analysis with time and uncertainty, one-period security market model, market completeness. P/NP or letter grading.

141B. Mathematical Finance B. (5) Lecture, three hours; computer laboratory, one hour. Requisite: course 141A. Capital asset pricing model, multiperiod discrete-time security market model, efficient markets, dynamic spanning and market completeness, mathematical models of options, futures, and derivatives. P/NP or letter grading.

141C. Mathematical Finance C. (5) Lecture, three hours; computer laboratory, one hour. Requisite: course 141B. Models of term structure of interest rates, interest rate derivatives, optimal consumption and investment, utility premium puzzle, bubbles. P/NP or letter grading.

142. Probabilistic Microeconomics. (4) Lecture, three hours. Requisite: course 101. Combination of basic probability introduced in Statistics 11 with microeconomic models presented in courses 11 and 101 in order to explain phenomena such as insurance, job search, and stock market behavior. Optimal production and consumption under uncertainty. Review of probability and introduction to alternative measures of risk and risk aversion. P/NP or letter grading.

143. Applied Regression Analysis. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: course 103. Not open to students with credit for course 147A or 147B. Estimation and inference in multiple regression model; violations of assumptions of classical model (heteroskedasticity, unobserved heterogeneity, measurement error); introduction to limited dependent variable and time-series models. Emphasis on applications of regression analysis and interpretation. P/NP or letter grading.

144. Introduction to Mathematical Methods in Economics. (4) Lecture, three hours. Requisite: course 101. Introduction to use of mathematics in economic analysis. Topics include partial differentiation, optimization, and differential and difference equations, with applications to theory of the household and the firm, capital theory, and economic dynamics.

145. Topics in Mathematical Economics. (4) Lecture, three hours. Requisite: course 101. Possible topics include game theory; competitive equilibrium analysis; examination of market failure and role for market intervention. P/NP or letter grading.

146. Linear Models in Economics. (4) Lecture, three hours. Preparation: one linear or matrix algebra course. Not open for credit to students with credit for Mathematics 164 or Electrical Engineering 136. Possible topics include duality theory of linear programming and simplex algorithm, output/input analysis, and two-person zero-sum games.

146A-C146B-C146C. Seminars: Asset Pricing. (4-4-4) Seminar, three hours. Requisites: courses 11, 101, 102. Limited to seniors. Overview of most current developments in asset pricing theory for advanced 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 C266A-C266B-C266C. P/NP or letter grading.

147A. Introduction to Econometric Theory. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: course 101. 115A. Introduction to econometric theory using linear algebra; estimation and inference in classical regression, generalized classical regression model; introduction to time series and simultaneous equations models. Emphasis on empirical analysis and computer programming skills. P/NP or letter grading.


149. Limits to Rationality. (4) Lecture, three hours. Requisites: courses 101, 103, and Mathematics 33A or 115A. Topics include review of rationality in economics, deviations from rationality, explanations of market failure, consumption, decisions and limits and rationality, economic agents as automata, genetic programming in economics, neuroeconomics, and bargaining, and limits to rationality. P/NP or letter grading.


151. Topics in Labor Economics. (4) Lecture, three hours. Requisite: course 101. Selected topics in labor theory, income distribution, business cycles and income distribution, investments in human capital and life cycles; migration; human fertility; marriage and divorce, etc. P/NP or letter grading.

152. Trade Unions and Professional Associations. (4) Lecture, three hours. Comparative behavior of unions and professional associations; criteria for wage maximization; quantification of gains; analysis of legal framework applying to such organizations.

145A-C155B-C155C. 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 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 C266A-C266B-C266C. P/NP or letter grading.


145A-C155B-C155C. Seminars: Monetary Economics/Macroeconomics. (4-4-4) Seminar, three hours. Requisite: course 102. Limited to seniors. Overview of 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 critiqued by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C266A-C266B-C266C. P/NP or letter grading.


171. Industrial Organization: Theory and Tactics. (4) Lecture, three hours. Requisite: course 11. Study of pricing and output decisions of firms under conditions of less than perfect competition or monopoly; theories of oligopolistic and monopolistic competition; information costs and advertising; examination of pricing practices such as price discrimination, tie-in selling, predatory pricing, and resale price maintenance.


C176A-B176C. Seminars: Industrial Organization. (4-4-4) Seminar, three hours. Requisites: courses 11, 101, 102. Limited to seniors. 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 C276A-C276B-C276C. P/NP or letter grading.


183. Development of Economic Institutions in the U.S. (4) Lecture, three hours. Requisite: course 11. Study of changing economic institutions in the U.S. from Colonial times to the early 20th century and effects of these changes on American society, P/NP or 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 differential 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. Microeconomics. (4-4-4) Lecture, three hours. S/U or letter grading.


203A. Probability and Statistics for Economists. (4) Lecture, three hours. Provides statistical tools necessary to understand economic techniques. Random variables, distribution and density functions, sampling, estimators, estimation techniques, hypothesis testing, and statistical inference. Use of economic problems and examples. S/U or letter grading.


204A-204Z. Applications of Economic Theory. (4 each) Lecture, three hours. S/U or letter grading.
231A-213B. General Equilibrium and Game The- ory. (4-4) Lecture, three hours. Requisite: course 201C. Selected advanced theoretical topics of current interest and in modern mathematical economics, 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. Current research in mathematical economics. Content varies. Ordinarily only two courses in this sequence given every year. May be repeated for credit. S/U or letter grading.

214A. General Equilibrium Theory. Requisite: course 201C. Core convergence theorem, cooperative and noncooperative approach to competitive equilibrium theory, perfectly competitive equilibrium, the no-surplus condition, and applications to mechanism theory and incomplete market models.

M214B. Game Theory. (Same as Mathematics M261 and Political Science M208A.) Lecture, three hours. Designed for graduate economics, mathematics, and political science students. Bargaining theory, the core, the value, other solution concepts. Applications to oligopoly, general exchange and production economies, and allocation of joint cost.

M215. Topical Game Theory. (4) Same as Political Science M208B.) Lecture, three hours. Preparation: calculus or introductory probability. Designed for graduate economics and political science students. Surveys and applications of major solution concepts to models of bargaining, oligopoly, cost allocation, and voting power. S/U or letter grading.

218A-218B-218C. Proseminars: Economic Theory. (4-4-4) Seminar, three hours. Quarterly seminars for predissertation and dissertation writers. Discussion of advanced topics and recent developments in game theory, information and uncertainty, and general equilib- rium 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 grading.


229A-229B-229C. Workshops: Monetary Econom- ics. (4-4-4) Lecture, three hours. Workshops for pre- dissertation and dissertation writers. Literature surveys or research in progress presented, dis- cussed, and criticized by visiting experts, UCLA faculty members, advanced graduate students. Research paper or presentation required. S/U grading.

229A-229B-229C. Workshops: Monetary Econom- ics. (4-4-4) Lecture, three hours. Workshops for pre- dissertation and dissertation writers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, advanced gradu- ate students. Research paper required. S/U grading.

221D. Monetary Economics IV. (4) Lecture, three hours. Requisites: courses 202A, 202B, 202C. Em- phasis on applied macroeconomics, with topics change each year. Students select a particular data set to study. Each week class studies an article from recent work in applied macroeconomics or applied econometrics which introduces a technique or suggests a theoretical restriction on the data. Subgroups of stu- dents report back to class using the technique on their selected data set. S/U or letter grading.

222A-222Z. Topics in Monetary Economics. (4 each) Lecture, three hours. Current research in mon- etary economics. Content varies. May be repeated for credit. S/U or letter grading:

M222A. Control and Coordination in Economics. (4) Same as Computer Science M222.) Lecture, three hours. Recommended preparation: upper class math- ematics course. Designed for graduate economics and engineering students. Stabilization policies, short- and long-run dynamics and stability analysis; decentralization, coordination in teams; certainty equivalence and separation theorems; stochastic and learning models. Bayesian approach to price and output rate adjustment. S/U or letter grading.

226A-C226B-C226C. Seminars: Monetary Eco- nomics. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers. Overview of current developments in monetary economic theory for ad- vanced undergraduate and graduate students. Intro- duction to graduate-level research in this field. Differ- ent topic each week, with presentation and discussion of new papers. Research in progress presented, dis- cussed, and critiqued by visiting experts. UCLA facul- ty members, and advanced graduate students. Con- curringly scheduled with courses C166A-C166B- C166C. S/U grading.

228A-228B-228C. Proseminars: Monetary Eco- nomics. (4-4-4) Seminar, three hours. Workshops for predissertation and dissertation writers. Literature surveys or research in progress presented, dis- cussed, and criticized by visiting experts. UCLA facult- y members, advanced graduate students. Research paper or presentation required. S/U grading.


224A-224B-224C. Von Gremp Workshops: History of Entrepreneurship in the U.S. Economy. (4-4-4) Lecture, three hours. Designed for graduate students. Workshops for advanced graduate students. Research in progress discussed by visiting experts, UCLA faculty members, graduate students. S/U grading.

251A. Theory and Policy of Taxation. (4) Lecture, three hours. Examination of influence of taxation on economic efficiency and incidence of taxation in first part of course. Topics include tax equivalences, Ram- sey rules, and alternative forms of taxation. Special tax provisions, tax incentives, and progressivity in tax- ation in second part of course.

251B. Cost-Benefit Analysis of Public Projects and Programs. (4) Lecture, three hours. Requisite: course 251A. Presentation of those aspects of applied economic theory that are most relevant in decisions concern- ing investment projects in first part of course. Dif- ferences between social and private benefits and costs (shadow prices) for foreign exchange, capital, and labor, with application to investment deci- sions, in second part of course. S/U or letter grading.


Economic History


Econometrics


M232A-232Z. Topics in Econometrics. (4 each) Lecture, three hours. Requisites: courses 231A, 231B. Current research in econometrics. Content varies. Courses in this sequence offered only given year may be repeated for credit. S/U or letter grading.

M232A. Bayesian Econometrics. (Same as Political Science M208E.) Subjective probability, introduction to decision theory, Bayesian analysis of regression, sensitivity analysis, model criticism.


238A-238B-238C. Proseminars: Econometrics. (4- 4-4) Seminar, three hours. Quarterly seminars for predissertation and dissertation writers. Research in progress presented, discussed, and critiqued by visit- ing 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 predis- sertation and dissertation writers. Research in progress presented, discussed, and critiqued by visiting ex- perts, UCLA faculty members, advanced graduate students. Research paper required. S/U grading.

Public Finance

251A. Theory and Policy of Taxation. (4) Lecture, three hours. Examination of influence of taxation on economic efficiency and incidence of taxation in first part of course. Topics include tax equivalences, Ram- sey rules, and alternative forms of taxation. Special tax provisions, tax incentives, and progressivity in tax- ation in second part of course.

251B. Cost-Benefit Analysis of Public Projects and Programs. (4) Lecture, three hours. Requisite: course 251A. Presentation of those aspects of ap- plied economic theory that are most relevant in decisions concern- ing investment projects in first part of course. Dif- ferences between social and private benefits and costs (shadow prices) for foreign exchange, capital, and labor, with application to investment deci- sions, in second part of course. S/U or letter grading.


254A-254Z. Workshops: Public Economics. (4-4-4) Lecture, three hours. Designed for graduate students. Workshops for advanced graduate students. Research in progress discussed by graduate students. UCLA faculty members, visiting experts. S/U grading.

Labor Economics
261A-261B. Labor Economics I, II, (4-4) Lecture, three hours. S/U or letter grading:


261B. Requisite: course 261A. Models of life-cycle learning and work behavior. Interpretation on recent literature examining labor force behavior and experience of women.

262A-262Z. Topics in Labor Economics. (4 each) Lecture, three hours. Current research in labor economics. Content varies. May be repeated for credit. S/ U or letter grading.

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 grading.


International Economics


282A-282Z. Topics in International Economics. (4 each) Lecture, three hours. Current research in international economics. Content varies. May be repeated for credit. S/U or letter grading.

284. Soviet Economic Theory and Organization. (4) Lecture, three hours. Overall strategy of planning used by U.S.S.R. planners and specific planning methods, interpreted broadly to cover not only instructions and objectives but also institutional arrangements. Intended and unintended outcomes of the 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, and applications to public, electric, 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. 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 the U.S., in area's economic development.

287C. Topics in Economic Development. Designed for graduate students. Topics in monetary and exchange rate policy in developing countries. Students expected to develop analytical tools and underlying policy issues.


Urban Economics


Economics / 285
Special Studies

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.

495. Teaching College Economics. (2)
Classroom practice in teaching, with individual and group instruction on related educational methods, materials, and evaluation. May be repeated for credit. S/U grading.

596. Individual Study. (2 to 8)
Directed individual study or research. S/U grading.

597. Individual Study: Graduate Examinations. (2 to 8)
Directed individual study in preparation for M.A. comprehensive examination or Ph.D. qualifying examinations. S/U grading.

599. Individual Research: Ph.D. Dissertation. (2 to 8)

Sandra Graham, Ph.D., Chair
Patricia M. McDonough, Ph.D., Vice Chair

Professors

Walter R. Allen, Ph.D. (Allan Murray Carter Professor of Higher Education)
Eva L. Baker, Ed.D.
James S. Cattani, Ph.D.
Sol Cohen, Ph.D.
Aimée Dorr, Ph.D., Dean
Frederick D. Erickson, Ph.D. (George F. Kneller Professor of Education and Anthropology)
Patricia C. Gándara, Ph.D.
Sandra H. Graham, Ph.D.
Kris D. Gutliérez, Ph.D.
Sandra Harding, Ph.D.
Carolee Howes, Ph.D.
Sylivia Hurtado, Ph.D.
Connie L. Kasari, Ph.D.
Douglas M. Kellner, Ph.D. (George F. Kneller Professor of Education and Philosophy)
Marilyn L. Kourilsky, Ph.D.
Patricia M. McDonough, Ph.D.
Peter L. McLaren, Ph.D.
Don T. Nakaniishi, Ph.D.
Jeanie L. Oakes, Ph.D. (Presidential Professor of Educational Equity)
Gary A. Orfield, Ph.D.
Robert A. Rhoads, Ph.D.
Mike A. Rose, Ph.D.
Val D. Rust, Ph.D.
Michael H. Seltzer, Ph.D.
Daniel G. Solórzano, Ph.D.
Carlos A. Torres, Ph.D.
Noreen M. Webb, Ph.D.
Wellford W. Wilms, Ph.D.

Professors Emeriti

Marvin C. Alkin, Ed.D.
Alexander W. Astin, Ph.D.
Helen S. Astin, Ph.D.
Gordon L. Berry, Ed.D.
Nicholas G. Burton-Jones, Ph.D.
Burton R. Clark, Ph.D.
Arthur M. Cohen, Ph.D.
Donald A. Erickson, Ph.D.
Norma D. Feshbach, Ph.D.
Simon González, Ed D.
John L. Goodlad, Ph.D., L.H.D., LL.D.
John N. Hawkins, Ph.D.
Charles C. Healy, Ph.D.
Barbara K. Keogh, Ph.D.
Frederick C. Kintzer, Ed.D.
John D. McNeil, Ed.D.
Bengt Muthén, Ph.D.
C. Robert Pace, Ph.D.
W. John Popham, Ed.D.
Rodney W. Skager, Ph.D.
Romeo Tidwell, Ph.D.
Carl Weinberg, Ed.D.
Richard C. Williams, Ph.D.
Charles Z. Wilson, Ph.D.

Associate Professors

Alison L. Bailey, Ed.D.
Mitchell J. Chang, Ph.D.
Noel D. Enjedy, Ph.D.
Diane Durkin, Ph.D.
Megan L. Franke, Ph.D.
Tyrone C. Howard, Ph.D.
Yasmin B. Kafai, Ed.D.
Ernest Morrell, Ph.D.
Marjorie F. Orellana, Ph.D.
William A. Sandoval, Ph.D.
Linda J. Sax, Ph.D.
Eva L. Baker, Ed.D.

Assistant Professors

Li Cai, Ph.D.
Robert Cooper III, Ph.D.
José-Felipe Martínez, Ph.D.
Rashmita S. Mistry, M.A.
Edith Mukudi Omwami, Ph.D.
Thomas M. Philip, Ph.D.
Jane E. Pizzolato, Ph.D.
John S. Rogers, Ph.D.
José Luis Santos, Ph.D.
Richard L. Wagoner, Ph.D.
Jeffrey J. Wood, Ph.D.

Adjunct Professors

Eloise Lopez Metcalfe, Ph.D.
Faye C. Peltzman, Ph.D.
Jane S. Permaul, Ed.D.
Jody Z. Priselac, Ed.D.
Harold L. Pruett, Ph.D.
Eugene Tucker, Ed.D.

Adjunct Associate Professors

Diane Durkin, Ph.D.
Philip Ender, Ph.D.
Linda P. Rose, Ph.D.

Adjunct Assistant Professors

Bruce L. Barbee, Ed.D.
Jennifer McCormick, Ph.D.

Scope and Objectives

As one of the top-ranked public graduate programs in education in the nation, the Department of Education is guided by a commitment to integrate theory and practice and to improve educational practice and policy. The department attracts prominent scholars and is internationally recognized for its research centers in evaluation, higher education, child development, and urban education. Whether students choose to pursue a Ph.D., an Ed.D., a master’s degree, or a services or instructional credential, they graduate with a broad understanding of educational theory and tested practice.

Undergraduate Study

Education Studies Minor

The Education Studies minor is intended to address the diverse information needs of the UCLA undergraduate community to (1) allow students to learn more about the multitude of contemporary professional research issues confronting the field of education, (2) understand the complex interactions between the legal, social, political, and economic forces that influence and shape educational policies in America, (3) provide an introductory course sequence for students who wish eventually to pursue careers in education either as teachers or researchers, and (4) provide an analysis of current educational practices by which UCLA students can become better consumers of educational services as future parents, taxpayers, and citizens.

To enter the minor, students must have completed two minor courses (one of which must be a designated core 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. Transfer students must have completed one minor course and have one minor course in progress. Applicants are expected to be committed to inquiry of issues central to educational research and practice. Students must follow the program of study in effect at the time

EDUCATION

Graduate School of Education and Information Studies

UCLA

Office of Student Services
1009 Moore Hall
Box 951521
Los Angeles, CA 90095-1521
(310) 825-8326
fax: (310) 794-4732
e-mail: info@gseis.ucla.edu
http://www.gseis.ucla.edu
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, 120 through 133, and M194A, M194B, M194C (to be taken concurrently with either M182A, M182B, M182C or M183A, M183B, M183C) and three elective courses selected from 80, 92A through 92F, M102, M103, M112, 140, 141, 143, 144, 146A, 146B, M148, 162, CM178/CM178L, 185, 191A through 191X, 192A/170A, 192B/170B, 196C.

Only one course from Education 80 and 92A through 92F may be applied toward the elective requirement. Courses CM178/CM178L, 192A/170A, and 192B/170B must be taken concurrently.

All minor courses must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gsaa/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, and Doctor of Philosophy (Ph.D.) degree in Special Education (with California State University, Los Angeles).

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 minutes; discussion, 60 minutes. 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, 60 minutes. Designed to help students better understand their experience within collegiate environment. Conceptual framework and research that has been done on college students and impact of college. Examination of diverse issues ranging from reasons why students go to college to how students are ultimately influenced by college experience. Letter grading.


92B. Practicum in Higher Education. (4) Seminar, three hours. Required 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. Required 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. Required 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.

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 the U.S.; studies of literacy in school, on job, and in everyday life; studies of literacy and electronic media; and selection of contemporary and 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 American schooling experience (K-12) and analysis 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 school environment, school organizations, and society) and how they are associated with American schooling experience. Discussion of contemporary themes such as risk behaviors, SAT controversy, high school exit examinations, social promotion, 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 political, social, 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 teaching and students learning. Examination of education in socioeconomic context and discussion of some philosophical questions that challenge teaching profession. Letter grading.

M102. Mexican Americans and Schools. (4) (Same as Chicana and Chicano Studies M102.) Seminar, four hours. Theorized and empirical overview of Chicana and Chicano educational issues in U.S., with special emphasis on disenfranchising effects of race, gender, class, and immigrant status on Chicana/Chicano educational attainment and achievement. Examination of how historical, social, political, and economic forces impact Chicana/Chicana educational experience. P/NP or letter grading.

Education / 287

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.

M108. Sociology of Education. (5) (Same as Sociology M175.) Lecture, four hours. Study of social processes and interaction patterns in educational organizations; relationship of such organizations to aspects of society, social class, and power; social relations within school, college, and university; formal and informal groups, subcultures in educational systems; roles of teachers, students, and administrators. Letter grading.


C125. Politics of Education. (5) Lecture, two hours; discussion, two hours. Political dimensions of education institutions as organizations. Relationships between education institutions and economic, political, and social 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 C205A. P/NP or letter grading.
132. Education of Exceptional Individuals. (5)
Four hours. Exploration of ways we draw on different educational programs to meet the needs of children with various disabilities. Letter grading.

133. Topics in Child Development and Social Poli-
cies. (5) Seminar, four hours; fieldwork, two hours. Research seminar to explore conceptions of child development and social policies and to gain basic understanding of ways in which public policies are established and implemented, and (2) learn about policy landscape in several major domains of child and family life in the U.S. and other countries, and (3) use scientific research on children's cognitive and social development to evaluate and understand effects of social and economic policies. Letter grading.

134. Educational Leadership, Organizational The-
vory, and Policy. (5) Seminar, four hours. Designed for students interested in developing understanding and appreciation for breadth of leadership models/theories in education, including traditional, entrepre-
neurial, bureaucratic, relationship-based models. Analysis of effectiveness of organizations and/or policies in terms of educational leadership, and development of personal leadership profile in context of alter-
native models of leadership relevant to education. Letter grading.

135. Introduction to Educational Inquiry. (5) Semi-
nar, five hours. Limited to juniors/seniors. Introduction to educational inquiry, with special attention to differ-
ent ways of conducting field research. Focus on different ways authors conceptualize/inves-

136. Praxis in Higher Education. (5) Lec-
ture, four hours. Introduction to range of contemporary and ongoing higher education public policy issues, and conceptual and theoretical frameworks typically used to understand them. Development of fluency in public policy language, with focus on national, state, and institutional policy perspectives. Letter grading.

137. Critical Pedagogy and Cultural Studies in Ur-
ban Education. (5) Lecture, two hours; discussion, two hours. Consideration of potential of cultural and empirical work in critical pedagogy and cultural studies to inform, confront, and transform many chal-
lenge[s] faced in urban education today. Study of theo-
ry and research of critical pedagogists such as Paulo Freire, Peter McLaren, and others. Letter grading.

138. Time and Behavior in Educational Organiza-
tions. (4) Seminar, three hours. Designed for juniors/ seniors. Exploration of psychosocial perspective of how temporal orientation and time investments impact and shape human behavior, with specific emphasis on educational issues related to school reform, teen pregnancy, school violence, teacher burnout, middle school crisis, culture, information-seeking behaviors, and academic attainment. Letter grading.

141. Writing to Learn: Teaching Writing in Ele-
mentary and Secondary Schools. (4) Seminar, four 
hours. Ways to teach writing at elementary and sec-
ondary level through use of concepts of ideas, evidence, part, and whole, and writing pro-
cess. 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. De-
sign to provide returned Education Abroad Pro-
gram (EAP) students with structured opportunity to deepen their reflections on their time abroad through contact with literature, academic articles, and speak-
ers. Provides EAP reciprocity students with opportu-
nity to analyze their transition to UCLA and allows both returned and reciprocity students chances to learn through service to EAP. Letter grading.

143. Understanding Pathways to College. (4) Lec-
ture, two hours; discussion, two hours. Examination of inequality across K-12 education to understand how college admissions are stratified across ra-
cial and class lines. Roles of school personnel, higher education admissions, families, and students in pro-
moting inequity in educational opportunity. Growth of indoctrination K-12 programs to prepare students interested in working in UCLA programs such as Early Academic Outreach Programs that serve students in Los Angeles area schools. Letter grading.

144. Advanced Undergraduate Research Seminar.
(4) Seminar, four hours. Limited to juniors/seniors. Advanced independent study 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 develop-
ment of children. Letter grading.

145A-145B. Restoring Civility: Understanding,
Using, and Resolving Conflict. (4-4) (Same as Chicana and Chicano Studies M145A-M145B.) Lecture, one hour; discussion, three hours. Designed for students who want to learn principles of dialogue and mediation, as alternatives to violence, and practice how to apply them in educational settings. In Prog-
gress (M145A) and letter. Letter grading.

146A. Research Apprenticeship in Peer Counsel-
ling. (4) (Formerly numbered 196A.) Seminar, four hours. Limited to juniors/seniors. Highly interactive, student-centered course designed to provide hands-
on experience in academic peer advising and leader-
ship and understanding of underlying theories, princi-
iples, and related issues. Students advise their peers in Education Studies minor courses and build commu-
nity among those students. Letter grading.

146B. Research Apprenticeship in Peer Advising
and Leadership. (4) (Formerly numbered 196B.) Seminar, four hours. Enforced requisite: course 146A. Limited to juniors/seniors. Highly interactive, student-
centered course designed to provide hands-on expe-
rince in academic peer advising and leadership and understanding of underlying theories, principles, and related issues. Students advise their peers in Educa-
tion Studies minor courses and build community among those students. Letter grading.

147. Lesbian, Gay, Bisexual, and Transgender Is-
sues in Education and Law. (4) Lecture, four hours. Lesbian, gay, bisexual, and transgender-related con-
traversies that arise in schools, colleges, and universi-
ties today and how they are being addressed by legal and education communities. In particular, examina-
tion of the life consequences and explora-
tion of what might be done to make things better for all persons. Letter grading.

M148. Women in Higher Education. (4) (Same as Women's Studies M148.) Seminar, three hours. De-
signated for juniors/seniors. Overview of issues related to experience of women in higher education. Topics include curricular transformation, feminist pedagogy, gender equity, women faculty members, and intersec-
tional theories and race. Letter grading.

149. Innovation and Social Entrepreneurship in
Education. (5) Lecture, two hours; laboratory, two hours. Exploration of various types of charter schools as well as alternative methods for social change. Emphasis on strengths, weaknesses, and its the-
etorical constructs, and its application to charter schools as social enterprises. Letter grading.

150. Student Development in Theory and Practice. (2) Seminar, two hours. Introduction to field of student affairs and contribution of student development theo-
ry. General overview of various student affairs func-
tions and programs, along with key theories that in-
form practice. P/N grading.

152. Policy Analysis and Real Politics of Educa-
tion. (3) Lecture/discussion, three hours. Exploration of relationship between scholarly policy analysis and actual workings of policy systems. Selected topics in-
clude achievement standards and assessment, school finance, equal access to education, and school reform. Letter grading.

170A. Experiential Learning: Community-Based
Outreach Programs. (2) Fieldwork, four hours. En-
forced requisite: course 192B. TB test required prior to first day of instruction. Training and supervised practicum for undergraduate students, including tutoring and mentoring of K-3 stu-
dents at America Reads sites. Letter grading.

170B. Experiential Learning: America Reads. (2)
Fieldwork, four hours. Enforced requisite: course 192B. TB test required prior to first day of instruction. Training and supervised practicum for undergraduate students, including tutoring and mentoring of K-3 stu-
dents at America Reads sites. Letter grading.
CM178. Critical Media Literacy and Politics of Gender: Theory and Production. (4) Same as Women's Studies CM178.) Seminar, three hours. Corequisites: course CM178L. 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 CM278. Letter grading.


M182A. Language, Literacy, and Human Development Ethnography. (2) Formerly numbered 182A.) (Same as Afro-American Studies M182A.) Fieldwork, three hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M182B. Culture, Gender, and Human Development Ethnography. (2) Formerly numbered 182B.) (Same as Afro-American Studies M182B.) Fieldwork, three hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M182C. Culture, Communications, and Human Development Ethnography. (2) Formerly numbered 182C.) (Same as Afro-American Studies M182C.) Fieldwork, six hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M183A. Language, Literacy, and Human Development Ethnography. (3) Formerly numbered 183A.) (Same as Afro-American Studies M183A.) Fieldwork, six hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M183B. Culture, Gender, and Human Development Ethnography. (3) Formerly numbered 183B.) (Same as Afro-American Studies M183B.) Fieldwork, six hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M183C. Culture, Communications, and Human Development Ethnography. (3) Formerly numbered 183C.) (Same as Afro-American Studies M183C.) Fieldwork, two hours. Must be taken prior to course 192A. Emphasis on cognitive learning and motivation theories and their relevance to strategies for developing curricular instructional techniques and training that contribute to tutoring, counseling, and other instructional assistance in various school settings. Letter grading.

187. Variable Topics in Education. (5) Seminar, five hours. Limited to juniors/seniors. Variable topics course organized around disciplinary knowledge/contemporary topics in human development. Concurrently scheduled with course ED278. Lecture grading.

191A-191X. Current Issues in Education. (4 each) Seminar, four hours. Limited to juniors/seniors. Variable topics course organized on selected current issues basis, integrating field observations and readings through seminar discussions. Development of culminating project. Consult Schedule of Classes for topics and instructors. May be repeated for credit. Letter grading.

192A. Undergraduate Practicum in Community-Based Outreach Programs. (2) Seminar, two hours. Enforced corequisite: course M170A. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students 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 M170B. Limited to juniors/seniors. TB test required prior to first day of instruction. Training and supervised practicum for advanced undergraduate students that provides opportunity to reflect on both content and experience pertaining to America Reads sites. Letter grading.

193Y-193Z. High School Advising Program. (4-4) Discussion, two hours; fieldwork, five hours. Service learning courses designed to provide students with information and techniques sufficient to allow them to undertake advising academic in low socioeconomic high schools. Letter grading.

M194A. Language, Literacy, and Human Development Research Group Seminars. (5) Formerly numbered 194A.) (Same as Afro-American Studies M194A.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182A or M183A. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationship between theories of development, culture, and language. May be taken independently for credit. Letter grading.

M194B. Culture, Gender, and Human Development Research Group Seminars. (5) Formerly numbered 194B.) (Same as Afro-American Studies M194B.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182B or M183B. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationship between theories of development, culture, and gender. May be taken independently for credit. Letter grading.

M194C. Communications, and Human Development Research Group Seminars. (5) Formerly numbered 194C.) (Same as Afro-American Studies M194C.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182C or M183C. Research seminar designed to provide opportunity to combine theory and practice in study of human development in educational contexts. Focus on relationship between theories of development, culture, and technologies. May be taken independently for credit. Letter grading.

195. Community Internships in Education. (4) Tutorial, one hour; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship or community service, supervised to be able to be supervised by Center for Community Learning and faculty sponsor. Students meet biweekly with teaching assistant, write reflective journals, and prepare final paper. May be repeated for credit. Individual contract with supervising faculty member required. Letter grading.


196R. Research Apprenticeship in Education. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Entry-level research apprenticeship for upper division students under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP grading.

197. Individual Studies in Education. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Asigned reading and supervised plan of study for subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Education. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Historical Research and Writing. (4) Lecture, four hours. Methods of historical research and writing for students who are or who will be engaged in research and in report or paper or thesis writing, regardless of their field of interest. S/U or letter grading.


200C. Analysis of Survey Data in Education. (4) Lecture, four hours; laboratory, two hours. Course 200B. Introduction to techniques of processing and analyzing nonexperimental and quasi-experimental quantitative data. S/U or letter grading.

200D. History of American Education. (4) Same as History M204.) History of educational thought and of social forces impinging on American education from the 1880s to the present. Analysis of relation between these ideas and forces, and aims and practices of American education today.


C203. Educational Anthropology. (5) Seminar, four hours. Research seminar designed to familiarize students with discipline of anthropology and subfield of anthropology and education. Exploration of concept of culture through various anthropological perspectives, with a focus on theoretical, cultural transmission and acquisition, and cultural reproduction and production for understanding schooling and its outcomes. Examination of research methodologies in anthropology, as well as an overview of discipline and current debates and dilemmas of doing anthropological research in educational settings. Issues of culture, science, government, ethnography, and class, and consideration of application of anthropological theory and methods to educational practice and research. Concurrently scheduled with course C126. Letter grading.
204A. Introduction to Education and the Social Sciences. (4) Interdisciplinary course intended to introduce students to study of educational issues, texts, and movements. Critical thinking through social sciences and comparative perspectives.

204B. Introduction to Comparative Education. (4) Examination of conceptual and methodological questions underlying comparative education. Particular attention to development of the field and to styles of social analysis which may be applied to comparative and cross-national studies in education.

204C. Education and National Development. (4) Designed for graduate students. Analysis of various social sciences perspectives and methodologies (including modernization, dependency, Marxist, neo-Marxist, liberation theology, and world-system theories of change and development) and changing notions of role of education in development of less-industrialized countries of the world.

204D. Minority Education in Cross-Cultural Perspective. (4) Historical and contemporary analyses of educational policies with regard to ethnic, religious, and linguistic minorities through selected national and international case studies. Introduction to cross-cultural education in representative countries in relation to social, political, and economic systems.

204E. International Efforts in Education. (4) Designed for graduate students. Critical analysis of complex world of “development cooperation,” with particular reference to bilateral and multilateral efforts in education.

204F. Nonformal Education in Comparative Perspective. (4) Comparative and international study of organized and systematic educational activity for children, youth, and adults carried on outside of schools. Types of programs include, among others, consciousness raising, community action, skills training, literacy, and extension programs.

205. Computers in the Educational Process. (4) 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.

206A. Philosophy of Education: Introduction. (4) Systematic introduction to the field, indicating ways in which philosophy serves to elucidate educational aims, content, methods, and values.

206C. Introduction to Conceptual Analysis. (4) Conceptual analysis of recurrent and contemporary themes in the field. Emphasis on development of logical and linguistic skills used in analysis of educational problems and issues.

207. 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 C125. S/U or letter grading.

208A. Perspectives on the Sociology of Education. (4) Lecture, four hours. Sociological perspectives on current issues in educational policy and practice, including public opinion, deinstitutionalization, equality of educational opportunity, structure of educational organization, teacher/student relationships, reform in education at elementary, secondary, postsecondary levels. S/U or letter grading.

208C. Explanation in the Social Sciences and Educational Research. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Overview of basic strategies and forms of explanation relevant to inquiry in education from vantage point of various social and behavioral sciences disciplines.


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) Analysis of structure and function of American postsecondary education from system perspective. Emphasis on structure of system and comparative characteristics (faculties, student bodies, finances, outputs) of different types of institutions.

210. Education as a Profession: Theory, Research, and Practice. (4) Lecture, 90 minutes; discussion, two and one-half hours. Introduction to major issues and approaches in educational research through series of faculty presentations, selected readings, and writing assignments. Letter grading.


211B. Item Response Theory. (4) Lecture, four hours. Requisites: courses 211A, 230C. Item response theory, applications to educational achievement tests, item bias, test information, test equating, computerized adaptive testing. S/U or letter grading.

212A. Learning and Education. (4) Lecture, four hours. Models of learning, modeling, reinforcement, motivation, encoding, memory, transfer, individual differences, and instruction. S/U or letter grading.

212B. Motivation and Affect in Educational Process. (4) Lecture, four hours. Review of theoretical and empirical literature on motivational factors in school settings and conditions for acquisition of affective outcomes. S/U or letter grading.

212C. Group Counseling Theory and Process. (4) Lecture, three hours; discussion, one hour. Requisite: course 214A. Group counseling; leadership in groups, social perception, attitude formation, and effect of behavior changes in individuals and groups. Evaluation of social, psychological, and educational principles related to therapeutic experiences of individuals in small groups. Letter grading.

213D. Assessment in Counseling and Student Affairs. (4) Lecture, one hour; discussion, one hour. Requisite: course 212D. Emphasis on concepts of testing and measurement, applications of measurement theory, and contemporary issues that are significant in influencing assessment in student affairs programs.

214A. Counseling Theory and Practice. (4) Lecture, four hours. Alternatives in counseling practice in relation to theories of personality development and functioning; research on effectiveness of counseling, professional issues; educational aspects of counseling. S/U or letter grading.

214C. American Professoriate: Faculty Status, Role, and Performance. (4) Discussion, four hours. Requisite: course 214A. Critical review of the social and intellectual causes of outcomes in achievement and affiliative domains.

214F. Student Problems: Social Context. (4) Designed to assist students in understanding the configuration of social forces that lead to student dysfunctions. Emphasis on identification of a number of contemporary social problems that are of concern to school counselors, educators in general, and behavioral scientists.

215. Personology, Motivation, and Attribution. (4) (Same as Psychology M239.) Current research and theory relating personality variables (e.g., attributional styles, self-esteem) to motivational concerns such as persistence and intensity of behavior; causes of outcomes in achievement and affiliative domains.


217A. Social Development and Education. (4) (Same as Psychology M242D.) Seminar, four hours. Biological and familial, school, and other influences on the child; development in context of current research and theoretical models; consideration of theoretical and methodological research on family, peer group, and school; application of developmental theory and research to educational practice. S/U or letter grading.

217B. Cognitive Development and Education. (4) Designed for graduate students. Critical review of theories and research in cognitive development, focusing on work of Piaget and Vygotsky, and relation of this work to issues in educational practice.

217C. Personality Development and Education. (4) (Same as Psychology M245.) Review of research and theory of critical content areas in personality development that bear on school performance: achievement motivation, self-construct, self-oriented differences, empathy, and other social behaviors; review of status of emotional behavior in personality theory and development.

217D. Language Development and Education. (4) Research and theory on how children develop their first language; sociolinguistic and psycholinguistic issues in preschool and primary years; bilingual and dialectal issues.

217F. Adolescent Development. (4) (Same as Psychology M242G.) Seminar, four hours. Designed for graduate students. Review of recent research on physical, cognitive, social, and psychological development during secondary decades. Topics include puberty, 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; evaluation of theories of measurement of intelligence; elements of validity and reliability. S/U or letter grading.

219. Laboratory: Advanced Topics in Research Methodology. (4) Provides assistance in design of research and interpretation of data to advanced students from other divisions. Coverage of special topics not included in other courses on research methods.

246A. Decision Analysis and Advanced Computer Methods for Educational Policy and Planning. (4) Requisite: course 242. How information technology and decision analysis impact K-12 schooling, higher education, and technical training/workplace settings. With research paper, oral presentation, and two re-search briefs. Students can pursue decision analysis areas of special interest to their professional and career objectives.

247. Special Topics in Law and Educational Policy. (4) Lecture, four hours. Policy-based inquiry with focus on specific law-related debates that inevitably influence both K-12 and higher education communities. Identification of strategies that have been successfully employed by those who have sought to use law to shape educational policy. Letter grading.

248. Seminar: Special Topics in Child Development and Education. (4) Seminar, four hours. Content varies; limits of investigation set by individual instructor. S/U or letter grading.

249B. Seminar in Institutional Research and Program Evaluation. (4) Critical review of institutional evaluation studies, with consideration of scope of information needed for various purposes and problems of interrelating this information to appraise overall institutional functioning and effectiveness.

250A. Organizations and Systems of Higher Education. (4) Designed for graduate students. Two-course sequence designed to orient new students to issues, ideas, and literature that constitute the division, with emphasis on understanding social and political issues that shape higher education and organizational change.

250B. Topical Issues in Higher Education. (4) Designed for graduate students. Two-course sequence designed to orient new students to issues, ideas, and literature that constitute the division, with emphasis on understanding social and political issues that shape higher education and organizational change.

250C. Theoretical Frameworks of Higher Education. (4) Designed for graduate students. Overview of various social sciences theories used to analyze institutions and issues of contemporary higher education. Explanation of how theory and methodology affect research design and framing of research questions in studies of higher education.


252A. Seminar: Educational Organizations. (4) Seminar, four hours. Requisite: course 208A. S/U or letter grading.

252B. Educational Enterprise. (4) Lecture, two hours; discussion, two hours. Requisite: course 252A. Limited to Educational Leadership Program students. Use of structural, human resource, political, and symbolical frames to study K-16 education, with focus on educational planner, organization, and curriculum and instruction. Letter grading.

252C. Human Resources and Economic Development. (4) (Same as Community Health Sciences M252.) Lecture, four hours. Examination, in context of developing countries, of trends among economic development, population growth, levels of health and nutritional status, and educational investments. S/U or letter grading.

252SA. Seminar: Current Problems in Comparative Education. (4) (Formerly numbered 252AS.) Seminar, four hours. Examination of some of most influential critical theorists, including Marx, Nietzsche, Freud, Marcuse, Foucault, Fanon, and de Beauvoir and their contributions to critique of contemporary education, society, and politics. S/U or letter grading.

253B. Seminar: African Education. (4) Designed for graduate students. Contemporary issues in African educational systems, including questions of access and equity, quality and efficiency, relevance and responsiveness, links between schools and communities, and policy and practice in education.


253D. Seminar: Latin American Education. (4) Seminar, four hours. S/U or letter grading.

253F. Seminar: Education in Revolutionary Societies. (4) Multidisciplinary and comparative study of socialist educational theory examined through writings of Marx, Lenin, Mao, and others. Implementation of this theory in specific case studies, along with comparative assessments of nonsocialist nations.

253G. Seminar: The American and Educational. (4) Basic issues and topics related to Asian Americans in the field of education. Examples of issues and topics include Asian Americans and the community, socioeconomic status, education-to-work transition, language and culture question.

253H. Seminar: The Chicano/Hispanic and Education. (4) Basic issues and topics related to the Chicano and other Hispanic groups in education. Review of literature on specific educational levels and Chicano and Hispanic student progress (e.g., early childhood, elementary, higher education; specific topics: assessment, access, tracking, segregation; implications for schooling).

253I. Education and Social Change in the Middle East and Islamic World. (4) Critical and analytic examination of historical and current role of traditional and modern (Western) education in affecting social, political, and economic changes in countries of the Middle East and Islamic world (including Pacific Rim, South and Central Asia).


255A-255B. Seminar in Special Topics. (4-4) May be repeated for credit. 255A. Measurement; 255B. Data Analysis.


256B. Seminar: Special Topics in Development. (4) Seminar, four hours. S/U or letter grading.

257. Seminar: Research in Counseling Psychology. (4) In-depth analysis of selected research approaches/areas in counseling psychology.

258A. Seminar: Problems in Instructional Research. (4) Seminar, four hours. S/U or letter grading.

258B. Seminar: Problems in Instructional Development. (4) Seminar, four hours. S/U or letter grading.

259A. Seminar: Research on Characteristics of Students. (4) Seminar, four hours. Analysis of concepts, methodology, and conclusions or implications underlying and resulting from major research on student characteristics. Emphasis on differential impact of higher education on student and faculty development. Letter grading.


261E. Higher Education Seminar; Diversity Issues and Research Perspectives. (4) Seminar, four hours. Examination of issues related to the social construction of diversity and its related dynamics and at same time been reshaped by institutions of higher education, with focus specifically on student experiences, curricula, institutional climate, educational policies, and administrative practices. Letter grading.

261F. Seminar: Cognitive and Personal Development of College Students. (4) Examination of cognitive development of college students; issues of personal and social development, including leadership, and interpersonal relations and skills.

262B. Seminar: Reading. (4) Seminar, four hours. S/U or letter grading.

262F. Seminar: Research Topics in Bilingual/Multicultural Education. (4) Seminar, four hours. S/U or letter grading.

262H. Economics of Urban Schooling. (4) Lecture, two hours; discussion, two hours. Examination of principles and tools of policy analysis and their application to enhance urban schooling decision making and effectiveness. Use of economics and equity as umbrella lenses and drawing on multiple supplemen- tary lenses and perspectives (from disciplines including history, law, political science, and sociology) to examine urban schooling issues and context and discourse of public policy genesis, implementation, and impact. Constructing and decon- structing policy processes with educational reform and transformation in terms of need for change and change proposal feasibility and desirability. Methods include development of arguments supporting contrasting views of policy issues, contention and counter-contention construction and support, and methods of advocacy, persuasion, and substantiation appropriate to various forums such as congressional testimony, public political dialogue, and academic re- search venues. Letter grading.

262J. Entrepreneurial Leadership and Education: Seminar for Education and Business Leaders. (4) Seminar, two hours; discussion, two hours. Seminar for education and business leaders to explore concepts and processes of becoming entrepreneurial leaders — meeting today’s educational challenges by internalizing and applying skills and thinking used by successful entrepreneurs. Letter grading.


264. Seminar: Teacher Education. (4) Research, issues, and practices in preservice and in-service teacher preparation, evaluation, and certification. Social, philosophical, and methodological issues and current trends in America and abroad. Opportunities to observe, participate in, and discuss teacher education programs.

265. Higher Education Policy. (4) Requisites: courses 250A, 250B. Understanding public policy for higher education requires understanding of both issues and policy process. Review of major topics on which the U.S. government is active, as well as key actors and their influence.

M266. Feminist Theory and Social Sciences Research. (4) (Formerly numbered 266.) (Same as Women’s Studies M266.) Lecture, four hours. Examination of how diverse feminist social theories of last quarter century have both challenged and strengthened conventional social sciences theories and their methodologies. Introduction especially to feminist standpoint theory, distinctive critical theory methodology now widely used in social sciences. Letter grading.


268. Theorizing Reading: Rhetorics of Academic Discourse. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Introduction to theoretical approaches to reading, such as poststructuralist, feminist, deconstruction, reader reception, and semiotics, and to core ideas of some leading theo-rists of reading, such as Roland Barthes, Wolfgang Iser, Barbara Johnson, Stanley Fish, and Gayatri Spivak.
269. Representations of Education in Cinema. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Exploration of ways in which we draw on diverse “texts,” particularly films set in or around schools, to illuminate contemporary issues in American secondary education (e.g., issues pertaining to representation of teachers, students, parents, and administrators, and curriculum in popular films about high school and adolescents).

270. Introduction to Cultural Studies. (4) Lecture, four hours. Investigation of current trends in cultural studies through examination of different methods of cultural interpretation, seminal texts in cultural studies, and practical criticism engaging popular artifacts of media culture. Emphasis on developing critical media literacy as a goal of cultural studies. Letter grading.

271A. Proseminar: Educational Psychology. (2) Introduction to a variety of research issues in the field of educational psychology, including topics related to human development, learning and instruction, counseling, and special education, and to different methodological approaches used to study them. S/U grading.

272. Case-Study Research in Education Policy and Practice. (4) Use of case-study methods in education research, providing opportunities for applying methodological skills to actual case-study research projects. Focus on single and multiple case studies that investigate issues in education policy and practice.

273A. Structure and Dynamics of Educational Systems. Lecture, 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, curricular theory and design, and teaching are inextricably connected in the delivery of education.

273B. Social Foundations of Education. (4) Introduction to literature on multiculturalism and teachings in diverse social, cultural, and economic contexts. Exploration of debates over multiculturalism and teaching for democratic citizenship by review of a diverse number of anthropological, sociological, educational curricula and literatures.

274. Science, Technology, and Social Research after Eurocentrism. (4) A philosophy of natural sciences for social scientists which examines challenges to conventional research assumptions raised by multi-cultural and postcolonial science and technology studies that have emerged since World War II. Focus on sciences and technologies in third-world development projects, comparative ethnoscence movements, and new theories of knowledge and how to do maximally objective research emerging from these literatures.

275. Race and Education. (4) Lecture, 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 broad theoretical and realist concerns through student analysis of media and critical media literacy projects. Concurrently scheduled with course CM178L. Letter grading.

276. Contemporary Theories of Writing. (4) Lecture, four hours. Designed for graduate students. Survey of major events, political and economic forces, and ideas that shaped urban schools since 1890. Examination of historical scholarship across range of political/ideological perspectives. Letter grading.

277. History of Urban Schooling. (4) Lecture, four hours. Designed for graduate students. Survey of major events, political and economic forces, and ideas that shaped urban schools since 1890. Examination of historical scholarship across range of political/ideological perspectives. Letter grading.

278. Seminar: Selected Topics in Special Educa- tion. (2 to 6) Focus on research and clinical problems in special education. Introduction to a range of clinical services and research strategies. Exploration of current topics in the field.


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 educational advantage and disadvantage accumulate throughout education and effects equity in college access. Letter grading.


283. Social Research in Multicultural and Postco- lonial World. (4) 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.

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 educational tradition,” including some major theoretical writings in liberal, neo-Marxist, left liberal/postmodernist, and Marxist subfields of critical education tradition. Letter grading.


286. Culture, Brain, and Development. (4) (Same as Anthropology M210S, Applied Linguistics and TESL M233, and Psychology M247.) Seminar, three hours. Designed for graduate students. Integration of knowledge across disciplines to understand interrelations of culture, brain, and development, where development includes both human ontogeny and human phylogeny. S/U or letter grading.


288. Research Apprenticeship Course. (2) Discussion, two hours. Course facilitates a mentorship model of training Ph.D. students in education, with focus on development of graduate research projects. Assignment of common readings related to these topics; students have opportunity to offer and receive feedback. May be repeated for credit. S/U grading.

290. Educational Policy Analysis: Research, The- ory, and Practice. (4) Broad overview of development of educational policy from the 1950s to the present. Examination of current issues and debates within educational policy in the U.S. through different theoretical lenses. Exploration of major bodies of research on educational policy and alternative paradigms.

291. Organizational and Leadership Theory in Edu- cation. (4) Introduction to contemporary and histori- cal conceptions of organization and leadership in context of formal schooling. Exploration of these concep- tions through inquiry into school and college settings.

292. Curriculum Theory, Research, and Practice. (4) Survey of history of theories and perspectives shaping what is taught in schools, providing graduate students broad understanding of various values, beliefs, and power relations shaping K-12 curriculum in the U.S.

293. Teaching Studies: Research and Theory into Practice. (4) Exploration of historical, theoretical, and empirical perspectives related to teaching and teach- er education, providing graduate students with broad overview of relevant and current issues shaping teaching profession in the U.S.

296A-296F. Seminars: Research Topics in Educa- tion. (2 each) Seminar, three hours. Advanced study and analysis of current topics in education. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296G. Research Topics in Education: Legal As- pects of Educational Management. (2) Seminar, two hours. Examination and analysis of legal issues, especially as they apply to school organizations. Letter grading.

296H. Research Topics in Education: Organiza- tional Theory. (2) Seminar, two hours. Discussion and analysis of organizational theories, especially as they apply to school organizations. Letter grading.

299A-299B. Research Practicum: Education. (4 to 8 each) May be repeated for credit.

300. Dissertation Writing Workshop: Interdivision- al Seminar. (4) Seminar, one hour; discussion, two hours; laboratory, one hour. Introduction. Introduc- tion for doctoral candidates to dissertation writing as a genre that can be analyzed or broken down with its constituent parts and, vice versa, which is con- structed out of materials that can be identified and an- alyzed. S/U grading.

301. Introduction to Information and Presentation Tools. (1) Laboratory, one hour. Limited to credentialed program students. Sequence of laboratory sessions providing preservice teachers with introduction to education technology infrastructure and classroom presentation tools. Introduction to resources and services, e-mail functions and Internet, 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 psycho- active drugs (alcohol, tobacco, and narcotics), human sexuality, nutrition, community health resources, and analysis of state’s health framework. S/U grading.

309. Methodologies for English Language Learn- ers. (2) Laboratory, two hours. Limited to credentialed program students. Pedagogy for bilingual and English language learners. Discussion of competencies needed by all content area teachers of English lan- guage learners, including strategies for teaching in and through English. Topics include educational issues, organizational approaches, and communicative approaches; strategies and activities. Letter grading.
310. Professional Communication for Graduate Students in Education. (2) Writing workshop on students’ papers in progress to ensure professional standards. Analysis and correction 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; lab, six hours. Introduction to the use of computers in educational environment. Discussion of issues on why and how to integrate computers into curriculum and hands-on practice which allows students to demonstrate skills. S/U grading.

312. Basic Principles of Curriculum and Instruction. (4) Analysis and practice of basic principles and concepts for planning, conducting, and evaluating units of curriculum and instruction. Emphasis on study of methods in a variety of instructional strategies and their application in elementary and secondary schools.


315B. Elementary Literacy Methods. (3) Seminar, three hours. Theoretical principles and pedagogical strategies necessary for developing and maintaining balanced comprehensive literacy program for elementary students of how children learn to read, write, and use language. S/U grading.


318A. Integrated Methods for Elementary Teachers. (2) Lecture, two hours. Examination and development of instructional programs and analyses and practices of instructional methods for teaching K-6 content, with emphasis on interdisciplinary approach that integrates content areas. Aligned with California state frameworks and California content standards for grades K-12 which address needs and interests of diverse students. S/U grading.

318B-318C. Integrated Methods for Elementary Teachers. (4-4) Lecture, four hours. Examination and development of instructional programs and analyses and practices of instructional methods for teaching K-6 content, with emphasis on interdisciplinary approach that integrates content areas and infuses literacy, technology, and social studies for second language learners. Aligned with California state frameworks and California content standards for grades K-12, including English Language Development Standards — all of which address needs and interests of diverse students. 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 development of instructional programs and analyses and practices of instructional methods for teaching content in grades 7-12. Emphasis on interdisciplinary approach that integrates content areas and infuses literacy, technology, and social studies for second language learners. Methods courses are aligned with California state frameworks and California content standards for grades K-12, including English Language Development Standards — all of which address needs and various interests of diverse students. S/U grading.


330A. Observation and Participation. (2 to 6) Site-based fieldwork, 10 to 15 hours. Students are assigned to school sites with racially, culturally, and linguistically diverse student populations. Throughout observation and participation periods, students analyze effective strategies for achieving learning for all students, including sociocultural approaches and appropriate use of educational technology. S/U grading.

330B. Student Teaching. (4 to 8) Site-based fieldwork, 10 to 20 hours. Requisite: course 330A. Students are assigned to student teach in designated school sites with racially, culturally, and linguistically diverse student populations. Throughout student teaching period, students as novice teachers plan, implement, and assess daily lessons and units, as well as actively engage in reflecting on issues specific to school/community relations. S/U grading.

330C. Student Teaching. (4 to 8) Site-based fieldwork, 10 to 30 hours. Requisite: course 330A. Students are assigned to student teach in designated school sites with racially, culturally, and linguistically diverse student populations. Throughout student teaching period, students as novice teachers plan, implement, and assess daily lessons and units, as well as actively engage in reflecting on issues specific to school/community relations. Increased daily responsibilities. S/U grading.

330D. Classroom Residency and Teaching. (4) Site-based fieldwork, 40 hours. Students are employed by local school districts to teach as residents in designated school sites with racially, culturally, and linguistically diverse student populations. Students also work in collaborative teams through Teacher Education Program to initiate a change project in their local school and/or complete a case study on the project. S/U grading.

330A-330B-330C. Novice Seminars. (3-3-3) Seminar, three hours. Analysis of basic principles and concepts of planning, conducting, and evaluating units of curriculum and instruction. Emphasis on study and utilization of constructivist strategies and their application in elementary and secondary schools. Examination of different methods of computer literacy and teaching subject matter may conduct ethnographic inquiry of local community of their designated partnership district. S/U grading.

375. Teaching Apprenticeship Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel, arrangement, associated personnel, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

390A-390B-390C. Colloquium Series: Psychological Perspectives; Literature; Diverse Diverse. (4) Lecture, three hours. Theoretical/conceptual, empirical, and/or ideological bases for these assertions. Alternative models of classroom teaching, their assumptions, and evidence of worth. Current policy issues and problems in generating and sustaining effective teaching.

405A-405B-405C. Teaching in Urban Schools. (2-2-2) Lecture, two hours. Limited to credential program students. Participatory courses that explore issues of identity development, positionality, and development as a teacher for urban students; issues of sociocultural realities of diverse student populations; and examination of urban school communities, their identities and ways of understanding and interacting. Each course may be taken independently for credit. Letter grading. 405A. Cultural Identity; 405B. Diverse Perspectives; 405C. Community Action.

406. Social Foundations and Cultural Diversity in American Education. (3) Lecture, three hours. Intensive consideration of American society, particularly its racial and cultural diversity. Topics include historical development of American society, manifestations of cultures, and ways to learn about students’ cultures. Examination of issues of race, ethnic and gender differences, perspectives of cultural diversity, and impact on educational and classroom instruction. Letter grading.


408A-408U. Language and Culture. (2 each) Lecture, two hours. Exploration of complex nature of culture and impact of cultural diversity in urban classroom through class discussions, activities, and reflective expression, allowing novice teachers to understand and participate in rich cultural diversity of urban Los Angeles. By exploring culture as tool and target for increasing understanding of multicultural diversity, teachers may construct meaningful connections to students, communities, and home cultures. Each course may be taken independently for credit. Letter grading. 408B. Latino/Latina Emphasis; 408C. Asian American Emphasis; 408D. African American Emphasis. 408U. General Topics.

409. Language Structure, Acquisition, and Development. (3) Lecture, three hours. Theoretical foundations of language structure and first and second language acquisition, with focus on major themes of current research that provide framework for schooling of English language learners. Rationale for bilingual/English language acquisition and development programs. Historical and current theories and models of language. Letter grading.

410. Structure and Functions of Schools as Complex Organizations. (4) Critical analysis of alternative assumptions about organizations, how they function, and why people in organizations behave as they do. Application to special circumstances of schools and to contemporary issues and problems in school leadership, improvement, and reform.


410A-410B. Issues in Higher Education and K-12. (4-4) Lecture, four hours. Two-course sequence providing overview of higher education systems. Letter grading. 410A. Designed to develop knowledge, understanding, and sensitivity to contemporary critical and emerging issues that impact higher education, with focus on both theory and practice. Study of relations between issues in K-12 schooling and higher education. 410B. Exploration of issues that affect both higher education and K-12 schooling, including restructuring and reform, standards, access and accountability, and new technologies. Emphasis on both theory and practice.


413B. Methodology for Emphasis Language Instruction. (3) (formerly numbered 413A) Lecture, three hours. Offered and required for Spanish BCLAD credential. Consideration of models for developing cultural and language skills of home speakers of language. Survey of methods in use. Emphasis on active learning to develop student ability to use language for real-world and academic purposes in culturally appropriate ways. Consideration of models for teaching academic content in primary language for delivery of core curriculum to bilingual students. Letter grading.

413C. Culture of Emphasis. (3) (Formerly numbered 413B) Lecture, three hours. Offered and required for Spanish BCLAD credential. Conducted in Spanish. Consideration of commonalities of culture of emphasis in its home country or countries; major historical periods and events; values, belief systems, and expectations; migration and immigration; historical and contemporary demography. Letter grading.

414A. Student Affairs Practice and Theory. (3) Lecture, two hours; discussion, two hours. Examination of needs for student affairs services, range of services, their philosophy, objectives, and emergent rationale, and their organization and evaluation to provide a knowledge base for developing theories of practice. Ongoing involvement in cooperative learning project to examine these issues both as team members and as individuals. Offered in summer only. Letter grading.

414B. Legal and Ethical Issues in Student Affairs. (4) Lecture, two hours; discussion, two hours. Examination of legal and ethical issues that affect student affairs practices in higher education. Letter grading.

414C. Advanced Counseling Theory and Practice. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Overview of intervention and prevention strategies for student affairs professionals, with emphasis on campus-as-community concept with crisis theory as a model, providing conceptual model for understanding counseling role of student affairs in higher education. Letter grading.

41D. 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.

41E. Administration of Student Affairs. (3) Lecture, two hours; discussion, two hours. Overview of growth in emphasis on counseling role of student affairs officers to effectively administer program or service under student affairs. Examination of relationship between environment, factors and strategies for governing, planning, and managing student affairs programs and services. Offered in summer only. Letter grading.


420A. Principles of Curriculum. (4) Critical examination of basic concepts underlying determination of objectives, selection and organization of learning experiences, and evaluation process.

421. Program and Research in Early Childhood Education. (4) Preparation: one course from development series. Examination of child care programs and research in early childhood education, including review of major programs and policies in the field of early childhood education and to goals of early childhood education and day care.

421D. Parents and Community Agents in Child Development. (4) 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 the community.

421F. Administration of the Instructional Program. (4) Examination of current educational problems in society and strategies of their solution through educational policy and practice; instructional design and operation; in-service training of teaching staffs.

431A. Administration in Higher Education. (4) Overview of college and university administration and introduction to policy research and analysis of post-secondary institutions. Case studies of administrative problems, policies, and practices. Management information systems, resource allocation, and issues related to responsibility, authority, and participation in administrative decisions.


432. Seminar: Professional Topics in Higher Education. (4) Seminar, four hours. 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 applications, integration plans for established or experimental educational media into forming courses, or evaluation of specific learning environments. Letter grading.

440C. Administration of the Instructional Program. (4) Examination of current educational problems in society and strategies of their solution through curriculum policy and practice; instructional design and operation; in-service training of teaching staffs.

441A. Instructional Supervision A. (4) Analysis of teaching in light of research-substantiated elements of instruction: task analysis, appropriate objectives, principles that increase motivations of learning, retention and transfer, monitoring and adjusting instruction to meet needs and capacities of learners.
441B. Instructional Supervision B. (4) Requisite: course 441A. Basic techniques of script-taping in instructional episodes, planning teacher conferences through analysis of script-tape, conducting and analyzing growth-evoking teacher conferences. Conducting mini-lessons to demonstrate elements of good instruction.

442B. Legal Aspects of Educational Management and Practice. (4) Examination of structures and kinds of law governing educational systems in the U.S.; constitutional dimensions of church/state relations; employment, civil rights, and legal aspects of hiring, firing, and negotiating procedures; student attendance, control, and civil rights.

443. Policy Analysis in Education. (4) Overview of political, economic, and legal context of educational policy formation. Included in examination are issues that impact on minorities (e.g., bilingual education, desegregation, affirmative action, role of subordinates in policy-making process).

444B. Equitable Educational Opportunity through Desegregation and Finance Case Law. (4) Requisite: course 442B. Concentrated review of definition of equality of educational opportunity as it is being developed by the courts in cases concerning desegregation and finance.

447. Seminar: Educational Policy and Planning, desegregation and educational finance. Being developed by the courts in cases concerning nants in policy-making process).

454A. Action Research: Collaboration in Change. (4) Formerly numbered 450A.) Lecture, one hour; discussion, two hours; small group work, four hours. Limited to Educational Leadership Program students. Second course in two-course sequence on learning how to do and use action research. Honing of team processes and team roles while collaborating on data collection and analysis at educational site. Letter grading.

455. Writing and Inquiry. (4) Formerly numbered 455A.) Lecture/workshop, eight hours per month; discussion, one hour; laboratory, one hour. Limited to doctoral students in Educational Leadership Program. Intended to assist students’ professional development as writers, addressing style and organization, scholarly genres, modes of discourse, and broader issues of conceptualization and specification of ideas. Letter grading.

456. Alterning Structure and Culture of Schooling. (4) Lecture, four hours; discussion, four hours. Limited to Educational Leadership Program students. Using applied orientation, examination of variety of approaches to organizational change and ways to sustain change. Letter grading.


460. Seminar: Special Issues in Evaluation. (2 or 4) Lecture, one or two hours; discussion, one or two hours. Topics and instructors vary each term. Recent emphases included evaluation utilization and cost-effectiveness evaluation. S/U or letter grading.

462. Seminar: Community College. (4) Topics include problems and practices in community college formation, instruction, student flow, administration, and evaluation. Letter grading.

470A. Seminar: Large Systems and Individual Schools. (4) Seminar, four hours. S/U or letter grading.


481. Knowledge and Inquiry in the Classroom. (4) Logical features of their application to inquiry techniques in teaching and learning. Various conceptions of truth, belief, and fact and opinion, and their application to classroom learning situations.

482A. Instructional Strategies in Urban Education: Technology. (4) Lecture, four hours. Emphasis on instructional practices that integrate use of technology in urban public schools. Study and analysis of comprehensive specialized use of appropriate computer-based technology to facilitate teaching and learning process, and debriefing of field experiences integrating technology-related tools. Letter grading.

482B. Instructional Strategies in Urban Education: English Language Learners. (4) Lecture, four hours. Emphasis on instructional practices that support English language learners in urban public schools. Study and analysis of comprehensive specialized instruction for English learners and debriefing of field experiences implementing adapted instructional programs for development of academic language, comprehension, and knowledge in core academic curriculum. Letter grading.

482C. Instructional Strategies in Urban Education: Special Populations. (4) Lecture, four hours. Emphasis on instructional practices that support special populations in urban public schools. Continuation of study of statutory programs, operations, instruction, and assessment issues related to teaching students with disabilities, students who are at risk, and students who are gifted and talented. Research opportunities, additional methods for advanced study, and preparation of M.Ed. inquiry included. Letter grading.

485. Advanced Study of Health Education. (1) Lecture, four hours. Student meetings with instructors, field specialists, and team members to study and analyze delivery of comprehensive support for physical, cognitive, emotional, and social well-being of students in K-12 classrooms. Topics include prevention and intervention strategies, accessing local and community resources, curriculum action, and major state and federal laws related to student health and safety. Letter grading.

489. Instructional Strategies in Education. (4) Methods of improving education, including research and active participation in the advocacy approach, forms of debate, role playing, interaction process analysis, and feedback instruments. Practical emphasis on social sciences and humanities instruction, K-12.

490A. Instructional Decision Making. (4) Analysis of instructional models relevant to public school education. Assumptions, procedures, and constraints of each strategy considered in terms of learner and task variables. Laboratory experiences in classroom settings permit students systematically to apply and evaluate alternative instructional strategies.


495A-495B-495C. Resident Seminars. (2-4) Seminar, two hours; site-based fieldwork, two hours. Students meet in individual sessions with instructors and other field support faculty and in team and cluster cohorts for university-school partnership, in addition to regular seminars to debrief field experiences and continue study of curriculum, instruction, and assessment issues. Research opportunities, additional methods in content areas, and preparation of M.Ed. portfolio included. Letter grading.

498A-498B-498C. Directed Field Experience. (2 to 8 each) Clinic, to be arranged. Field experiences designed to increase understanding of student fields of study. S/U or letter grading.

499A-499B-499C. Advanced Directed Field Experience. (4 to 8 each) May be repeated for credit.

501. Cooperative Program in Special Education. (2 to 8) Preparation: consent of UCLA academic advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Limited to UCLA doctoral students in special education. Used to record enrollment in practicum courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Independent Study. (4 to 12) Tutorial, to be arranged. Earned for all 4 units. Individual study or research for graduate students. May be repeated for credit. S/U or letter grading.

597. Preparation for Master’s Comprehensive Examinations or Doctoral Qualifying Examinations. (4 to 12) Tutorial, to be arranged. Individual study for master’s comprehensive examinations or for Ph.D. or Ed.D. qualifying examinations. May be repeated for credit. S/U grading.


296 / Education
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.

Department Mission

The education and research activities in the Electrical Engineering Department are strongly aligned with its mission statement. In partnership with its constituents, consisting of students, alumni, industry, and faculty members, the mission of the department is to (1) produce highly qualified, well-rounded, and motivated students with fundamental knowledge of electrical engineering who can provide leadership and service to California, the nation, and the world, (2) pursue creative research and new technologies in electrical engineering and across disciplines in order to serve the needs of industry, government, society, and the scientific community by expanding the body of knowledge in the field, (3) develop partnerships with industrial and government agencies, (4) achieve visibility by active participation in conferences and technical and community activities, and (5) publish enduring scientific articles and books.

Undergraduate Program Objectives

The ABET-accredited electrical engineering curriculum provides an excellent background for either graduate study or employment. Undergraduate education in the department provides students with (1) fundamental knowledge in mathematics, physical sciences, and electrical engineering, (2) the opportunity to specialize in specific areas of interest or career aspiration, (3) intensive training in problem solving, laboratory skills, and design skills, and (4) a well-rounded education that includes communication skills, the ability to function well on a team, an appreciation for ethical behavior, and the ability to engage in lifelong learning. This education is meant to prepare students to thrive and to lead. It also prepares them to achieve the following two program educational objectives: (1) that graduates of the program have successful technical or professional careers and (2) that graduates of the program continue to learn and to adapt in a world of constantly evolving technology.

Undergraduate Study

Electrical Engineering B.S.

The undergraduate curriculum allows Electrical Engineering majors to specialize in one of three emphasis areas or options. The three options are structured as an electrical engineering degree, and the only degree offered to undergraduate students by the department is the Bachelor of Science degree in Electrical Engineering.
No distinction is made among the three options: (1) electrical engineering (EE) option is the regular option that provides students with preparation in electrical engineering with a range of required and elective courses across several disciplines; (2) computer engineering (CE) option provides students with preparation in embedded systems and software and hardware issues. Students replace some of the senior courses in the regular EE option with computer engineering-oriented courses or computer science courses; and (3) biomedical engineering (BE) option provides students with exposure to additional chemistry and life sciences courses and helps them meet most of the premedical preparation requirements so that they are prepared for careers in bioengineering, medicine, or electrical engineering.

Electrical Engineering Option

Preparation for the Major

Required: Chemistry and Biochemistry 20A; Computer Science 31, 32; Electrical Engineering 1, 2, 3, 10, M16 or (Computer Science M51A); Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 4AL, 4BL.

The Major

Required: Electrical Engineering 101, 102, 103, 110, 110L, 113, 115A, 115AL, 121B, 131A, 132A, 141, 161, Mathematics 132, Statistics 105; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and three major field elective courses (12 units), one design course (4 units), and one laboratory course (2 to 4 units) selected from one of the following pathways:

Antennas and Microwaves: Three major field elective courses from Electrical Engineering 162A, 163A, and 163B or 163C; one capstone design course from 164D or 184D; and one laboratory course from 164L (or by petition from 194 or 199)

Integrated Circuits: Three major field elective courses from Electrical Engineering 115B, 115C, and M116C; one capstone design course from 115D or 184D; and one laboratory course from 115BL (or by petition from 194 or 199)

Microelectromechanical (MEMS) Systems: Three major field elective courses from Electrical Engineering 115B or 123A or 124, CM150, and 163A or 173; one capstone design course from 129D; and one laboratory course from 122L or CM150L (or by petition from 194 or 199)

Photonics and Plasma Electronics: Three major field elective courses from Electrical Engineering 172, 173, and 174 or 175 or M185; one capstone design course from 173D; and one laboratory course from 172L (or by petition from 194 or 199)

Signals and Systems: Three major field elective courses from Electrical Engineering 114, 115B, 115C, 131B, 132B, 136, 142, 162A; one capstone design course from 113D, 173D, 180D, or 184D; and one laboratory course from 115BL or M116L or M171L (or by petition from 194 or 199)

Solid State: Three major field elective courses from Electrical Engineering 123A, 123B, and 124; one capstone design course from 129D; and one laboratory course from 122L (or by petition from 194 or 199)

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

Biomedical Engineering Option

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL; Computer Science 31; Electrical Engineering 1, 2, 3, 10, M16 or (Computer Science M51A); Life Sciences 2, 3, Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 4AL, 4BL.

The Major

Required: Electrical Engineering 101, 102, 103, 110, 110L, 113, 115A, 115AL, 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 units) selected from the biomedical engineering pathway as follows: three major field elective courses from Electrical Engineering 132A, 141, and 176 or Mechanical and Aerospace Engineering 105A; one capstone design course from Electrical Engineering 113D or 180D; and one laboratory course from Biomedical Engineering CM186C or Electrical Engineering M171L (or by petition from 194 or 199)

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

Computer Engineering Option

Preparation for the Major

Required: Chemistry and Biochemistry 20A; Computer Science 31, 32, 33, 35L; Electrical Engineering 1, 2, 3, 10, M16 or (Computer Science M51A); Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 4AL, 4BL.

The Major

Required: Electrical Engineering 101, 102, 103, 110, 110L, 113, 115A, 115AL, 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 units) selected from the biomedical engineering pathway as follows: three major field elective courses from Electrical Engineering 132A, 141, and 176 or Mechanical and Aerospace Engineering 105A; one capstone design course from Electrical Engineering 113D or 180D; and one laboratory course from Biomedical Engineering CM186C or Electrical Engineering M171L (or by petition from 194 or 199)

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Electrical Engineering offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Electrical Engineering.

Electrical Engineering

Lower Division Courses

1. Electrical Engineering Physics I. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Mathematics 32A, 32B, 33A, 33B; Physics 1A, 1B. Introduction to modern physics and electromagnetism with an engineering orientation. Emphasis on mathematical tools necessary to express and solve Maxwell equations. Relation of these concepts to waves propagating in free space, including dielectrics and optical systems. Letter grading.

2. Physics for Electrical Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 1. Introduction to concepts of modern physics necessary to understand solid-state devices, including elementary quantum theory, Fermi energies, and concepts of electrons in solids. Discussion of electrical properties of semiconductors leading to operation of junction devices. Letter grading.

3. Introduction to Electrical Engineering. (2) Lecture, two hours. Introduction to field of electrical engineering; research and applications across several areas, such as communications, control, electromagnetics, embedded computing, engineering optimization, integrated circuits, MEMS, nanotechnology, photonics and optoelectronics, plasma electronics, signal processing, and solid-state electronics. P/NP grading.


16. Logic Design of Digital Systems. (4) (Same as Computer Science M51A.) Lecture, four hours; discussion, two hours; outside study, six hours. Introduction to digital systems. Specification and implementation of combinational and sequential systems. Standard logic modules and programmable logic arrays. Specification and implementation of algorithmic systems: data and control sections. Number systems and arithmetic algorithms. Error control codes for digital information. Letter grading.
**Upper Division Courses**

100. Electrical and Electronic Circuits. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: course 1 or Physics 1C, Mathematics 33A, 33B. Electrical quantities, linear circuit elements, circuit principles, signal waveforms, transient response, and steady state circuit behavior, semiconductor diodes and transistors, small signal models, and operational amplifiers. Letter grading.

101. Engineering Electromagnetics. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 1 or Physics 1C, Mathematics 32A and 32B, or 33A and 33B. Electromagnetic field concepts, waves and phases, transmission lines and Smith chart, transient responses, vector analysis, introduction to microwave devices, and static and magnetic fields. Letter grading.

102. Systems and Signals. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 1 (or Physics 1C), Mathematics 33A, 33B. Elements of differential equations, first- and second-order equations, variation of parameters method and method of undetermined coefficients, existence and uniqueness theorems, Laplace and Fourier transforms, system responses, responses of systems to periodic signals. Sampling theorem. Letter grading.

103. Applied Numerical Computing. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Computer Engineering 15 or Computer Science 31 or Mechanical and Aerospace Engineering 20, Mathematics 33A, 33B (33B may be taken concurrently). Introduction to numerical computing and analysis. Floating point representations and round-off errors; numerical methods for systems of linear equations; methods for systems of nonlinear equations. Introduction to numerical optimization: least square problems, root finding and interpolation and integration, and numerical integration; linear programming. Letter grading.

110. Circuit Analysis II. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 101, 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.

110L. Circuit Measurements Laboratory. (2) Laboratory, four hours; outside study, two hours. Requisite: 101. Experiments with basic circuits containing resistors, capacitors, inductors, and diodes. Ohm’s law voltage and current division, Thévenin and Norton equivalent circuits, superposition, transient and steady state analysis, and frequency response principles. Letter grading.


113D. Digital Signal Processing Design. (4) (Formerly numbered 113DL.) Lecture, four hours; outside study, four hours. 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 wordlength effects. Project course involving original design and implementation of signal processing systems for communications, speech, audio, video using DSP chip. Letter grading.

114. Speech and Image Processing Systems Design. (4) (Formerly numbered 114D.) Lecture, three hours; discussion, one hour; outside study, six hours. 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 transformation in second half. Lectures supplemented by laboratory implementation of speech and image processing tasks. Letter grading.


115AL. Analog Electronics Laboratory I. (2) Laboratory, four hours; outside study, two hours. Requisites: courses 110L, 115A. Experimental determination of device characteristics, diode circuits, single-stage amplifiers, compound transistor stages, effect of feedback on single-stage amplifiers. Letter grading.

115B. Analog Electronic Circuits II. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Requisite: course 115A. Analysis and design of differential amplifiers in bipolar and CMOS technologies. Design of current mirrors and active loads, frequency response of amplifiers. Feedback and its properties. Stability issues and frequency compensation. Letter grading.

115BL. Analog Electronics Laboratory II. (2) Laboratory, four hours; outside study, eight hours. Requisites: courses 115AL, 115B. Experimental and computational studies of multistage, wideband, tuned, and power amplifiers, and multistage feedback amplifiers. Introduction to thick film hybrid techniques. Construction of amplifier using hybrid thick film techniques. Letter grading.

115C. Digital Electronic Circuits. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 115A, Computer Science 51M. 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, flipflops/fatches, counters, etc.), computer-aided simulation of digital circuits. Letter grading.

115D. Design Studies in Electronic Circuits. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 115A, Computer Science 51M. 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, flipflops/fatches, counters, etc.), computer-aided simulation of digital circuits. Letter grading.

115E. Design Studies in Electronic Circuits II. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 115A, Computer Science 51M. 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, flipflops/fatches, counters, etc.), computer-aided simulation of digital circuits. Letter grading.

115F. Design Studies in Electronic Circuits III. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 115A, Computer Science 51M. 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, flipflops/fatches, counters, etc.), computer-aided simulation of digital circuits. Letter grading.

116. Computer Networks. (4) Lecture, four hours; discussion, one hour; outside study, six hours. Requisite: course 121B. Introduction to fundamental data communication concepts underlying and supporting modern networks, with focus on physical and media access layers of network protocol stack. Systems include high-speed LANs (e.g., fast and giga Ethernet), optical DWDM (dense wavelength division multiplexing), time division SONET networks, and wireless LANs (IEEE802.11), and ad hoc wireless and personal area networks (e.g., Bluetooth). Experimental laboratory sessions included. Letter grading.

121B. Principles of Semiconductor Device Design. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 2. Introduction to principles of operation of bipolar and MOS transistors, equivalent circuits, high-frequency behavior, voltage limitations. Letter grading.

122L. Semiconductor Devices Laboratory. (4) (Formerly numbered 122AL) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisites: courses 2, 121B (may be taken concurrently). Direct-current operation and design of junction diodes and transistors. Students perform various processing tasks such as wafer preparation, oxidation, diffusion, metallization, and photolithography. Letter grading.

123A. Fundamentals of Solid-State I. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 2 or Physics 1C. Limited to junior/senior engineering majors. Fundamentals of solid-state, introduction to quantum mechanics and quantum statistics applied to solid-state. Crystal structure, energy levels in solids, and band theory and semiconductor properties. Letter grading.

123B. Fundamentals of Solid-State II. (4) Lecture, three hours; outside study, nine hours. Requisite: course 123A. Discussion of solid-state properties, lattice vibrations, thermal properties, dielectric, magnetic, and superconducting properties. Letter grading.

124. Semiconductor Physical Electronics. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Requisite: course 123A. Band structure of semiconductors, experimental probes of basic band structure parameters, statistics of carriers, carrier transport properties at low fields, excess carrier transport properties, carrier recombination mechanisms, heterojunction properties. Letter grading.

128. Principles of Nanoelectronics. (4) Lecture, four hours; discussion, one hour; outside study, four hours. Requisites: course 1, or Physics 1A and 1B. Introduction to fundamentals of nanoscience for electronics nanosystems. Principles of fundamental quantum transport electron charge, quantum mechanics, Bohr magneton, and related physical properties. 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 electronics nanosystems. Letter grading.

129D. Semiconductor Processing and Device Design. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Requisite: course 121B. Introduction to CAD tools used in integrated circuit processing and device design. Device structure optimization tool is based on SUPREM. Course familiarizes students with the tools. Using CAD tools, a CMOS process integration to be designed. Letter grading.

131A. Probability. (4) Lecture, four hours; discussion, one hour; outside study, four hours. Requisite: course 102. Mathematics 32B, 33B. Introduction to basic concepts of probability, including random variables and vectors, distributions and densities, moment generating functions, and limit theorems. Applications to communication, control, and signal processing. Introduction to computer simulation and generation of random events. Letter grading.
131B. Introduction to Stochastic Processes. (4) Lecture, four hours; outside study, eight hours. 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 environmental sensing. Introduction to computer simulation and analysis of stochastic processes. Letter grading.


142. Linear Systems: State-Space Approach. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. 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) Formerly numbered M150.) (Same as Biomedical Engineering CM150 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. Corequisite: course CM160L. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students go through process of fabricating MEMS devices. Concurrently scheduled with course CM250L. Letter grading.

161. Electromagnetic Waves. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 101. 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.


163A. Introductory Microwave Circuits. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 161. Transmission lines description of waveguides, impedance transformers, power dividers, directional couplers, filters, hybrid junctions, dielectric devices. Letter grading.

163B. Microwave and Millimeter Wave Active Devices. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 121B. MESFET, HEMT, HBT, IMPATT, Gunn, small signal models, noise model, large signal model, loadpull method, parameter extraction technique. Letter grading.

163C. Active Microwave Circuits. (4) Lecture, three hours; outside study, nine hours. Requisites: courses 115A, 161. Theory and design of microwave transistors and amplifiers; stability, noise, distortion. Letter grading.

164D. Microwave Wireless Design. (4) Formerly numbered 164DL.) Lecture, one hour; laboratory, four hours; outside study, seven hours. Requisite: course 161. Microwave design from wireless system perspective, with focus on (1) use of microwave circuit simulation tools, (2) design of wireless front-end 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) Formerly numbered 164AL.) Lecture, one hour; laboratory, three hours; outside study, three hours. Requisite: course 161. Measurement techniques and instrumentations 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.

M171L. Data Communication Systems Laboratory. (2 to 4) (Same as Computer Science M171L.) Laboratory, four to eight hours; outside study, two to four hours. Recommended preparation: course M116L. Limited to seniors. Interpretation of analog-signal aspects of digital systems and data communication through experience in using contemporary test instruments to generate and display signals in relevant laboratory setups. Use of oscilloscopes, pulse and function generators, baseband spectrum analyzers, desktop computers, modems, PCs, and workstations in experiments on pulse transmission impairments, waveforms and their spectra, modern and terminal characteristics, and interfaces. Letter grading.

172. Introduction to Lasers and Quantum Electronics. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 101. Physical applications and principles of lasers, Gaussian optics, resonant cavities, atomic radiation, laser oscillation and amplification, cw and pulsed lasers. Letter grading.

172L. Laser Laboratory. (4) Laboratory, four hours; outside study, eight hours. Requisite or corequisite: course 101B. Properties of semiconductor lasers, gain, mode structure. Laser applications, including optics, modulation, communication, holography, and interferometry. Letter grading.

173. Physical Devices in Communication. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 101. Introduction to basic principles of photonic devices. Topics include crystal optics, dielectric optical waveguides, waveguide couplers, electro-optic devices, miniature transistors, photo-diode devices, second-harmonic generation, optical Kerr effect, optical switching devices. Letter grading.

173D. Photonics and Communication Design. (4) (Formerly numbered 173DL.) Lecture, four hours; outside study, eight hours. Requisite: course 102. Recommended: course 132A. Introduction to measurement of basic photonic devices, including LEDs, lasers, detectors, and amplifiers; fiber-optic fundamentals and measurement of fiber systems. Modulation techniques, including A.M., F.M., phase and suppressed carrier methods. Letter grading.

174. Semiconductor Optoelectronics. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 172. Introduction to semiconductor optoelectronic devices for optical communications, interconnects, and signal processing. Basic optical properties of semiconductors: photodiodes, avalanche photodiode detectors (APD), light-emitting diodes (LED), semiconductor lasers, optical modulators and amplifiers, and typical photonic systems. Letter grading.

175. Fourier Optics. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: courses 102, 161. Two-dimensional linear systems and Fourier transforms. Foundation of diffraction theory. Analysis of optical imaging systems. Spatial filtering and optical information processing. Wavefront reconstruction and holography. Letter grading.

176. Lasers in Biomedical Applications. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 101. Study of different types of laser systems and their operation. Examination of their roles in current and projected biomedical applications. Specific capabilities of laser radiation to be related to each example. Letter grading.

180D. Systems Design. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Limited to senior Electrical Engineering majors. Advanced systems design integrating communications, control, and signal processing subsystems. Different project to be assigned yearly in which student teams create high-performance designs that manage trade-offs among subsystems. Letter grading.
M202A. Embedded Systems. (4) (Formerly numbered 202A.) (Same as Computer Science M213A.) Lecture, four hours; outside study, eight hours. Requisites: courses M16, 110L, 110LL. Designed for graduate computer science and electrical engineering students. Methodologies and technologies for design of embedded systems. Topics include hardware and software platforms for embedded systems, techniques for modeling and specification of system behavior, software organization, real-time operating system scheduling, real-time communication and synchronization, and embedded computer-aided design tools. Letter grading.

M202B. Distributed Embedded Systems. (4) (Formerly numbered 206A.) (Same as Computer Science M213B.) Lecture, four hours; outside study, eight hours. Designed for graduate computer science and electrical engineering students. Interdisciplinary course with focus on study of distributed embedded systems concepts needed to realize systems such as wireless sensor and actuator networks for monitoring and control of physical world. Topics include network self-configuration with localization, reliable data transmission, energy-aware systems design and operation; protocols for MAC, routing, transport, disruption tolerance; programming issues and models with language, OS, database, and middleware; in-network computing; fundamental mental characteristics such as coverage, connectivity, capacity, latency; techniques for exploitation and management of actuation and mobility; data and system integrity issues with calibration, faults, debugging, and security; and usage issues such as human inter-faces and safety. S/U or letter grading.


208A. Analytical Methods of Engineering I. (4) (Formerly numbered 208A.) Lecture, four hours; outside study, eight hours. Preparation: course 132B or Mathematics 115A and 115B, Mathematics 131A, 131B, 132. Topics may include L(p) spaces, Hilbert, Banach, and separable spaces; Fourier transforms; linear functionals; Riesz representation theorem; linear operators and their adjoints; self-adjoint and compact operators. Spectral theory. Differential operators; such as Laplace and Schrödinger problems. Resolvent distributions and Green’s functions. Semi-groups. Applications. S/U or letter grading.


209S. Special Topics in Embedded Computing Systems. (4) Lecture, four hours; outside study, eight hours. Preparation: current topics in embedded computing systems, including but not limited to processor and system architecture, real-time, low-power design. S/U or letter grading.


211B. Digital Image Processing II. (4) Lecture, three hours; laboratory, four hours; outside study, five hours. Preparation: course 211A. Advanced digital image processing theory and techniques. Topics include modeling, restoration, still-frame and video image compression, tomographic imaging, and multiresolution analysis using wavelet transforms. Letter grading.

212B. Multirate Systems and Filter Banks. (4) Lecture, three hours; outside study, nine hours. Requisite: course 212A. Fundamentals of multirate systems; phase relation, 212A, 213B, 216A, 218A, 220A, 221A. Digital filter design and optimization tools, 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.

213A. Advanced Digital Signal Processing Circuit Design. (4) Lecture, three hours; outside study, nine hours. Requisite: course 213A. Digital filter design and optimization tools, 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.

214A. Biomedical Engineering M214A. Lecture, three hours; laboratory, four; outside study, seven hours. Requisite: course 113B. Theory and applications of digitalization of processing signals. Mathematical models of human speech production and perception; speech systems and analysis/synthesis. Techniques include linear prediction, filter-bank models, and homomorphic filtering. Applications to speech synthesis, automatic recognition, and hearing aids. Letter grading.

214B. Advanced Topics in Speech Processing. (4) Lecture, three hours; computer assignments, two hours; outside study, seven hours. Requisite: course M214A. Advanced techniques used in various speech-processing applications with focus on speech recognition by humans and machine. Physiology 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. Analysis and design of analog integrated circuits. MOS and bipolar device structures and models, single-stage and differential amplifiers, operational amplifiers, offset and distortion, sampling devices and discrete-time circuits, bandgap references. Letter grading.


215C. Analysis and Design of RF Circuits and Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 215A. Principles of RF circuit and system design, with emphasis on monolithic implementation in VLSI technologies. Basic 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, 216A. Analysis and design of circuits for synchronization and communication for VLSI systems. Use of both digital and analog design techniques to improve data rate of electronics between functional subsystems. Advanced clocking methodologies, phase-locked loop design for clock generation, and high-performance wire-line transmitters, receivers, and timing recovery circuits. Letter grading.

216A. Design of VLSI Circuits and Systems. (4) (Same as Computer Science M258A.) Lecture, four hours; discussion, one hour; laboratory, four hours; outside study, three hours. Requisites: courses M16 or Computer Science M51A, and M115A. Recommended: course 115C. LSIVLSI design and application in computer systems. Fundamental design techniques that can be used to design complex integrated systems on a chip. Letter grading.

216B-216C. LSI in Computer System Design. (4-4) (Same as Computer Science M258B-M258C.) Lecture and laboratory. Prerequisite: course 216A. LSI/LSIVLSI design and application in computer systems. In-depth studies of VLSI architectures and VLSI design tools. In Progress (M216B) and S/U or letter (M216C) grading.

217. Biomedical Imaging. (4) (Same as Biomedical Engineering M217.) Lecture, three hours; laboratory, two hours; outside study, seven hours. Requisite: course 114 or 211A. Mathematical principles of medical imaging modalities: X-ray, computed tomography, positron-emission tomography, single photon emission computed tomography, magnetic resonance imaging. Topics include basic principles of each imaging system, mathematical imaging algorithms; system design, configuration, and their effects on reconstruction algorithms, specialized imaging techniques for specific applications such as flow imaging. Letter grading.

218. Special Topics in Circuit and Signal Processing. (4) Lecture, three hours; outside study, nine hours. Advanced treatment of topics selected from search areas in circuit theory, integrated circuits, or signal processing. Letter grading.

219A. Special Topics in Circuits and Signal Processing. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 131A. Applications of estimation and detection concepts in communication and radar engineering; random signal and noise characterizations by analytical and simulation methods; mean square (MS) and maximum likelihood (ML) estimators and algorithms; detection under Gaussian noise; detection of signals under Nakagami distribution; non-coherent (NP) criteria; signal-to-noise ratio (SNR) and error probability evaluations. Letter grading.

219B. Digital Communication Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 132A, 230A. Basic concepts of digital communication systems; representation of bandpass waveforms; signal space analysis and optimum receivers in Gaussian noise; comparison of digital modulation methods; synchronization and adaptive equalization; applications to modern communication systems. Letter grading.


219D. Signal Processing in Communications. (4) Lecture, four hours; outside study, eight hours. Requisite: course 219D. Basic digital signal processing techniques for estimation and detection of signals in communication and radar systems. Optimization of dynamic range, quantization noise, and other constraints; DFT, convolution, FFT, NT, 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 211A. Fundamental limits on compression and transmission of information. Topics include limits and algorithms for lossless data compression, channel capacity, rate versus distortion in lossy compression, and information theory for multiple users. Letter grading.

231E. Channel Coding Theory. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 213A. Fundamentals of error control codes and decoding algorithms. Topics include block codes, convolutional codes, trellis codes, and turbo codes. Letter grading.

232A. Stochastic Modeling with Applications to Telecommunication Systems. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 131A. Introduction to stochastic processes as applied to study of telecommunication systems and traffic engineering. Renewal theory; discrete-time Markov chains; continuous-time Markov jump processes. Applications to traffic and queueing analysis of basic telecommunication system models. Letter grading.

232C. Telecommunication Architecture and Networks. (4) Lecture, four hours; outside study, eight hours. Requisite: course 232B. Study of networking protocols, digital switching, transmission network technologies, architecture and protocol design. Topics include design of IP and ATM networks and telecommunication services. Letter grading.

232D. Telecommunication Networks and Multiple-Access Communications. (4) Lecture, four hours; outside study, eight hours. Requisite: course 232B. Performance analysis and design of telecommunication network technologies. Analysis of multiple-access communication systems and protocols. Letter grading.

232E. Graphs and Network Flows. (4) Lecture, four hours; outside study, eight hours. Requisite: course 232B. Network flow theory and algorithms. Topics include connectivity, shortest paths, maximum flow, and minimum cost network flows. Applications to problems in computer networking, transportation, and operations research. Letter grading.

233A. Wireless Communication Theory. (4) Lecture, four hours; outside study, eight hours. Requisite: course 230B. Theory of physical layer of wireless systems. Signal detection, modulation, and channel coding for wireless communications. Letter grading.


236C. Optimization Methods for Large-Scale Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 236B. Additional theoretical and computational methods for decomposing large-scale optimization problems. Letter grading.

237D. Dynamic Programming. (4) (Same as Mechanical and Aerospace Engineering M276.) Lecture, four hours; outside study, eight hours. Recommended requisite: course 232A or 236A or 236B. Introduction to mathematical programming for sequential decision processes. Finite horizon model in both deterministic and stochastic cases. Finite-state infinite horizon model. Methods of solution. Examples from inventory theory, finance, optimal control and estimation, Markov decision processes, combinatorial optimization, communications. Letter grading.

238. Multimedia Communications and Processing. (4) Lecture, four hours; outside study, eight hours. Requisite: course 232D. Multimedia communication systems with emphasis on video and audio communications. Letter grading.

239A. Topics in Communication. (4) Lecture, four hours; outside study, eight hours. Topics in one or more special aspects of communications systems, such as phase-coherent communication systems, optical channels, time-varying channel, feedback channel. Letter grading.

239B. Topics in Operations Research. (4) Lecture, four hours; outside study, eight hours. Treatment of one or more selected topics from areas such as integer programming; combinatorial optimization; network synthesis; scheduling, routing, location, and design problems; implementation considerations for mathematical programming algorithms; stochastic programming; applications in engineering, computer science, economics. May be repeated for credit with topic change. Letter grading.

240A. Linear Dynamic Systems. (4) (Same as Chemical Engineering M280A and Mechanical and Aerospace Engineering M270A.) Lecture, four hours; outside study, eight hours. Requisite: course 141 or Mechanical and Aerospace Engineering 171A. State-space description of linear-time invariant (LTI) and time-varying (LTV) systems in continuous and discrete time. Linear algebra concepts, such as eigenvalues and eigenvectors, singular values, Cayley-Hamilton theorem, Jordan form; solution of state equations; stability, controllability, observability, realizability, and minimality. Stabilization design via state feedback and observers. Applications to transfer function techniques. Letter grading.

240B. Linear Optimal Control. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 141, M240A. Introduction to optimal control, with emphasis on detailed study of LQR, or linear regulators with quadratic cost criteria. Relationships to classical control system design. Letter grading.

240C. Optimal Control. (4) (Same as Chemical Engineering M280C and Mechanical and Aerospace Engineering M270C.) Lecture, four hours; outside study, eight hours. Requisite: 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. Requisites: courses 240B, 241B. Linear quadratic Gaussian theory of optimal feedback control of stochastic systems: discrete-time state models; sigma algebra equivalence and separation principle: dynamic programming: compensator design for time-invariant systems; feedback control and servomechanisms, extensions to nonlinear and linear systems: applications to interception guidance, gust alleviation. Letter grading.


243. Robust and Optimal Control by Convex Methods. (4) Lecture, four hours; outside study, eight hours. Requisite: course M240A. Multivariable robust control, including H2 and H-infinity optimal control and robust performance analysis and synthesis against structured uncertainty. Emphasis on convex methods for analysis and design, in particular linear matrix inequality (LMI) approach to control. Letter grading.

248S. Seminar: Systems, Dynamics, and Control Topics. (2) (Same as Chemical Engineering M257 and Mechanical and Aerospace Engineering M299A.) Seminar, two hours; outside study, six hours. Limited to graduate engineering students. Presentations of the research topics by leading academic researchers, in particular from fields of systems, dynamics, and control. Students who wish to participate in these seminars may present their papers and result. SU grading.

249S. Topics in Control. (4) Seminar, four hours; outside study, eight hours. Thorough treatment of one or more aspects of control theory and applications, such as computational methods for optimal control; stability of distributed systems; identification; adaptive control; nonlinear filtering; diffusion, first-passage applications to flight control, nuclear reactors, process control, biomedical problems. May be repeated for credit with topic change. Letter grading.
M250A. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) (Formerly numbered M250A.) (Same as Biomedical Engineering M250A and Mechanical and Aerospace Engineering M280A.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L; Physics 1A, 1B, 1C, 4A, 4BL. Corequisite: course CM250L. Introduction to micromachining technologies and microelectromechanical systems (MEMS). Methods of micromachining and how these methods can be used to produce many MEMS, including microstructures, microsensors, and microactuators. Students design microfabrication processes capable of achieving desired MEMS device. Concurrently scheduled with course CM150L. Letter grading.

M250B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Biomedical Engineering M250B and Mechanical and Aerospace Engineering M280B.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: 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 stress. Letter grading.

M250L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (2) (Same as Biomedical Engineering CM250L and Mechanical and Aerospace Engineering CM280L.) Lecture, one hour; laboratory, four hours; outside study, two hours. Requisite: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4BL. Corequisite: course CM250MA. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students go through process of fabricating device. Concurrently scheduled with course CM150L. Letter grading.

M252. Microelectromechanical Systems (MEMS) Device Physics and Design. (4) (Formerly numbered M252B.) (Same as Biomedical Engineering M252 and Mechanical and Aerospace Engineering M282B.) Lecture, four hours; outside study, eight hours. Introduction to MEMS design. Design methods, design rules, sensing and actuation mechanisms, microsensors, and microactuators. Designing MEMS to be produced with both foundry and nonfoundry processes. Computer-aided design for MEMS. Design project required. Letter grading.

M255. Neuroengineering. (4) (Same as Biomedical Engineering M260 and Neuroscience M260B.) Lecture, four hours; laboratory, three hours; outside study, five hours. Requisites: Mathematics 32A, Physics 1B or 6B. Introduction to principles and technologies of bioelectricity and neural signal recording, processing, and stimulation. Topics include bioelectricity, electrophysiology (action potentials, local field potentials, EEG, EOG), intracellular and extracellular recording, microelectrode technology, neural signal processing (neural signal frequency bands, filtering, spike detection, spike sorting, stimulation artifact removal), brain-computer interfaces, deep-brain stimulation, and prosthetics. Letter grading.


M257. Nanoscience and Technology. (4) (Same as Mechanical and Aerospace Engineering M287.) Lecture, four hours; outside study, eight hours. Introduction to fundamentals of nanoscale science and technology. Basic physical principles, quantum mechanics, chemical bonding and nanostructures, top-down and bottom-up (self-assembly) fabrication; nanochips; nanomaterials, nanoelectronics, and nanobiotechnology. Introduction to new knowledge and technologies in nano areas to understand scientific principles behind nanotechnology and inspire students to create new ideas in multidisciplinary nano areas. Letter grading.

259S. Seminar: Microelectromechanical Systems (MEMS). (2) Seminar; two hours; outside study, four hours. Seminar on microelectromechanical systems (MEMS). Letter grading.


261. Microwave and Millimeter Wave Circuits. (4) Lecture, four hours; outside study, eight hours. Requisite: course 163A. Rectangular and circular waveguides, microstrip, stripline, finite, and dielectric waveguide distributed circuits, with applications in microwave and millimeter wave integrated circuits. Substrate materials, surface wave phenomena. Analysis and design techniques for discontinuity effects. Design of passive microwave and millimeter wave circuits. Letter grading.


279S. Special Topics in Quantum Electronics. (4) Lecture, four hours; outside study, nine hours. Current research topics in quantum electronics, lasers, nonlinear optics, optoelectronics, ultrashort pulses, nanomechanics, fiber optics, and lightwave technology. May be repeated for credit. Letter grading.


295. Technical Writing for Electrical Engineers. (2) Lecture, two hours. Designed for electrical engineering Ph.D. students. Opportunity for students to improve technical writing skills by revising conference, technical, and journal papers and practicing writing about their work for undergraduate audience (potential students), engineers outside their specific fields, and nonscientists (colleagues with lesser expertise in field and policymakers). Students write in variety of genres, all related to their professional development as electrical engineers. Emphasis on writing as vital way to communicate precise technical and professional information in distinct contexts, directly resulting in specific outcomes. S/U grading.
296. Seminar: Research Topics in Electrical Engineering. (2) Seminar, two hours; outside study, four hours. Advanced study and analysis of current topics in electrical engineering. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

297. Seminar Series: Electrical Engineering. (1) Seminar, 90 minutes; outside study, 90 minutes. 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 the guidance of a faculty mentor. Regular meetings, culminating report, and presentation required. Individual contract required; enrollment petitions available in Office of Graduate Student Affairs. 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 in undergraduate courses under the guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

475C. Manufacturing Systems. (4) Lecture, four hours; outside study, eight hours. Modeling and analysis of manufacturing systems. Assembly and transfer lines, facility layout and design, Group technology and flexible manufacturing systems. Planning and scheduling, Task management, machine setup, and operation sequencing, Manufacturing system models. Modeling information systems. Social, economic, environmental, and regulatory issues. Letter 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 Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate electrical engineering students. Reading and preparation for M.S. comprehensive examination. S/U grading.

597B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate electrical engineering students. 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. Dissertation. (2 to 16) Tutorial, to be arranged. Limited to graduate electrical engineering students. Usually taken after students have been advanced to candidacy. S/U grading.

ENGINEERING SCHOOLWIDE PROGRAMS

Henry Samueli School of Engineering and Applied Science

UCLA
6426 Boelter Hall
Box 951601
Los Angeles, CA 90095-1601
(310) 285-2282
http://www.engineer.ucla.edu

Professors Emeriti
Edward P. Coleman, Ph.D.
Allen B. Rosenberg, 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://www.gdnet.ucla.edu/gasia/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Henry Samueli School of Engineering and Applied Science offers the Master of Engineering (M.Engr.) degree (through the Engineering Executive Program), Master of Science (M.S.) 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

87. Introduction to Engineering Disciplines. (4) Lecture, four hours; discussion, four hours; outside study, four hours. Introduction to engineering as a professional opportunity for freshmen students by exploring difference between engineering disciplines and functions engineers perform. Development of skills and techniques for academic excellence through team process. Investigation of national need underlining current effort to increase participation of historically underrepresented groups in the U.S. technological workforce. Letter grading.

95. Ethical and Professional Issues in Engineering and Computer Science. (4) Lecture, four hours; discussion, one hour. Selected lectures, discussions, and oral and written reports related to profession of engineering. Lectures by practicing engineers, case studies, and small group projects on issues that involve conflicting demands on society. Letter grading.

Upper Division Courses

M101. Principles of Nanoscience and Nanotechnology. (4) Same as Materials Science M105. Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistry 20, and Electrical Engineering 1 or 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 nanoscale objects, 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 task required. Letter grading.

103. Environmental Nanotechnology: Implications and Applications. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisite: course M101. Introduction to potential implications of nanotechnology to environmental systems, as well as 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 (within firm) and external (in marketplace) marketing and financing of high-technology innovation. Concepts include present value, future value, discounted cash flow, internal rate of return, return on assets, return on equity, return on investment, interest rates, cost of capital, and product, price, positioning, and promotion. Use of market research, segmentation, and forecasting in management of technological innovation. Letter grading.

112. Laboratory to Market, Entrepreneurship for Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Critical components of entrepreneurship, finance, marketing, human resources, and accounting disciplines as they impact management of technology commercialization. Topics include intellectual property management, team building, market forecasting, and entrepreneurial finance. Students work in small teams studying technology management plans to bring new technologies to market. Students select from set of available technology concepts, many generated at UCLA, that are in need of plans for movement from laboratory to market. Letter grading.
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 disciplines covering lifecycle of engineering, processes, and techniques used in industry today. Multidisciplinary systems engineering perspective in which aspects of electrical, mechanical, material, and software engineering are incorporated. Three specific case studies in commu- nication, sensor, and processing systems included to help students understand these concepts. Special at- tention 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.

183. Engineering and Society. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Limited to junior/senior engineering students. Profes- sional and ethical considerations in practice of engi- neering. Impact of technology on society and on development of moral and ethical values. Contemporary environmental, biological, legal, and other issues created by new technologies. Letter grading.


188. Special Courses in Engineering. (4) Seminar, four hours; outside study, eight hours. Special topics in engineering for undergraduate students that are 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. (4) Tutori- al, four hours. Limited to juniors/seniors. Internship studies course supervised by associate dean or desig- nated faculty members. Further supervision to be provided by organization for which students are doing internship. Students may be required to meet on regu- lar basis with instructor and provide periodic reports of their experience. May not be applied toward major requirements. Normally, only 4 units of internship are allowed. Individual contract with associate dean re- quired. P/NP grading.

199. Directed Research in Engineering. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit with school approval. Individual contract required; enrollment per- missions available in Office of Academic and Student Af- fairs. 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-mak- ing 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.

210. Entrepreneurship for Engineers. (4) Lecture, three hours. Limited to graduate engineering stu- dents. Emphasis in starting and developing high-tech en- terprises and intended for students who wish to com- plement their technical education with introduction to entrepreneurship. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice per- sonnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guid- ance and supervision of regular faculty member re- sponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.


471A-471B-471C. The Engineer in the General En- vironment. (3-3-1.5) Lecture, three hours (courses 471A, 471B) and 90 minutes (course 471C). Limited to Engineering 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 or letter (471C) grading.

472A-472D. The Engineer in the Business Envi- ronment. (3-3-3-1.5) Lecture, three hours (courses 472A, 472B, 472C) and 90 minutes (course 472D). Limited to Engineering Executive Program students. Language of business for the engineering executive. Accounting, finance, business economics, business law, and marketing. Laboratory in organization and management problem solving. Analysis of actual business problems of firm, community, and nation, provided through cooperation and participation with California business corporations and government agencies. In Progress (472A, 472C) and S/U or letter grading (credit to be given on completion of courses 472B and 472D).

473A-473B. Analysis and Synthesis of a Large- Scale System. (3-3) Lecture, two and one-half hours. Limited to Engineering Executive Program students. Problem area of modern industry or government is selected as class project, and its solution is synthe- sized using quantitative tools and methods. Project also serves as laboratory in organization for a goal- oriented technical group. In Progress (473A) and S/U (473B) grading.

495. Teaching Assistant Training Seminar. (4) Seminar, four hours; outside study, eight hours. Prepara- tion: appointment as a teaching assistant. Limited to graduate engineering students. Seminar on com- munication of engineering principles, concepts, and methods, preparation, organization of material, pre- sentation, use of visual aids, grading, advising, and rapport with students. 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, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.
Profile:

Stephen J. Dickey, Ph.D.

Critical judgments and the ability to write the English language persuasively, with point and effect. 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, and teaching. 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.

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 literature in translation courses. The courses may be taken on a P/NP grading basis.

English B.A.

The Bachelor of Arts degree has concentrations in creative writing and in world literature. An international students program in English (other than English Composition A or 2). English 140A through 182C (students intending graduate work in literature are especially encouraged to select additional electives from courses 140A through 182C.

English 140A through 182C...

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/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Twelve 4- or 5-unit upper division English courses, including 141A or 141B, 142A, 142B, 143, at least one course from each of the 150A through 157 series and M179A through 182C series, one course from 160 through 164, and five additional courses of which three must be selected from 140A, 140B, 142C, or 150A through 182C. All courses applied toward requirements for the major must be 4 or 5 units and be taken for a letter grade.

Optional Concentrations and Special Programs

The department offers optional concentrations in creative writing and in world literature, as well as a special program for international students. For all programs, the regular Preparation for the Major sequence as well as the departmental foreign language requirement apply. Because of the specialized nature of these programs, students should consult the departmental counselor before selecting and declaring one of them as a concentration.

Creative Writing Concentration

The creative writing concentration consists of English 142A and 142B and a minimum of 10 additional 4- or 5-unit upper division English courses: three creative writing courses from 133 or 134, taken in a single genre (poetry or short story), three literature courses parallelizing the creative writing genre, and four electives selected from courses 140A through 182C. 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 133, 134, or 135) 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 departmental counselor for further details.

World Literature Concentration

The world literature concentration consists of nine 4- or 5-unit upper division courses in English or American literature and four upper division courses in foreign literatures (at least 4 units each and one of which must be taught in the original language). The nine courses in English must include 141A or 141B or 143, 142A, 142B, at least one course from the 150 series, and four electives selected from courses 140A through 182C (students intending graduate work in literature are especially encouraged to select additional electives from courses 140A through 182C.

UCLA Transfer Admission Guide...

Online...
encouraged to take English 140A). A listing of acceptable courses may be obtained from the department.

International Students Program
The department offers a special program in English to bona fide international students whose native language is other than English. For this program, students must satisfy all requirements listed under Preparation for the Major; they may fulfill the departmental foreign language requirement with their own native language. The following 12- to 5-unit upper division courses are required for the program itself: English as a Second Language 106, 108, 109, English 121 or 122 or Applied Linguistics and Teaching English as a Second Language C116, English 142A, 142B, and six courses from English 100 through 199, four of which must be selected from 140A through 182C. Students who complete this program and wish to pursue graduate study should consult the departmental counselor about programs of study and requirements for admission.

American Literature and Culture B.A.
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: Twelve 4- or 5-unit upper division courses, including six in American literature selected from English 170A through 178B, two of which must be devoted to literature written before 1900 (courses 170A, 170B, 171A, 171B, 173A, 174A); two courses from 142A, 142B, 143; one seminar from M179A, M179B, M179C, 182A, 182B, 182C, or when treating American topics, 180; one course from M101A, M101B, M102A, M102B, 103, M104A, M104B, M104C, M105A, M105B, 106, M107A (also M101C or M107C when treating American topics or figures), or 109; 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). All courses applied toward requirements for the major must be at least 4 units and be taken for a letter grade.

Honors Program
Admission
The honors program is open to departmental majors with a 3.5 departmental and a 3.25 overall grade-point average. Students with lower GPAs may petition for admission to the program, but these grade-point averages must be achieved before graduation in order to qualify for honors. Students should apply by Winter Quarter of the junior year. For application forms and further information, contact the departmental counselor.

Requirements
All honors students are required to take English 140A or 140B during the junior year and one seminar from the English M179A through 182C sequence, preferably before the senior 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. 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. 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 a student affairs officer in the Undergraduate Counseling Office, 149 Humanities Building, (310) 825-1389. This allows them priority enrollment in many upper division courses.

Required Lower Division Courses (10 units): English 10B and 10C, with grades of C or better.
Required Upper Division Courses (21 to 25 units): Five courses selected from English 100 through 182C, including course 142A and one other course that focuses on literature in English written before 1900. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of English offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in English.

English
Lower Division Courses
4HW. Critical Reading and Writing (Honors). (5) Lecture, four hours. Enforced requisites: English Composition 3 or 3H or English as a Second Language 36. Introduction to literary analysis, with close reading and carefully written exposition of selections from principal modes of literature: poetry, prose fiction, and drama. Minimum of four papers (three to five pages each) and two in-class essays. Satisfies Writing II requirement. Letter grading.

4W. Critical Reading and Writing. (5) Lecture, four hours. Enforced requisites: English Composition 3 or 3H or English as a Second Language 36. Introduction to literary analysis, with close reading and carefully written exposition of selections from principal modes of literature: poetry, prose fiction, and drama. Minimum of four papers (three to five pages each) and two in-class essays. Satisfies Writing II requirement. Letter grading.

4WS. Critical Reading and Writing (Service Learning). (5) Lecture, four hours. Enforced requisites: English Composition 3 or 3H or English as a Second Language 36. Introduction to literary analysis, with close reading and carefully written exposition of selections from principal modes of literature: poetry, prose fiction, and drama. Minimum of six papers, with minimum of 15 to 20 pages of revised writing. Service learning component includes minimum of 20 hours service with agency involved in issues of public advocacy and social justice. Satisfies Writing II requirement. Letter grading.

10A. English Literature to 1660. (5) Lecture, three hours; discussion, one hour. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Study of selected works of period, beginning with selections from Old English poetry and including writings by Chaucer, Spenser, Shakespeare, Donne, and Milton. Minimum of three papers (three to five pages each) or equivalent. P/NP or letter grading.

10B. English Literature, 1660 to 1832. (5) Lecture, three hours; discussion, one hour. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW, 10A. Study of selected works of period, including writings by Dryden, Pope, Swift, Wordsworth, and Keats. Minimum of three papers (three to five pages each) or equivalent. P/NP or letter grading.

10C. English Literature, 1832 to the Present. (5) Lecture, three hours; discussion, one hour. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW, 10A. 10B. Study of selected works of period, including writings by Tennyson, Arnold, Browning, Joyce, and Eliot. Minimum of three papers (three to five pages each) or equivalent. P/NP or letter grading.
20. Introduction to Creative Writing. (4) Preparation: submission of creative or expository writing samples to a screening committee. Enforced requisites: satisfaction of Entry-Level Writing requirement. Recommended for English majors or students with credit for course 142A or 142B. Readings in assigned texts and weekly writing assignments required.

M40. Structure of English Words. (5) Same as Linguistics M10. Lecture, four hours; discussion, one hour. Introduction to structure of English words of classical origin, including most common base forms and rules by which alternate forms are derived. Students may expect to achieve substantial enrichment of their vocabulary while learning about etymology, semantic change, and abstract rules of English word formation. P/NP or letter grading.

M50. Introduction to Visual Culture. (5) Formerly numbered 50G. (Same as Film and Television M50.) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. Study of how visual media, including advertising, still and moving images, and narrative films, have shaped contemporary politics, economics, and knowledge. P/NP or letter grading.

70. Major British Authors before 1800. (4) Enforced requisite: satisfaction of Entry-Level Writing requirement. Open for credit to English majors or students with credit for course 10A or 10B. Study of selected masterpieces of English literature before 1800, including works of such writers as Chaucer, Shakespeare, Donne, Milton, Swift, Pope, Johnson, and Fielding.

75. Major British Authors, 1800 to the Present. (4) Enforced requisite: satisfaction of Entry-Level Writing requirement. Not open for credit to English majors or students with credit for course 10B or 10C. Study of selected masterpieces of English literature from 1800 to the present, including works of such writers as Wordsworth, Coleridge, Keats, Tennyson, Dickens, and Ford Madox Ford.

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 courses in 170 series. Introduction to chief American authors, with emphasis on poetry, nonfiction prose, and short fiction of such writers as Poe, Dickinson, Emerson, Whitman, Twain, Frost, and Hemingway. 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 courses in 170 series. Development of novel form, of American novel from its beginning to the present day. Includes works of such novelists as Hawthorne, Fitzgerald, Faulkner, Ellison, and Morrison. P/NP or letter grading.


90. Shakespeare. (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 course 142A or 142B. Study of Shakespeare's plays, including comedies, tragedies, and histories, selected to represent Shakespeare's breadth, artistic progress, and total dramatic achievement. P/NP or letter grading.

95A. Introduction to Poetry. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Recommended for English majors or students with credit for course 10A or 10B. Study of representative poems. P/NP or letter grading.

95B. Introduction to Drama. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Examination of representative plays; readings may range from Greek to modern drama. Emphasis on critical approaches to dramatic text; study of issues such as plot construction, characterization, special uses of language in drama, methods of evaluation. P/NP or letter grading.

95C. Introduction to Fiction. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Introduction to prose narrative, its techniques and forms. Analysis of short and long narratives and of critical issues such as plot, characterization, setting, narrative voice, style, form, nonfiction. P/NP or letter grading.


97H. Honors Seminar for Freshmen and Sopho- mores. (4) Seminar, three hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Limited to 20 students. Discussion of current issues in literature, focusing on a particular literary text and its historical, political, and social context. May be repeated for credit. P/NP or letter grading.


M101C. Special Topics in Lesbian and Gay Litera- ture. (5) Same as Lesbian, Gay, Bisexual, and Transgender Studies M101C and Women's Studies M101C. Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies concerned with lesbian and gay literature. Topics focus on particular problem or issue in terms of its relationship to lesbian and gay culture and writing. May be repeated for credit. P/NP or letter grading.

M102A. Asian American Literature to 1980. (5) Same as Asian American Studies M112A. Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Survey of Asian American literature from early period of formation to cultural nationalist movement of late 1960s and 1970s. Works of such authors as Edith Eaton, Carlos Bulosan, Hisaye Yamamoto, Louis Chu, and Elaine Hong Kingston included. P/NP or letter grading.

M102B. Asian American Literature since 1980. (5) Same as Asian American Studies M112B. Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Survey of contemporary Asian American literature with emphasis on its growing ethnic diversity following influx of new immigrants. Works of such authors as Theresia Choe, Bill V. Powell, Cherrie Moraga, Sandra Cisneros, and Maxine Hong Kingston included. P/NP or letter grading.

103. Jewish American Fiction. (5) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study of the fiction of Jewish writers, such as Bellor, Malamud, and Roth, focusing on encounter of Jewish ethical ideals and social values with the contemporary environment. P/NP or letter grading.

M104A. Early Afro-American Literature. (5) Same as African American Studies M104A. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of Afro-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, David Walker, Frances Harper, Frederick Douglass, Harriet Jacobs, Paul Laurence Dunbar, Charles W. Chesnutt, Booker T. Washington, and Pauline Hoppins. P/NP or letter grading.

M104B. Afro-American Literature from Harlem Re- naissance to 1960. (5) Same as African American Studies M104B. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of 20th-century black 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, Sterling Brown, Nella Larsen, Zora Neale Hurston, Richard Wright, Ann Petry, James Baldwin, and Ralph Ellison. P/NP or letter grading.

M104C. Afro-American Literature since 1960s. (5) Same as African American Studies M104C. Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Introductory survey of diverse forms of Afro-American literary expression produced from rise of Black Arts Movement and continuing through writers such as Amiri Baraka, Nikki Giovanni, Alice Walker, Etheridge Knight, Toni Morrison, Martin Luther King, Jr., Paule Marshall, Ernest Gaines, Ishmael Reed, and Audre Lorde. P/NP or letter grading.

M105A. Early Chicana/Chicana Literature. (5) Same as Chicana and Chicano Studies M105A. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Chicana/Chicana literature from 16th century through Zoot Suit Riots (1943), including both oral and written forms of literary expression (corridos, folktales, essays, memoirs, novels, and poetry), by such authors as Cabeza de Vaca, Juan Seguin, Ame- rica Paredes, and Maria Ruiz Amparo Burton. P/NP or letter grading.

M105B. Recent Chicana/Chicana Literature. (5) Same as Chicana and Chicano Studies M105B. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Chicana/Chicana literature since 1943, beginning with reactions to Zoot Suit Riots and continuing through Chicana/Chicana Movimiento to contemporary literature. Drama, novels, memoirs, es- says, and poetry by such authors as Luis Valdez, Cherríe Moraga, Sandra Cisneros, Rosario Anaya, Rolando Hinojosa, Oscar Zeta Acosta, and Ana Cas- tillito. P/NP or letter grading.
106. Native American Literary Studies. (5) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study of Native American oral cultures through translated documents (song-poems, lifestories, myths, tales, dream visions, speeches) and/or images in writing about Native Americans (poetry, fiction, history, anthropology, sociology). P/NP or letter grading.

M107A. American Women Writers. (5) Same as Women’s Studies M107A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of literary works by American women writers, with emphasis on roles of women, portrayal of nature and society, and evolution of forms and techniques in writing by American women. P/NP or letter grading.

M107B. British Women Writers. (5) Same as Women’s Studies M107B.) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Survey of literary works by British women writers, with emphasis on roles of women, portrayal of nature and society, and evolution of forms and techniques in writing by British women. P/NP or letter grading.

M107C. Special Topics in Women and Literature. (5) (Same as Women’s Studies M107C.) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in women and literature, with emphasis on a period, genre, particular theme, or nonnational literary grouping. P/NP or letter grading.


108C. English Bible as Literature: Special Topics. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Same as English Bible, with attention to particular literary themes, motifs, and genres. Possible discussion of influence of the Bible on discrete periods or individual authors in English literature. May be repeated for credit. P/NP or letter grading.

109. Interdisciplinary Approaches to Literature. (4) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of British or American literature in relation to other disciplines (history, politics, philosophy, psychology). May be repeated for credit. P/NP or letter grading.

110. Studies in Individual Authors. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Same as English Bible, with attention to particular literary themes, motifs, and genres. Possible discussion of influence of the Bible on discrete periods or individual authors in English literature. May be repeated for credit. P/NP or letter grading.

111. Children’s Literature. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study of types of children’s literature, folklore and oral tradition, levels of interest, criticism and evaluation, illustration and bibliography. P/NP or letter grading.

112SL. Children’s Literature: Service Learning. (4) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H. Study of historical backgrounds and development of types of children’s literature, folklore, oral tradition, levels of interest, criticism and evaluation, illustration and bibliography. Service learning component includes minimum of 20 hours service with agency involved with literacy and education. P/NP or letter grading.

113. Literature for Adolescents and Young Adults. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Analysis and evaluation of literature intended mainly for students in junior and senior high schools. Review of mature books that are popularly suggested for this age group; study of interests and reading habits of young adults. P/NP or letter grading.

114. World Literatures in English. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Survey of contemporary literature from English-speaking countries, with special attention to general topics, major genres from several countries and making cross-comparisons with the literatures. Generalizations concerning the nature of the English language by such writers. May be repeated for credit. P/NP or letter grading.

115A. American Popular Literature. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study of main currents of popular and cultural taste as reflected in such genres as dime novels, detective fiction, and Western stories. P/NP or letter grading.

115B. British Popular Literature. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Readings in the literature of the British masses, from 18th-century broadside to contemporary novels. Examination of social functions of literature. P/NP or letter grading.


117. Detective Fiction. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study of interrelated disciplines between film and literature, including theme and plot focusing on cinematic adaptations of literary works. P/NP or letter grading.

118. Film and Literature. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study of interrelationships between film and literature, including theme and plot focusing on cinematic adaptations of literary works. P/NP or letter grading.

119. Literature of California and the American West. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study of myths, dramatic origins, oral epic, folktales, and ballad, emphasizing Indo-European and Semitic examples. P/NP or letter grading.

120. Celtic Mythology. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study of myth, dramatic origins, oral epic, folktales, and ballad, emphasizing Indo-European and Semitic examples. P/NP or letter grading.

121. History of the English Language. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Study directed toward English majors of major features in grammatical, lexical, and phonetic condition of the English language from Indo-European time to the present. P/NP or letter grading.

122. Introduction to Structure of Present-Day English. (4) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Introduction to techniques of linguistic description as applied to pronunciation, grammar, and vocabulary of modern English. P/NP or letter grading.

133. Creative Writing: Poetry. (5) Lecture, four hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Three-average-length stories of poetry, with practice in standard forms and meters and study of techniques. Classroom discussion based on student use. 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.

134. Creative Writing: Short Story. (5) Lecture, four hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Exploration of capacity of each student to write for the theater. Class discussion of student writing, individual conferences, rehearsal readings, and laboratory productions. 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.

135. Creative Writing: Drama. (5) Lecture, four hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Exploration of capacity of each student to write for the theater. Class discussion of student writing, individual conferences, rehearsal readings, and laboratory productions. 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. Advanced Computer Techniques for Students of English. (5) Lecture, four hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Concurrent instruction in writing computer programs for literary study and in the kinds of literary research that can be aided by computers. BASIC is taught; students must know how to operate a computer. Principles of computer science, if not previously taken, are neither assumed nor taught. P/NP or letter grading.

140A. Criticism: History and Theory. (5) Lecture, four hours. Requisites: courses 10A, 10B. Study of some major historical documents and theoretical statements in history of literary criticism, including works by such writers as Plato, Aristotle, Horace, Sidney, Dryden, Johnson, Kant, Coleridge, Wordsworth, Shelley, Arnold, James, Croce, and T.S. Eliot, with emphasis on major critical positions posed and developed by these writers, basis of their theoretical positions, and practical consequences of those positions. Possible discussion of recent trends in criticism. P/NP or letter grading.

140B. Criticism: Special Topics. (5) Lecture, four hours. Requisites: courses 10A, 10B. Study of limited periods and specialized issues and approaches in history of literary criticism, including moral, biographical, sociological, psychological, structural, and deconstructionist. Area of concentration determined by instructor and listed in Schedule of Classes. Some study of literary texts, to illuminate value and practical application of approach, may be required. May be repeated for credit with topic change. P/NP or letter grading.

141A. Chaucer: The Canterbury Tales. (5) Lecture, four hours. Requisites: courses 10A, 10B. Introduction to Chaucer’s language, versification, and his- torical and literary background, including analysis and discussion of his long major poem, The Canterbury Tales, satisfies department’s Chaucer requirement. P/NP or letter grading.

141B. Chaucer: Troilus and Criseyde and Selected Minor Works. (5) Lecture, four hours. Requisites: courses 10A, 10B. Intensive study of Troilus and Criseyde and selected minor works of Chaucer, such as The Book of the Duchess, The House of Fame, The Parliament of Fowls, etc. Satisfies department’s Chaucer requirement. P/NP or letter grading.

142A. Shakespeare: Poems and Early Plays. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B. Intensive study of selected poems and representative comedies, histories, and tragedies through Hamlet. P/NP or letter grading.
142B. Shakespeare: Later Plays. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B. Intensive study of representative major tragedies, Roman plays, and romances. P/NP or letter grading.

142C. Shakespeare: Selected Topics. (5) Lecture, three or four hours. Requisites: courses 10A, 10B. Designed for students interested in further study of Shakespeare. Limits of investigation set by individual instructors. P/NP or letter grading.

143. Milton. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B. Study of all major works of Milton, with emphasis on Paradise Lost. P/NP or letter grading.

150A. Early Medieval Literature. (5) Lecture, four hours. Requisites: courses 10A, 10B. Reading knowledge of Old English not required. Major prose and poetry of Anglo-Saxon England (600 to 1100), including epic, romance, history, saints’ lives, and travel literature. Texts and topics include Beowulf, Vultus, poems on women, Bede, and King Alfred. P/NP or letter grading.

150B. Later Medieval Literature. (5) Lecture, four hours. Requisites: courses 10A, 10B. Reading and historical explication of major writers of the 14th and 15th centuries (e.g., the Gawain-poet, Langland, Gower, Ford, Malory). Major topics: plays, prose, and lyrics. The more difficult texts read in modernized form. P/NP or letter grading.


152A. Drama from Beginning to 1576. (5) Lecture, four hours. Requisites: courses 10A, 10B. English drama from its Latin and Anglo-Norman roots to opening of first public playhouse. P/NP or letter grading.

152B. Drama, 1576 to 1642. (5) Lecture, four hours. Requisites: courses 10A, 10B. Non-Shakespearean English drama from opening of first public playhouse to closing of the theaters. P/NP or letter grading.


154. Literature of Restoration and Earlier 18th Century, 1660 to 1730. (5) Lecture, four hours. Requisites: courses 10A, 10B. Study of major works as literary documents and as products of the Restoration and earlier 18th-century thought. P/NP or letter grading.

155. Literature of Later 18th Century, 1730 to 1798. (5) Lecture, four hours. Requisites: courses 10A, 10B. Study of major works as literary documents and as products of later 18-century thought. P/NP or letter grading.

156. Drama, 1660 to 1842. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B. Survey of English drama from the Restoration to the Licensing Act. P/NP or letter grading.


160. Earlier Romantic Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B. Intensive study of early American literature, including major works of American fiction (both novels and short stories) from its beginning to the end of the 19th century. P/NP or letter grading.

173B. American Fiction, 1900 to 1945. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B, 10C. Study of American fiction from beginning to end of the 20th century to end of World War II. P/NP or letter grading.

173C. American Fiction since 1945. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B, 10C. Study of American fiction from Puritan period through end of the 19th century. P/NP or letter grading.

174A. American Poetry to 1900. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B, 10C. Study of American poetry from Puritan period through end of the 19th century. P/NP or letter grading.

174B. American Poetry, 1900 to 1945. (5) Lecture, four hours. Requisites: courses 10A, 10B, 10C. Study of American nonfictional prose (essays, autobiographies, travel narratives, and other). Particular genre and/or historical period vary with instructor. P/NP or letter grading.

175. American Nonfictional Prose. (5) Lecture, four hours. Requisites: courses 10A, 10B. Study of American nonfictional prose (essays, autobiographies, travel narratives, and other). Particular genre and/or historical period vary with instructor. May be repeated for credit. P/NP or letter grading.

177. Special Topics in American Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Requisites: courses 10A, 10B, 10C. Study of American literature in its relationships to other disciplines, including art, architecture, film, history, music, politics, and various social sciences, with emphasis on application of literary methodology to the study of American culture. May be repeated for credit. P/NP or letter grading.

178. Interbarical Encounters in Contemporary American Literature. (5) Lecture, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in American literature and its relationships to other disciplines, including art, architecture, music, film, history, and politics, and various social sciences, with emphasis on application of literary methodology to the study of American culture. May be repeated for credit. P/NP or letter grading.

M179A. Topics in Afro-American Literature. (5) Same as Afro-American Studies M179A. Seminar, four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Afro-American literature. Topics include Harlem Renaissance, Afro-American Literature in Nadir, 1890 to 1914, Contemporary Afro-American Fiction. May be repeated for credit. P/NP or letter grading.

M179B. Topics in Chicana/Chicano Literature. (5) Same as Chicana and Chicano Studies M139.) Seminar, three hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Chicana/Chicano literature. Topics include labor and literature; Chicana/Chicana visions of Los Angeles; immigration, migration, and exile; autobiography and historical change; Chicana/Chicano journalism; literary New Mexico; specific literary genres. May be repeated for credit. P/NP or letter grading.
191H. Honors Research Seminars: English. (5) Seminar, three hours. Enforced requisite: course 140A or 140B. Open only to students who are eligible and apply for honors program in English. Introduction to research techniques and study of various approaches and applications of critical methodology as it relates to interpretation and evaluation of texts. Development and presentation of proposals for honors projects. Consult undergraduate adviser. May be repeated for credit. P/NP or letter grading.

192. Undergraduate Practicum in English. (4) Seminar, three or four hours. May be repeated for credit. P/NP grading.

193. Colloquia and Speakers’ Series Undergraduate Seminars: English. (1) Seminar, one hour. Limited to undergraduate students. Discussion of current critical literature and/or creative 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 or letter 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. Students meet on regular basis with instructor and provide periodic written reports of their experience. May require analytic essay, as determined by supervised faculty member. May be repeated for credit. Individual contract required. P/NP or letter grading.

197. Individual Studies in English. (2 to 5) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study with scheduled meetings to be arranged between faculty 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 English. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised literary research and creative projects under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


201A. Criticism and Interpretation from Classical Era to the 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, Miller, 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 the Enlightenment to the Decadence. (4) Lecture, three hours. Continuation of course 201A, proceeding from neo-classical and Enlightenment critical theory through Victorian and decadent aesthetic and literary critical theory to contemporary theory, by Bos, Russeaux, Dryden, Pope, Horne, Kant, Schiller, the Schlegels, Coleridge, Hegel, Schelling, Arnold, Pater, Wilde, and Nietzsche. S/U or letter grading.

201C. Developments and Issues in Modern Critical Thought. (4) Lecture, three hours. Study of major figures and ideas in modern and contemporary critical theory. Readings vary from year to year but may include such figures as Freud, Durkheim, Saussure, Heidegger, Shklovskij, Benjamin, Adorno, Levi-Strauss, Lacan, Barthes, Derrida, Deleuze, Fanon, Foucault, Irigaray, Lyotard, Bourdieu, and Bhabha. S/U or letter grading.

202. Enumerative and Descriptive Bibliography. (4) Problems in bibliography, texts, and editions, with practical application in compiling bibliographies, editing texts, and approaching literature through textual criticism.

203. Computers and Literary Research. (4) Prior knowledge in this area not required. Practice in writing and using computer programs for analysis of literary style, content, and authorship.

204. History of Rhetoirc. (4) Reading of basic texts in history of rhetoric and selections from standard commentaries. Survey of classical period and medi-et-to-modern period in alternate years.

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 appropriate oral traditions, from Homer and ancient Greece to origins of vernacular literatures, European romantic (re)discovery of oral tradition, 20th-century theory of oral composition, and modern-day electronic media and popular 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.

M205C. Studies in Oral Traditional Genres. (4) (Same as Scandinavian M273.) Seminar, three hours. Exploration in depth of variety and history of, and scholarship on, particular oral traditional genre (e.g., ballad, song, epic, proverb, riddle, folktale, legend) or set of closely related oral traditional genres. S/U or letter grading.

210. History of the English Language. (4) Detailed study of history, characteristics, and changing forms of the language from its origin until about 1900.

211. Old English. (4) Study of Old English grammar, lexicon, phonology, and pronunciation to enable students to read the literature silently and aloud. Reading of as much of the more interesting Old English prose and poetry as can be read in a term.

212. Middle English. (4) Requisite: course 211. Detailed study of linguistic aspects of Middle English and of representative examples of the better prose and poetry.

213. Early Modern English. (4) Detailed study of phonology, morphology, syntax, and vocabulary of English between 1450 and 1750. Description and analysis of changes in the language in relation to intellectual, political, and social characteristics of the period.

214. Modern English. (4) Description and analysis of modern English phonology, grammar, and vocabulary, using theory and techniques of contemporary linguistics. Survey of the evolution of modern English and account of characteristic phonological and grammatical features of major regional varieties of English around the world.
M215. Paleography of Latin and Vernacular Manuscripts, 900 to 1500. (4) (Same as Classics M218, French M210, and History M218.) Lecture, three hours; discussion, two hours. Introduction to history of Latin and vernacular manuscript book from 900 to 1500 to (1) train students to make informed judgments with regard to place and date of origin, (2) provide training in accurate reading and transcription of later medieval scripts, and (3) examine manuscript book as witness to changing society that produced it. Focus on relationship between Latin manuscripts and vernacular manuscripts with regard to their respective presentation of written texts. S/U or letter grading.


218. Celtic Linguistics. (4) Survey of salient fea- tures of Celtic linguistic stock in its Gaelic and British branches, with reference to position of Celtic within Indo-European languages.

230. Workshop: Creative Writing. (2 to 4) Prepara- tion: submission of writing samples in specified genre (poetry, fiction, or drama). May be repeated but may not satisfy more than one of the nine courses required for first qualifying examination nor any of the five courses required for second qualifying examination.

240. Studies in History of the English Language. (4) Individual seminars with any single histori- cal period from Old English period to the present or development of a particular linguistic characteristic (phonology, syntax, semantics, dialectology) through various periods. May be repeated for credit.

241. Studies in Structure of the English Lan- guage. (4) Topics in various aspects of structure of modern English, especially syntax and semantics. May be repeated for credit.

242. Language and Literature. (4) Application of lin- guistics to literary analysis. Individual seminars dealing with a historical period (medieval and Renaissance, neoclassical, or 19th century and modern), specific au- thors, or contributions of specific groups of linguists to literary analysis. May be repeated for credit.

244. Old and Medieval English Literature. (4) Studies in poetry and prose of Old and medieval English literature; limits of investigation set by individual instruc- tor. May be repeated for credit.

245. Chaucer. (4) May be repeated for credit.

246. Renaissance Literature. (4) Studies in poetry and prose of Renaissance English literature, exclu- sive of Shakespeare; limits of investigation set by indi- vidual instructor. May be repeated for credit.

247. Shakespeare. (4) May be repeated for credit.


250. Restoration and 18th-Century Literature. (4) Studies in English poetry and prose, 1660 to 1800; limits of investigation set by individual instructor. May be repeated for credit.

251. Romantic Writers. (4) May be repeated for credit.

252. Victorian Literature. (4) Studies in English po- etry and prose of the Victorian period; limits of investi- gation set by individual instructor. May be repeated for credit.

253. Contemporary British Literature. (4) May be repeated for credit.

254. American Literature to 1900. (4) Studies in Colonial and 19th-century American literature; limits of investigation set by individual instructor. May be re- peated for credit.

255. Contemporary American Literature. (4) Stud- ies in contemporary American poetry and prose; lim- its of investigation set by individual instructor. May be repeated for credit.

256. Studies in the Drama. (4) Studies in drama as a genre from its beginning to the present; limits of in- vestigation set by individual instructor. May be repeat- ed for credit.

257. Studies in Poetry. (4) Studies in various themes and forms of poetry from Old English to the present; limits of investigation set by individual in- structor. May be repeated for credit.

258. Studies in the Novel. (4) Studies in evolution of the genre from its beginning to the present; limits of investigation set by individual instructor. May be re- peated for credit.

259. Studies in Criticism. (4) May be repeated for credit.

260. Studies in Literature and Its Relationship to the Arts and Sciences. (4) Studies in interrelation- ships of literature, arts, and sciences; limits of investi- gation set by individual instructor. May be repeated for credit.

M260A. Topics in Asian American Literature. (4) (Same as Asian American Studies M260A.) Seminar, three hours. Graduate seminar that examines and critically evaluates writings of Asian Americans. May be repeated for credit.

261. Studies in Chicana/Chicana Literature. (4) Seminar, three hours. Intensive research and study of major themes, authors, and issues in Chicana/Chicana literature and culture. Examination of political, aesthet- ic, economic, and cultural context that emerges in Chi- cana/Chicana discourse; limits of investigation 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 of the ancient or mod- ern Celtic languages. Studies in poetry and prose of early and modern Celtic literatures, chiefly Irish and Welsh; limits of investigation set by individual instruc- tor. May be repeated for credit.

264. Studies in Rhetoric. (4) Discussion, three hours. Special topics in classical and modern rhetoric, including substantial practice in rhetorical analysis of literary texts. May be repeated for credit.

265. Postcolonial Literatures. Seminar, three hours. Study of aesthetic, historic, and social back- grounds to literatures of former British colonies that became independent after 1947. General issues rela- ted to way imperialism, colonialism, and postcolonial- ism have helped to shape and have been shaped by literature in English. May be repeated for credit. S/U or letter grading.

M266. Cultural World Views of Native America. (4) (Same as American Indian Studies M266.) 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 tradi- tional and tribal contexts have been translated into contemporary literary texts (fiction, poetry, essay, and drama). Survey, from secondary sources, of interdisci- plinary methodological approaches taken from liter- ary analysis, structural anthropology, folklore, linguis- tics, and ethnomusicology. May be repeated for credit with instructor and/or topic change. Letter grading.

M270. Seminar: Literary Theory. (5) (Same as History M270.) Topics vary according to participating faculty. May be repeat- ed for credit.

M299. Interdisciplinary American Studies. Seminar, three hours. Readings, discussion, and papers on a common theme, team-taught by faculty from different depart- ments. Topics vary according to participating faculty. May be repeated for credit with consent of instructors.

375. Teaching Apprentice Practicum. (1 to 4) Semi- nars, 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 not be substituted for any departmental enrollment require- ments. May be repeated for credit. S/U grading.

495A. Supervised Teaching Preparation. (2) Semi- nars, 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) Semi- nars, 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 a research project on a technology topic of their choice. S/U grading.

496. Publishing the Academic Literary Article. (4) Discussion, four hours. Structured as a writing work- shop and divided into two parts: (1) determination of what a publishable article looks like while students re- vise work independently and (2) circulation of student papers to class in advance with the writing discussed in seminar room by whole class. 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. May be arranged with USC. S/U grading.

596. Directed Individual Study. (2 to 4) Tutorial, to be arranged. Limited to students preparing for first qual- ifying examination or engaging in intensive directed re- search 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) Limited to graduate students. May not be applied to- ward any course requirement for degree. S/U grading.

599. Ph.D. Dissertation Research. (4 or 8) 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.

272. Current Issues in Teaching English. (4) Fo- cus on one of a variety of topics of special current in- terest. May be repeated for credit.
ENGLISH COMPOSITION
(WRITING PROGRAMS)
College of Letters and Science
UCLA
146 Humanities Building
Box 951384
Los Angeles, CA 90095-1384
(310) 206-1145
fax: (310) 267-2224
http://www.wp.ucla.edu

Bruce J. Beiderwell, Ph.D., Director
George E. Gadda, C.Phil., Assistant Director

Lecturers
Bruce J. Beiderwell, Ph.D.
Richard A. Creese, Ph.D.
Esha N. De, Ph.D.
Randall J. Fallows, Ph.D.
Ed P. Frankel, M.A.
Rachiel I. Fretz, Ph.D.
George E. Gadda, C.Phil.
Lisa Gerrard, Ph.D.
Patricia Gilmore-Jaffe, Ph.D.
Cheryl F. Giuliano, Ph.D.
Susan M. Griffin, Ph.D.
Leigh C. Harris, Ph.D.
Christine Holten, M.A.
Janette Lewis, Ph.D.
Bonnie J. Lisle, Ph.D.
Sonia Maasik, M.A.
Sandra Mano, Ph.D.
Anita H. McCormick, Ph.D.
Michele L. Moe, Ph.D.
Geraldine Moyle, Ph.D.
Shelby A. Popham, Ph.D.
Gregory J. Rubinson, Ph.D.
Robert D. Samuels, Ph.D.
Lisa Gerrard, Ph.D.
Sonia Maasik, M.A.
Bonnie J. Lisle, Ph.D.
Gina V. Shaffer, Ph.D.
Steve K. Steinberg, Ed.D.
Jennifer Westbay, Ph.D.

Scope and Objectives
Students need writing proficiency at every stage of their university careers. Although UCLA does not have a composition major, this program offers a series of courses introducing the varieties of university discourse and providing instruction in basic to high-level skills. Besides courses that satisfy the University’s Entry-Level Writing and Writing I and II (English Composition) requirements, the program offers advanced courses in exposition and a language and composition course for teachers. Special programs include the Transfer Intensive Program (TIP).

Undergraduate Study
Entry-Level Writing
Every student who does not satisfy the Entry-Level Writing requirement by presenting transfer credit or acceptable test scores is required to take, as early as possible during the first year in residence, English Composition A or 2 (determined by performance on the Analytical Writing Placement Examination) or 2I (determined by performance on both the Analytical Writing Placement Examination and the English as a Second Language Placement Examination). For more information regarding Entry-Level Writing, see Undergraduate Degree Requirements in the Undergraduate Study section of this catalog.

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 of participant’s Study List but yields no credit toward a degree. First course in reading university-level texts and framed writing responses that employ a range of rhetorical strategies from paraphrase to analysis. Emphasis on revision, developing syntactic variety and academic vocabulary, and editing for grammar and style. Completion of course with a grade of C or better or demonstration of minimum competence on Analytical Writing Placement Examination is requisite to course 2.

2. Approaches to University Writing. (5) Lecture, four hours. Enforced requisite: course A or a grade of C or better or appropriate score on Analytical Writing Placement Examination. Second course in university-level discourse, with analysis and critique of university-level texts. Emphasis on revision for argumentative coherence and effective style. Completion of course with a grade of C or better satisfies Entry-Level Writing requirement. Letter grading.

2I. Approaches to University Writing. (5) Lecture, six hours. Enforced requisite: appropriate scores on Analytical Writing Placement Examination and English as a Second Language Placement Examination. Second course in university-level discourse, with analysis and critique of university-level texts. Emphasis on strategies for developing coherent and well-argued pieces of academic writing and for achieving effective and clear style in academic prose. Completion of course with a grade of C or better satisfies Entry-Level Writing and English as a Second Language requirements. Letter grading.

3. English Composition, Rhetoric, and Language. (5) Lecture, three hours. Enforced requisite: satisfaction of Entry-Level Writing requirement, course 2 or English as a Second Language 35 (C or better). Rhetorical techniques and skillful argument. Analysis of varieties of academic prose and writing of minimum of 20 pages of revised text. Completion of course with a grade of C or better satisfies Writing I requirement. Letter grading.

3H. English Composition, Rhetoric, and Language (Honors). (5) Lecture, three hours. Enforced requisite: satisfaction of Entry-Level Writing requirement, course 2 or English as a Second Language 35 (C or better). Rhetorical techniques and skillful argument. Analysis of varieties of academic prose and writing of minimum of 20 pages of revised text. Completion of course with a grade of C or better satisfies Writing I requirement. Letter grading.

4. English Composition, Rhetoric, and Language. (5) Lecture, four hours. Enforced requisite: course 2 or English as a Second Language 35 (C or better). Rhetorical techniques and skillful argument. Analysis of varieties of academic prose and writing of minimum of 20 pages of revised text. Completion of course with a grade of C or better satisfies Writing I requirement. Letter grading.

5W. Literature, Culture, and Critical Inquiry. (5) Lecture, four hours. Enforced requisite: course 2 or 3H or English as a Second Language 36. Use of analysis of literary works within cultural context to engage students in critical thinking and writing about issues important to academic inquiry and responsible citizenship. Minimum of 15 to 20 pages of revised text required in addition to regular informal writing exercises. Satisfies Writing II requirement. Letter grading.

5W. Language, Rhetoric, and Cultural Analysis. (5) Lecture, four hours. Enforced requisite: course 2 or English as a Second Language 36. Language and rhetoric of spoken, written, and visual texts, considering how they express cultural values, their role in society, and how audience comes to interpret these forms of communication. Minimum of 15 to 20 pages of revised writing required. Satisfies Writing II requirement. Letter grading.

30W. Intermediate Academic Writing: Various Topics. (5) Lecture, four hours; discussion, one hour. Enforced requisite: course 2 or 3 or 3H or English as a Second Language 36. Theme-based interdisciplinary writing course. Assignments involve students in critical reading, application, and integration of sources. Minimum of 20 pages of revised text required. Satisfies Writing II requirement. Letter grading.

Upper Division Courses
100W. Interdisciplinary Academic Writing. (5) Lecture, four hours. Enforced requisite: course 2 or 3 or 3H or English as a Second Language 36. Designed for sophomores/juniors/seniors. Course in academic writing suitable for both lower and upper division students that helps them develop academic papers with a range of complexity and length. Focus on conventions of academic prose and genres across the disciplines. Written assignments include common forms of academic writing such as argument, research paper, and/or critical essay. Satisfies Writing II requirement. Letter grading.

110. Writing Adjunct. (4) Lecture, four hours. Requisite: satisfaction of Entry-Level Writing requirement, course 2 or 3. Students must be concurrently enrolled in a course offered in conjunction with course 110 (course=Schedule of courses for course is designated). Writing assignments use materials from adjacent course and reflect and develop analytic writing skills needed in that course. May be repeated for credit with consent of instructor. P/NP or letter grading.

120A. Language Study for Teachers: Elementary School. (4) Lecture, four hours. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Survey of topics in English linguistics of special interest to elementary school teachers. Subjects include approaches to English grammar; language acquisition and development; language attitudes; regional and social dialects of American English; bilingual schooling; contribution of English language study to teaching of reading, writing, spelling, and literature.


123. Information Literacy and Research Skills. (1) Lecture, one hour. Preparation: satisfaction of Writing I requirement. Designed to help students become information literate, so they know how to identify, locate, critically evaluate, and use print and electronic information effectively and ethically. Closely interwoven with Writing Programs courses that have information/research-related assignments. P/NP or letter grading.

129A-129D. Academic Writing in the Disciplines. (4 each) Lecture, four hours. Designed for juniors/seniors. Advanced study of writing conventions in specific disciplinary areas, with focus on analysis and development of writing expertise in common discourse forms, stylistic patterns, and research practices in the 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. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Designed for juniors/seniors. Advanced writing course designed to help students develop their own personal, individualized 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.

195. Community or Corporate Internships in English Composition. (4) Tutorial, to be arranged. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Designed for juniors/seniors. Study of specific topics in relationship between rhetoric/writing and social or political history. Each course may be taken independently for credit. P/NP or letter grading. English majors who wish to use course to satisfy departmental requisite must take it for a letter grade. Limited to seminars.

495A. Supervised Teaching Preparation. (2) Seminar, one hour. Course 495A is not requisite to 495B. Required of all teaching assistants who are assigned to English Composition 3 courses. Focus on composition pedagogy, writing course design, assessment of student writing, and specialized problems that may occur in teaching English Composition 3. S/U grading.

495C. Supervised Teaching Preparation. (2) Seminar, to be arranged. Requisite: course 495B. Required of all teaching assistants in their initial quarter of teaching English Composition 3. Mentoring and group conferences, S/U grading.

495D. Supervised Teaching Preparation. (2) Seminar, one hour. Requisite: course 495A. Required of all teaching assistants for Writing II courses not exempt by appropriate departmental or program training. 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 disciplinary contexts. Practical concerns of creating assignments, marking and grading essays, and conducting peer reviews and conferences. S/U grading.

Environmental Health Sciences

School of Public Health

UCLA

56-070 Center for the Health Sciences
Box 951772
Los Angeles, CA 90095-1772

(310) 206-1619
fax: (310) 794-2106
http://www.ph.ucla.edu/ehs/

Curtis D. Eckhart, Ph.D., Chair

Professors

Richard F. Ambrose, Ph.D.
Michael D. Collins, Ph.D.
Jared M. Diamond, Ph.D.
Curtis D. Eckhart, Ph.D.
John R. Froines, Ph.D.
Jon Fukuto, Ph.D.
Hilary A. Godwin, Ph.D.
William C. Hindson, Ph.D.
Shane S. Que Hee, Ph.D.
Linda Rosenstock, M.D., M.P.H.
Robert H. Schiestl, Ph.D.
Irwin H. Suffet, Ph.D.
Arthur M. Winer, Ph.D.
Zuo-Feng Zhang, M.D., Ph.D.

Professors Emeriti

Arthur K. Cho, Ph.D.
Climis A. Davos, Ph.D.
Robert A. Mah, Ph.D.

Associate Professors

Linwood H. Pendleton, D.P.E.S.
Beate R. Ritz, M.D., Ph.D.
Wendie A. Robbins, R.N., Ph.D., F.A.A.N.
Jane L. Valentine, Ph.D.

Assistant Professors

Nola Kennedy, Ph.D., in Residence
Yllung Zhu, Ph.D., in Residence

Adjunct Assistant Professor

Pablo Cicero-Fernandez, D.Env.

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 highly trained scientists and professionals 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, environmental toxicology, 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). In addition, a unique doctoral degree (Doctor of Environmental Science and Engineering — D.Env.) is offered by the interdepartmental Environmental Science and Engineering Program which is administered through the department.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of 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. Introduction to environmental health, including coverage of sanitary principles and chronic and acute health effects of environmental contaminants. P/NP or letter grading.

C125. Atmospheric Transport and Transformations of Airborne Chemicals. (4) Lecture, four hours. Preparation: one year of calculus, one course each in physics, organic chemistry, and physical chemistry. Designed for science, engineering, and public health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemical smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global distribution of volatile toxic compounds. Concurrently scheduled with course C225. P/NP or letter grading.
C135. Environmental Policy for Science and Engineering. (4) Lecture, four hours. Preparation: strong quantitative background and good understanding of statistical methods. Core concepts and methods of environmental economics, policy analysis, basic econometrics, and survey design. Application of case-study approach with considerable memo and paper writing and revision. Emphasis on critical thinking about normative and positive aspects of environmental policies. Normative issues include evaluation of benefits and costs of environmental policies. Exploration of why some environmental policies are readily adopted by society, while other policies go unheeded or lead to perverse and counterproductive outcomes. 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, including properties, behavior, sampling, and measurement of aerosols and quantitative problems. Concurrently scheduled with course C252D. P/NP or letter grading.

C157. Risk Assessment and Standard Setting. (4) Seminar, four hours. Preparation: course C140, Epidemiology 100. Designed to provide students with opportunity to review scientific basis for association of environmental chemicals or biologic agents and adverse health effects. Core concepts include absorbed dose, toxicity, exposure, dose-response, and risk. Students explore scientific and regulatory standards. Concurrently scheduled with course C257. P/NP or letter grading.

C164. Fate and Transport of Organic Chemicals in Aquatic Environment. (4) Lecture, four hours. Recommended requisites: Chemistry 14A and 14B, or 20A and 20B. Evaluation of how and where and in what form and concentration organic pollutants are distributed in aquatic environments. Study of mass transport mechanisms moving organic chemicals between phases, biological degradation and accumulation, and chemical and physical effects of humic substances on these processes. Concurrently scheduled with course C264. P/NP or letter grading.

M166. Environmental Microbiology. (4) (Same as Civil Engineering M166.) Lecture, four hours; discussion, two hours; outside study, two hours. Recommended requisite: Civil Engineering 153. Microbial cell and its metabolic capabilities, microbial genetics and its potentials, growth of microbes and kinetics of growth, microbial ecology and diversity, microbiology of wastewater treatment, probing of microbes, public health microbiology, pathogen control. Letter grading.

M166L. Environmental Microbiology and Biotechnology Laboratory. (1) (Same as Civil Engineering M166L.) Laboratory, two hours; outside study, two hours. Corequisite: course M166. General laboratory practice within environmental microbiology, sampling of environmental samples, classical and modern molecular techniques for enumeration of microbes from environmental samples, techniques for determination of microbial activity in environmental samples, laboratory setups for studying environmental biotechnology. Letter grading.


197. Individual Studies in Environmental Health Sciences. (2 to 4) Formerly numbered 191B. 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


200C. Environmental Health Sciences for Nursing Students. (3) Lecture, three hours. Preparation: one year of undergraduate biology, calculus, chemistry, and physics. Limited to nursing students. Introduction to physical agents, including noise, thermal environment, ionizing radiation, and nonionizing radiation. Exploration of exposure assessment of air pollution in urban areas, occupational exposure assessment for epidemiological inferences, exposure characteristics, air pollution and excess mortality, assessment of exposure to mixtures of chemicals, multimedia and ecologic exposure assessment. S/U or letter grading.


203. Seminar: Ecotoxicology. (2) Seminar, two hours. Discussion of various topics in ecotoxicology. Topics vary from term to term and include aspects of environmental chemistry, toxicology, and ecology. May be repeated for credit. S/U grading.

204. Seminar: Exposure Assessment. (2) Seminar, two hours. Discussion of various topics in exposure assessment. Topics vary from term to term and include aspects of population activity, microenvironments, types of monitoring (outdoor, indoor, personal, biomarkers), and multimedia sources of exposure. S/U grading.

205. Environmental Health Sciences Doctoral Seminar. (2) Seminar, two hours. Limited to environmental health sciences doctoral students. Presentation of current research of environmental health sciences doctoral students. May be repeated for credit. S/U grading.


207. Introduction to Geographic Information Systems. (4) Lecture, two hours; laboratory, two hours. Introduction to geographic information systems (GIS), including use of GIS software, mapping, geocoding, and data analysis. S/U or letter grading.


211. Science and Politics of Environmental Regulation: Coastal Pollution and Solutions. (4) Lecture, three hours. Designed for graduate students. Overview of environmental regulations that protect coastal resources, regulatory agencies that have jurisdiction over coastal resources, past and current coastal pollution problems in the U.S., solving pollution problems through treatment, advocacy, enforcement, restoration, remediation, and watershed management. Letter grading.


225. Atmospheric Transport and Transformations of Airborne Chemicals. (4) (Formerly numbered 225.) Lecture, four hours. Preparation: one year of calculus, one course each in physics, organic chemistry, and physical chemistry. Designed for science, engineering, and public health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemical smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global distribution of volatile toxic compounds. Concurrently scheduled with course C125. S/U or letter grading.


231. Environmental Decision Systems Analysis. (4) Lecture, four hours; discussion, one hour. Requisite: course 230. Techniques and models of systems analysis and concepts of general system theory as applied to comprehensive environmental decision evaluation, and management of environmental decision systems. Experimentation with relevant computer programs. S/U or letter grading.

234. Critical Readings in Environmental Policy for Scientists and Engineers. (4) Lecture, one hour; discussion, three hours. Requisite: course 230 or 235. Development of science and engineering policy, science and economics, one year of statistics, one year of calculus. Introduction to core methods of environmental economics, policy analysis, basic econometrics, and survey design. Application of case-study approach with considerable memo and paper writing and revision. Emphasis on critical thinking about normative and positive aspects of environmental policies. Normative issues include evaluation of benefits and costs of environmental policies. Exploration of why some environmental policies are readily adopted by society, while other policies go unheeded or lead to perverse or counterproductive environmental outcomes. Concurrently scheduled with course C135. Letter grading.

235. Environmental Policy for Science and Engineering. (4) (Formerly numbered 235.) Lecture, four hours. Preparation: bachelor's degree in science, engineering, or public policy, public science, or economics, one year of statistics, one year of calculus. Introduction to core methods of environmental economics, policy analysis, basic econometrics, and survey design. Application of case-study approach with considerable memo and paper writing and revision. Emphasis on critical thinking about normative and positive aspects of environmental policies. Normative issues include evaluation of benefits and costs of environmental policies. Exploration of why some environmental policies are readily adopted by society, while other policies go unheeded or lead to perverse or counterproductive environmental outcomes. Concurrently scheduled with course C135. Letter grading.

240. Fundamentals of Toxicology. (4) (Formerly numbered 240.) Lecture, two hours. Preparation: one course each in biology, organic chemistry, and biochemistry. Essentials of toxicology with emphasis on human species. Absorption, distribution, excretion, and metabolism of chemicals as basic toxicologic processes and organ systems. Concurrently scheduled with course C140. Letter grading.

242. Toxicodynamics. (4) (Same as Molecular Toxicology M242.) Lecture, two hours; discussion, two hours. Requisite: course 240. Examination of biochemical, cellular, and molecular mechanisms by which chemicals induce toxicity in wide spectrum of organ systems and in a number of pathological conditions. Letter grading.

243. Embryology and Teratology. (4) Lecture, four hours. Requisite: course 240. Description of normal mammalian embryology at whole animal, cellular, and molecular levels and of biological, chemical, or physical perturbations of normal processes which produce congenital malformations. Letter grading.

244. Reproductive and Developmental Toxicology. (4) Lecture, four hours. Requisite: course 240. Introduction to current theory and research related to reproductive and developmental toxicology. Letter grading.

245. Laboratory in Toxicological Methods. (2) (Same as Molecular Toxicology M245 and Pharmacology M234C.) Lecture, one hour; laboratory, four to five hours. Survey of experimental techniques used in study of toxicology. Experimentation conducted within known toxin to demonstrate its effects at molecular, cellular, and tissue levels. Presentation of principles of techniques and methods of data analysis at discussion session prior to laboratory. Letter grading.

246. Molecular Toxicology. (4) (Same as Molecular Toxicology M246.) Lecture, four hours. Enforced requisite: course 240. Fundamental aspects of toxicology relevant to understanding of toxicologic processes, with research-oriented outlook. Dissemination of information about important molecular toxicological topics to make students think about them from research perspective. Students learn about cutting-edge research areas of molecular toxicology, how to most optimally extract important information from research papers, how to critique papers, how to formulate alternative hypotheses for data in papers, how to formulate ideas for future research, and how to express their ideas effectively in oral settings. Letter grading.

250D. Industrial Hygiene Practice. (2) Seminar, two hours. Requisites: courses 200A, 200B. Presentation of topics that are relevant to current practice of occupational health. Topics include discussions of regulatory framework, risk assessment and risk communication, new legislation and emergent occupational health issues. S/U grading.

251. Prevention of Disease in Workers and Workplaces. (3) (Formerly numbered 251A.) Lecture, three hours; discussion, one hour. Requisite: course 252D. Prevention and control of work-related diseases and injuries by occupational hygienists, workers, environmental engineers, policy makers, and others. Study approaches to permit proper disease control and prevention. Concurrently scheduled with course C152D. S/U or letter grading.

252E. Identification and Measurement of Gases and Vapors. (4) Lecture, three hours; discussion, one hour; outside study, two hours. A requisite: one year each of chemistry, physics, and calculus. Theoretical and practical aspects of industrial hygiene sampling and measurement of gases and vapors. Letter grading.

252F. Environmental Measurements Laboratory. (3) Laboratory, three hours. Corequisites: courses 252D, 252E. Limit to industrial hygiene majors. Laboratory methods for sampling and analysis of gases, vapors, and aerosols found in occupational environment. S/U or letter grading.

252G. Industrial and Environmental Hygiene Assessment. (4) Lecture, one hour; discussion, two hours; laboratory, two hours; outside study, four hours. Requisites: courses 200A, 200B, 252D, 252E. Environmental and industrial hygiene sampling strategies and assessment via walk-through surveys, group discussions, analysis of gases, vapors, and aerosols found in occupational environment. S/U or letter grading.


253. Physical Agents in Work Environment. (2 to 4) (Formerly numbered 253A, 253B.) Lecture, two hours; laboratory, two hours. Preparation: one year of physics. Physics, measurement methods, health effects, and control methods for radiation (ionizing and nonionizing), noise, and thermal stress in workplace environment. S/U or letter grading.

255. Control of Airborne Contaminants in Industry. (4) Lecture, two hours; laboratory, two hours. Preparation: one course; requisite: course 252D. Principles and applications of control technology to industrial environments, including general and local exhaust ventilation, air cleaning equipment, and respiratory protection. Letter grading.

256. Biological and Health Surveillance Monitoring in Occupational/Environmental Health. (4) Lecture, three hours; discussion, one hour; assignments, three hours. Principles and applications of biological monitoring and health surveillance to assess occupational and environmental exposures to organic and inorganic chemicals and physical factors. Letter grading.

257. Risk Assessment and Standard Setting. (4) (Formerly numbered 257.) Seminar, four hours. Requisites: courses C240, 251, Epidemiology 100. Designed to provide students with opportunity to review scientific basis for association of selected occupational and environmental exposures with disease. Special emphasis on critical evaluations of literature. Attention specifically to interface of science and regulatory agencies. Concurrently scheduled with course C157. S/U or letter grading.

258. Identification and Analysis of Hazardous Wastes. (4) Lecture, three hours; discussion, one hour; assignments, one hour. Requisite: course 252D. Designed to define, identify, label, and quantify hazardous wastes and how workers should be protected. Provides a critical understanding of all analytical aspects of hazardous wastes, health aspects, and regulation and practice of handling hazardous wastes. Letter grading.

259A. Occupational Safety and Ergonomics. (4) Lecture, four hours. Perception of design and modification of products and industrial machinery to prevent injuries or diseases to eliminate or control hazards arising out of mechanical, electrical, thermal, chemical, and other potential energy sources and ergonomic risk factors. Discussion of case studies in industrial manufacturing, construction, and agriculture. Letter grading.

259B. Occupational Ergonomics Laboratory. (4) Laboratory, four hours. Requisite or corequisite: course 259A. Hands-on experience using typical instruments and analytical techniques utilized in professional practice and research in occupational ergonomics. Laboratory exercises cover anthropometry, force and strength measurements, biomechanical modeling and static prediction, energy expenditure prediction, posture and motion analysis, use of goniometer, and computer-aided workstation design. Letter grading.

259C. Seminar Series. Occupational Ergonomics. (2) Seminar, two hours. Requisite: course 259A. Emphasis on research methodology as applied to prevention and control of worker-related musculoskeletal disorders. Topics include applied anthropometry, biomechanics, and epidemiology to assess workplace environments, job design, and supervision. Letter grading.

259D. 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. (4) Lecture, four 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.

259F. Accident Investigation and System Safety. (4) Lecture, four hours. Requisite: course 259A. Introduction to prospective and retrospective safety hazard analysis, system safety, computer-aided hazard analysis, and methodology and process of accident investigation. Letter grading.

259G. 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.

259H. Biomechanics of Traumatic Injury. (4) (Same as Biomedical Engineering M259H.) Lecture, four hours; outside study, eight hours. Designs for graduate students. Introduction to application of biomechanics of accidental injury causation and prevention; discussion of mechanisms of injury that result in bone and soft tissue trauma; discussion of mechanisms of healing for effective rehabilitation after traumatic injury. Letter grading.


259M. Fate and Transport of Organic Chemicals in Aquatic Environments. (4) (Formerly numbered 259M.) Lecture, four hours. Preparation: bachelor's degree in science, engineering, geophysics, chemistry, biology, or public health. Evaluation of how and where and in what form and concentration organic pollutants are distributed in aquatic environments. Study of mass transport mechanisms moving organic chemicals between phases, biological degradation and accumulation, and chemical and biological decomposition of humic substances on these processes. Concurrently scheduled with course C164. S/U or letter grading.
401. Environmental Measurements. (4) Lecture, four hours; laboratory, four hours. Requisites: courses 200A, 200B, 401. Field and instrumental techniques for laboratory and field applications to assess quantity of environmental pollutants in air, food, and water, and to assess degree of exposure to such factors as noise and radiation. Letter grading.

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 200A, 200B. Laboratory techniques and instrumentation used in preparation and analysis of biological, environmental, and occupational samples. Letter grading.

M411. Environmental Health Sciences Seminar. (2) Same as Environmental Science M411. Seminar, two hours. Required of graduate environmental health sciences students for one term each year. Current topics in environmental health sciences and environmental science and engineering. May be repeated for credit. S/U grading.


454. Health Hazards of Industrial Processes. (4) Formerly numbered 255.) Lecture, two hours; field trips, four hours. Requisite: 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 200A, 200B, 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 200A, 200B, 401, 401. Epidemiology 100. Field principles and practices of environmental sanitation as applicable to the sanitary engineer. Topics include theory, code enforcement, and inspection procedures for applicable environmental topics. S/U or letter grading.

495. Teacher Preparation in Environmental Health Sciences. (2) Seminar, two hours. Preparation: 18 units of cognate courses in areas of specialization. May not be applied toward master's degree minimum total course requirement. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. No more than 8 units may be applied toward master's degree minimum total course requirement; may not be applied toward minimum graduate course requirement. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Limited to graduate students. Individual 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 requirements. May be repeated for credit. S/U grading.

Scope and Objectives
The UCLA Environmental Science and Engineering (ESE) Program was founded in 1973 by Nobel laureate Dr. Willard Libby, who perceived a need to train environmental scientists, engineers, and policymakers in a more interdisciplinary manner than is afforded by traditional Ph.D. programs. After three decades, Dr. Libby's vision has in fact been realized with the evolution of the program from an experimental approach into a key component of the overall effort to train environmental professionals at UCLA. To date the program has awarded the Doctor of Environmental Science and Engineering (D.Env.) degree to over 200 students, and UCLA remains unique in the country in awarding such a degree. Many graduates have gone on to occupy critical positions in environmental research, remediation, and policy throughout the major environmental agencies in California and the nation. Other graduates have risen to senior positions in private sector companies.
conducting environmental research and remediation. Still other graduates are applying scientific solutions to environmental problems at national laboratories such as Oak Ridge and Lawrence Livermore Laboratories and at research institutes such as the RAND Corporation. Although many participating interdepartmental faculty members are from the College of Letters and Science and the Henry Samueli School of Engineering and Applied Science, the program is administered through the School of Public Health where a core faculty is based in the Department of Environmental Health Sciences. No undergraduate major or master's degree is offered.

The program is designed to train multidisciplinary professionals with an appropriate balance of breadth and specific skills, based on a strong master's-level foundation in 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. Because the D.Env. degree is not a specialized research degree in the manner of a Ph.D., the usual extended research training period in residence at UCLA associated with a Ph.D. is replaced by an 18- to 36-month internship in an appropriate government agency, national laboratory, or private industry, during which in-depth study of an environmental problem leads to a dissertation.

### Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/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 Degree

The Environmental Science and Engineering Program offers the Doctor of Environmental Science and Engineering (D.Env.) degree.

### Environmental Science and Engineering

#### Graduate Courses

M255. Introduction to Statistical Analysis of Environmental Data. (4) (Same as Statistics CM255.) Lecture, three hours. Designed for graduate students. Routine intermediate applied statistics course, with emphasis on applications to environmental data and statistical computing with the language R. Statistical analysis and scientific report from real data required. S/U or letter grading.

M266. Nonpoint Pollutant Sources and Transport Phenomena. (2) (Same as Environmental Health Sciences M266.) Seminar, two hours. Critical analysis course with focus on advanced topics in origins, transport, and fate of nonpoint source pollutants, especially in runoff from urban watersheds. Basics of transport of humic substances, methods to identify sources of pollutants in urban runoff, analysis of urban activities as potential sources, and methods to estimate loadings from particular urban watersheds. S/U grading.

400A. Environmental Science and Engineering Problems Course. (8) Discussion, eight hours. Primarily designed for environmental science and engineering doctoral students. Multidisciplinary technical and socioeconomic analysis and prognosis of significant current environmental problems. In Progress grading (credit to be given only on completion of courses 400B and 400C).

400B. Environmental Science and Engineering Problems Course. (8) Discussion, eight hours. Requires: course 400A. Multidisciplinary technical and socioeconomic analysis and prognosis of significant current environmental problems. In Progress grading (credit to be given only on completion of course 400C).

400C. Environmental Science and Engineering Problems Course. (8) Discussion, eight hours. Requires: course 400B. Multidisciplinary technical and socioeconomic analysis and prognosis of significant current environmental problems. Letting grading.

400D. Environmental Science and Engineering Problems Course. (8) Discussion, eight hours. Preparation: successful completion of internship approved by doctoral committee and program director. Requires: course 400C. Multidisciplinary technical and socioeconomic analysis and prognosis of significant current environmental problems. S/U or letter grading.

410A-410B-410C. Environmental Science and Engineering Workshops. (2-2-2) Discussion, 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.

M411. Environmental Health Sciences Seminar. (2) (Same as Environmental Health Sciences M411.) Seminar, two hours. Required of graduate environmental health sciences students for one term each year. Current topics in environmental health sciences and environmental science and engineering. May be repeated for credit. S/U grading.

M412. Effective Technical Writing. (2) (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 résumés. 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) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department to be given only on completion. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. 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://www.gdnet.ucla.edu/gasaa/library/pgmqrIntro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Epidemiology offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Epidemiology.

**Epidemiology**

**Upper Division Courses**

100. **Principles of Epidemiology.** (4) Lecture, two hours; discussion, four hours. Preparation: one full biological sciences course. Not open for credit to students with credit for course 200A, 200B, or 200C. Introduction to epidemiology, including factors governing health and disease in populations. Letter grading.

197. **Individual Studies in Epidemiology.** (2 to 4) (Formerly numbered 199.) 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/N or letter grading.

**Graduate Courses**

200A. **Methods I: Basic Concepts and Study Designs.** (6) Lecture, six hours; discussion, four hours. Prequisite 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 prerequisites: course 200A, Biostatistics 100A, 100B. Introduction to basic concepts, principles, and methods of chronic and infectious disease epidemiology. Letter grading.

200C. **Methods III: Analysis.** (4) Lecture, three hours; laboratory, one hour. Enforced prerequisites: courses 200A, 200B. Introduction to basic concepts, principles, and methods of epidemiologic data analysis. Letter grading.

202A. **Epidemiology: Theory and Methodology.** (4) Lecture, four hours. Prerequisite: course 200C. Advanced principles and methods of epidemiologic analysis. Topics include relating prevalence and incidence, analysis of clustering and seasonality; measures of effect, sources of bias, regression to mean, estimation and hypothesis testing in epidemiology, models for risk and rates; cohort analysis. S/U or letter grading.

203. **Topics in Theoretical Epidemiology.** (2) Lecture, two hours. Selected topics from current research areas in epidemiologic theory and quantitative methods. Topics selected from biologic models, epidemiologic models, problems in inference, model specification problems, design issues, analysis issues, and confounding. May be repeated for credit with consent of instructor. S/U grading.


211. **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). Prerequisites: courses 200B, 200C. Concepts and methods tailored for analysis of epidemiologic data, with emphasis on tabular and graphical techniques. Expansion of topics introduced in courses 200B and 200C and introduction of new topics, including principles of epidemiologic analysis, trend analysis, smoothing and sensitivity analysis. S/U or letter grading.

212. **Statistical Modeling in Epidemiology.** (4) (Same as Biostatistics M209.) Lecture, four hours. Preparation: two terms of statistics (three terms recommended). Recommended: course 200 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.

218. **Questionnaire Design and Administration.** (4) (Same as Community Health Sciences M218.) Lecture, four hours. Prerequisites: 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. Prerequisite: course 100 or 200A. Ascertainment of infection, transmission, and epidemiologic parameters rather than clinical and pathological aspects. Specific diseases discussed in depth to illustrate epidemiologic principles. S/U or letter grading.

221. **Prevalent and Emerging Infectious Diseases in Workers.** (4) Lecture, four hours. Prerequisites: courses 200A, 200B, and 200C (or 100). Biostatistics 100A, 100B. Designed for graduate students and medical doctors seeking broad knowledge and detail on prevalent and emerging infectious diseases, including influenza, acute respiratory infections, cholera/diarrheal disease, tuberculosis, hepatitis B, malaria, measles, neonatal tetanus, HIV/AIDS, pertussis (whooping cough). S/U or letter grading.

222. **Arthropods as Vectors of Human Diseases.** (4) Lecture, four hours. Prerequisites: courses 200A, 200B, and 200C (or 100). 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 epidemiologic 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.

225. **Public Health Microbiology.** (4) Lecture, four hours. Preparation: introductory microbiology. Prerequisites: courses 200A, 200B, and 200C (or 100). Corequisite: course 225L. Role of public health laboratory is to support testing needs of programs. To successfully fulfill this role, laboratory must provide information based on most sensitive and specific technologies available. Coverage of common infectious disease agents of public health importance and definition of impact of molecular biology on disease detection and epidemiology in modern public health laboratory. S/U or letter grading.

M226. Global Health Measures for Biological Emergencies. (4) (Formerly numbered 226.) (Same as Ecology and Evolutionary Biology M226.) Lecture, four hours. Requisites: courses 220 or 251. Mitigation of bioterrorism fails 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. (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100), Biostatistics 100A. Food poisoning is significant cause of morbidity and mortality in both developing and developed world. Examination of etiologic agents of food poisoning and factors specific to foods that allow them to become agents of disease transmission. Topics include definition, pathogenesis, detection, and control of foodborne, waterborne, and occupational diseases. Examination of range of current research topics on aging, with focus on conceptual and methodological issues related to each topic area. 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.

231. Principles of Control of Infectious Diseases. (2) Lecture, two hours. Requisites: courses 200A, 200B, 200C, 220. Comprehensive study of tools for control of infectious diseases and application of these tools in public health programs to achieve epidemiologic impact on disease reduction, elimination, or eradication. Letter grading.

232. Methods in 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 qualitative data and methods that produce quantitative data, with emphasis on use of methods specific to challenging and sensitive research topics such as behavior, addiction, and sexual abuse. 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 lung disease. Letter grading.

241. Issues in Cancer Prevention Research and Policy. (2) Lecture, two hours. Development of more informed understanding of promise of preventive strategies for cancer and of philosophical, scientific, and practical challenges that these strategies entail. Designed to build on ideas that move from general to more specific to cancer.
262. Seminar: Environmental and Occupational Cancer Epidemiology. (2) Seminar, two hours. Req-uisites: 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 other hazardous environmental contaminants levels of drinking water. S/U or letter grading.

263. Exposure Assessment in Occupational and Environmental Epidemiology. (2) Lecture, two hours. Requisite: courses 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, environmental health, industrial hygiene and the Public Health Science courses in biochemistry, epidemiology, molecular biology, and pharmacology. Letter grading.

264. Environmental and Occupational Health. (2) Lecture, two hours. Environmental exposure assessment for example in epidemiologic studies of occupational and environmental health. Focus on issues such as risk communication, potential influence (and ethics) of oversight panels and external review groups on presenting results and conclusions, and interest of govern-ment agencies. S/U or letter grading.

265. Methodologic Issues in Reproductive Epidemiology. (2) Seminar, two hours. General discussion of methodologic issues important to epidemiologic studies of reproductive outcomes, including fertility, low birth weight, prematurity, birth defects, pregnancy loss, and perinatal mortality. Approaches to study design and 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 outcomes. S/U or letter grading.

266. Introduction to Pharmacoepidemiology. (2) Lecture, two hours. Requisites: courses 200A, 200B, 200C. Pharmacoepidemiology is application of epidemiologic knowledge, reasoning, and methods to study effects and uses of drugs. Survey of contemporary epidemiologic literature. May be repeated for credit. S/U or letter grading.

267. Epidemiology of Prescription Drugs. (2) Lecture, four hours. Requisites: course 200A, 200B, or 200C (or 100). Introduction to prescription drug use and associated public health consequences. Introduction to basic concepts of cancer epidemiology and review of current epidemiologi-cal research in cancer in recent medical and epidemiologi-cal literature. May be repeated for credit. 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 disorders in field of neurology. Focus on methods of analyzing clinical and experimental research published in journals which provide support for or refute clinical claims about effectiveness of the procedure. Primary procedures include acupuncture, chiropRACTIC, manipulation, massage, and herbal reme-dies. Letter grading.

273. Responsible Conduct of Research in Global Health. (2) Lecture, one hour; discussion, one hour. Requisite: Community Health Sciences 200. Introduction to fundamental principles of public health ethics, current ethical procedures, guidelines, and require-ments, and ethical issues facing public health profes-sionals working in developing countries. History of public health issues, unique ethical issues of research in developing countries, analysis of ethical implica-tions of informed consent process to study com-munity, mechanisms of study approval, role of funders, and role and responsibilities of review boards. S/U or letter grading.

280. Connecting Epidemiological, Medical, and Mathematical Aspects of Infectious Diseases. (4) Lecture, four hours. Requisites: courses 200A, 200B, 200C, 220. To deepen and further integrate knowl-edge on infectious diseases, focus on small number of them to enable in-depth study. Each to be present-ed and discussed from three viewpoints that facilitate grasp of basic virology, hematology, microbiology and molecular basis, and epidemiologic and mathe-matical analysis. Letter grading.


290. Seminar: Epidemiology — Infectious and Tropical Disease. (2) Seminar, two hours. Review of research on specific diseases of public health impor-tance. May be repeated for credit. S/U or letter grading.

291. Seminar: Epidemiology — Methodology. (2) Seminar, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Review of current epidemiologic research contained in recent medical literature. May be repeated for credit. S/U or letter grading.


294. Epidemiology and Policy of Occupational and Environmental Health. (2) Seminar, two hours. Requisites: courses 200A, 200B, and 200C (or 100) and/or 260. Introduction to demands that go be-yond pure science, with focus on issues such as risk communication, potential influence (and ethics) of oversight panels and external review groups on present- ing results and conclusions, and interest of govern-ment agencies. S/U or letter grading.


297. Seminar: Epidemiology — Childhood. (2) Semi-nar, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Overview of current epidemiologic research on specific diseases of public health impor-tance. May be repeated for credit. S/U or letter grading.

298. Epidemiology — Field Studies. (2 or 4) Field-work, to be arranged. Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100). Field studies of reproductive outcomes, including fertility, 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 outcomes. 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 guid-ance and supervision of regular faculty member re-sponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Field Studies in Epidemiology. (2 or 4) Field-work, to be arranged. Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100). Field studies of reproductive outcomes, including fertility, low birth weight, prematurity, birth defects, pregnancy loss, and perinatal mortality. Students must file field place-ment and program training documentation on form available from student Affairs Office. May not be ap-piled toward M.S. minimum course requirement: 4 units may be applied toward 44-unit minimum total re-quired for M.P.H. degree. Letter grading.


M403. Computer Management and Analysis of Health Data Using SAS. (4) (Same as Biostatistics 4403B.) Lecture, four hours. Requisites: Biostatistics 100A, 100B (100B may be taken concurrently). Introduction to practical issues in management and analysis of health data using SAS programming language. Cross-sectional and longitudi-nal population-based data sets to be used through-out to illustrate principles of data management and analysis for addressing biomedical and health-related hypotheses. 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 smallpox or other bioterrorist events. Letter grading.

410. Management of Epidemiologic Data. (2) Lect-ure, two hours. Data management for various epidemiologic studies, confidentiality concerns; data management systems; introduction 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 aids and sources of information, building of reference files, and presentation of research findings for publica-tion or other purpose. 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, imple-mentation, 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.


414. Practical Epidemiologic Investigations. (2 or 4) Lecture, one or two hours; laboratory, one or two hours. Requisite: course 100 or 200. Practical ap-proaches to 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 100 and/or 200, Biostatistics 100A. Practical use of epidemiology, microcomputers, and statistical methods for estimating morbidity and mortality, developing interven-tion or prevention strategies, and setting program pri-orities in Third World settings. Letter grading.

417. Injury Prevention Strategies and Countermeasures. (2) Lecture, two hours. Requisite: course 100. Lectures with discussion on injury prevention strategies and countermeasures, including critical re-view of effectiveness in the public health context. Empha-sizes major public health issues from assaultive, self-inflicted, or unintentional causes. S/U or letter grading.

418. Rapid Epidemiologic Surveys in Developing Countries. (4) (Same as Community Health Sci-ences M418.) Lecture, four hours. Requisites: courses 100 and/or 200, 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 ana-lyze data, and prepare final report. Letter grading.
419. Applications in Musculoskeletal Epidemiology. (4) Lecture, two hours; laboratory, two hours. Requisites: course 100 or 200 (may be taken concurrently), Biostatistics 100A. Introduction to principles and practical issues of epidemiologic data analysis for addressing musculoskeletal-related hypotheses. Use of data sets from relevant components of National Health Interview Survey and from musculoskeletal-related epidemiologic studies. Use of SAS programming language, with applications in both UNIX and Windows. Letter grading.

420. Field Epidemiology in Developing Countries. (2) Seminar, two hours. Requisite: course 100 or 200A or 200B. Introduction to practical concepts and issues in conducting epidemiologic field research in developing countries, including formulating research questions, study site selection, ethical considerations, and logistics of data and specimen collection. S/U or letter grading.

495. Teacher Preparation in Epidemiology. (2) Seminar, two hours. Preparation: 18 units of cognate courses in area of specialization. May not be applied toward master's degree minimum total course requirement. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate 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 requirement. 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 requirement. May be repeated for credit. S/U grading.

Ethnomusicology / 323

Ethnomusicology
School of the Arts and Architecture
UCLA
2539 Schoenberg Music Building
Box 951657
Los Angeles, CA 90095-1657
(310) 206-3033
fax: (310) 206-4738
http://www.ethnomusic.ucla.edu

Jacqueline Cogdell DjeDje, Ph.D., Chair

Professors
Kenneth E. Burrell, B.A.
Jacqueline Cogdell DjeDje, Ph.D.
Roger A. Kendall, Ph.D.
Steven J. Loza, Ph.D.
Daniel M. Neuman, Ph.D.
James W. Newton, B.M.
A.J. Racy, Ph.D.
Helen M. Rees, Ph.D.
Timothy Rice, Ph.D.
Anthony Seeger, Ph.D.

Timothy D. Taylor, Ph.D.

Professors Emeriti
Charlotte A. Heith, Ph.D.
William R. Hutchinson, Ph.D.
Nazi A. Jairazboly, Ph.D.
J.H.K. Neklia, B.A.
James W. Porter, M.A.
Hiromi Lorraine Sakata, Ph.D.

Associate Professors
Tara C. Browner, Ph.D.
Cheryl L. Keyes, Ph.D.
Roger Savage, Ph.D.

Assistant Professor
Munir N. Beken, Ph.D.

Lecturers
Clayton Cameron, B.M.
Jesus A. Guzman
Charles A. Harrison, M.M.
Tamar Hendelman, B.M.
Shujaat H. Khan
Charles Owens, B.A.
Bobby H. Rodriguez, D.M.A.

Adjunct Professor
Benjamin Suchoff, Ed.D.

Adjunct Assistant Professors
Francisco U. Aguabella
George R. Bohanon
Abhiman Kausha
Donald K. Kim, B.A.
Kobla Ladzekpo, M.A.
Chi Li, B.A.
Roberto Miranda, M.M.
Barbara Morrison, A.A.
Ruth Price
James E. Roberson, M.B.A.
Ivan Varnimezov, B.A.
Tzvetanka T. Varnimezova, B.A.
Michele A. Weir, M.A.
I Nyoman Wenten, Ph.D.

Scope and Objectives
Ethnomusicology involves the study of all kinds of music from all over the world, using a variety of disciplinary perspectives. The Department of Ethnomusicology, the largest and first of its kind in a U.S. university, offers courses that cover the music of virtually every region of the world and of many ethnic groups in the U.S., as well as courses on jazz, popular music, and film music. Most courses combine an interest in music as an art form with questions about how musical art and practice relate to other aspects of culture, society, politics, and economics. Courses are also given on the 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 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-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

Ethnomusicology B.A.

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
Required: Ethnomusicology 10A, 10B, 10C, 11A, 11B, 11C, 20A, 20B, 20C, and 12 units of music courses in area of specialization or private instruction in music (courses 91A through 91Z or 92).

The Major

Jazz Studies Concentration
Required: Ethnomusicology CM110A, CM110B, M111, 120A, 120B, 127A, 129A, 129B, M129C, 183, 186, 12 units of course 171, 12 units of course 177, and one elective course selected from the general world music emphasis (see departmental counselor for course list).
World Music Concentration

Required: Ethnomusicology 175 or 181, 183; 12 units from courses 161A through 161Z; and eight courses (32 units) from one of the four ethnomusicology emphases: (1) general world music, (2) performance/composition, (3) public ethnomusicology, or (4) scholarly research. See the departmental counselor for the list of courses for each emphasis.

Emphases (32 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, (2) Africa and Asia, (3) popular music and jazz, or (4) aesthetics, politics, and psychology of music. Students may complete the remaining four courses with other upper division ethnomusicology courses listed under this emphasis, with courses from other emphases, or with Ethnomusicology 188, 197E, or 197S courses.

Performance/Composition (for students interested in a career in performance and/or composition): Students who select this emphasis must have a 3.5 grade-point average in departmental lower division core courses and a cumulative 3.0 GPA at the time of application. In addition to the lower and upper division core requirements, a minimum of eight 4-unit courses is required. Students must take four 4-unit courses in this emphasis and an additional two 4-unit courses in the general world music emphasis. Students must fulfill the internship requirement, which consists of three terms (8 units minimum) of Ethnomusicology 195, in an institution approved by the faculty sponsor. Students must write a final research paper (at least 10 pages) at the completion of each internship.

Scholarly Research (for students interested in pursuing graduate study): Students who select this emphasis must have a 3.5 grade-point average in departmental lower division core courses and a cumulative 3.25 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 listed under this emphasis, with courses from other emphases, or with Ethnomusicology 188, 197E, or 197S courses. Students must also write a thesis (25 to 30 pages) and enroll in Ethnomusicology 199 for at least one term while writing the thesis.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Ethnomusicology offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Ethnomusicology.

Ethnomusicology

Lower Division Courses

5. Music Around World. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Overview of world’s musical traditions by selecting one or two case studies from each of nine musical world regions: Pacific, East Asia, Southeast Asia, South Asia, Middle East, Africa, Europe, Latin America, and the U.S. and Canada. P/NP or letter grading.

10A-10B-10C. World Music Theory and Musicanship. (5-5-5) Lecture, two hours; discussion, four hours; laboratory, two hours; outside study, seven hours. Course 10A is requisite to 10B, which is requisite to 10C. Limited to Ethnomusicology and World Arts and Cultures majors. Introduction to and participation in musical systems of selected world cultures 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 the late 20th century; use of and current activity in music that correspond to and shape contemporary social processes. P/NP or letter grading.

20A-20B-20C. Musical Cultures of the World. (5-5-5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Traditions and popular music from many different countries, with introduction to basic ethnomusicological concepts and development of listening and analytical skills. P/NP or letter grading.

20A. Europe and Americas; 20B. Africa and Near East; 20C. Asia.

25. Global Pop. (5) Lecture, four hours; discussion, one hour. Exploration of ways music is mediated to people by industry, technologies, and corporations. Survey of leading theorists of media and exploration of case studies. P/NP or letter grading.

35. Blues, Society, and American Culture. (5) Lecture, four hours; discussion, one hour. Sociocultural history and survey of blues music tradition from its roots in West Africa to its emergence in African American oral culture, with emphasis on philosophical underpinnings and social and political impact of blues and its influence on development of country, jazz, gospel, rhythm and blues, rock, hip-hop music, and other mediums. P/NP or letter grading.

40. Music and Religion. (5) Lecture, four hours; discussion, one hour. Survey of nature, role, and power of music in religious rituals around world, covering music and ritual of Hinduism, Buddhism, Judaism, Christianity, and Islam, as well as religious traditions of Native Americans and syncretic religious practices in Americas such as African American gospel music, Brazilian Candomble, Cuban Santeria, and Haitian vodoun. Letter grading.

45. Music of Bollywood and Beyond. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. History and development of South Asian film scores in their filmic context, especially omnipresent songs that most distinctively characterize this genre. P/NP or letter grading.

50A-50B. Jazz in American Culture. (5-5) Lecture, four hours; discussion, one hour. Course 50A is not requisite to 50B. Survey of development of jazz in American culture. Discussion of different composition-performance techniques and approaches that distinguish different sub-styles of jazz from one another, as well as key historical figures that shaped development of jazz from its early years through modern jazz. Important historical social issues (segregation, Depression, World War II, Civil Rights Movement) that intersect with history of U.S. and jazz music. P/NP or letter grading. 50A, Late 19th Century through 1940s; 50B, 1940s to Present.
C100. Audiovisual Archiving in 21st Century. (4) Seminar, three hours. Designed for Ethnomusicology majors. Examination of history, present state, and future of audiovisual archives, with special focus on ethics, copyright, contracts, fieldwork, preservation, and access and issues related to technology, space, 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 majors in public ethnomusicology emphasis. How music industry functions and how products are created, marketed, and consumed. Basic information on production of recordings and legal issues faced by industry. (Same as Afro-American Studies C124.) P/NP or letter grading.


108B. Contemporary North American Indian Music. (4) Lecture, three hours; discussion, one hour. Contemporary Native North American 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 South American traditional music and its role in indigenous societies. Topics include relationship between speech and song, use of music by shamans, musical structures, and use of indigenous music in creating nationalist and popular music styles. Letter grading.


M109. Women in Jazz. (4) (Same as Afro-American Studies M109 and Women’s 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.

CM110A-CM110B. African American Musical Heritage. (5-5) (Same as Afro-American Studies CM110A-CM110B.) Lecture, four hours; discussion, one hour. Concurrently scheduled with courses CM210A-CM210B. P/NP or letter grading. CM110A. Sociocultural history and survey of African American music coming from Africa and its impact on America; music of 17th through 19th centuries; missionary music and its impact on representation of blacks in film, television, and theater; religious music, including hymns, spirituals, and gospels, and music of Caribbean and Central and South America; and music of black Los Angeles. CM110B. Sociocultural history and survey of African American music covering blues, pre-1947 jazz styles, rhythm and blues, soul, funk, disco, hip-hop, and heavy metal music. Emphasis on recording industry and effects of cultural politics on popular music productions. M111. Ellingtonia. (4) (Same as Afro-American Studies M114B.) 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 by U.S. Covers many contributions of other artists who worked with Ellington, such as composer Billy Strayhorn and musicians Johnny Hodges,oots Williams, and Mercer Ellington. P/NP or letter grading.

M115. Musical Aesthetics in Los Angeles. (4) (Same as Chicanas and Chicano Studies M115.) Lecture, three hours. Confronting aesthetics from classical perspective of art as imitation, examination on cross-cultural basis of diverse musical contexts within vast multicultural metropolis of Los Angeles, with focus on various musical networks and specific experiences of Chicanos/Latinos, African American, Asian American, rock culture, Western art music tradition, and commercial music industry. P/NP or letter grading.

M116. Chicanas/Latinas in U.S. (4) (Same as Chicanas 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 and trends in post-1950 popular music. P/NP or letter grading.

118. Development of Rock. (5) Lecture, four hours. Examination of historical and stylistic development of rock from the 1950s to the present, with attention to its sociocultural and political impact on American society and beyond. P/NP or letter grading.

M119. Cultural History of Rap. (5) (Same as Afro-American Studies M119.) Lecture, four hours; discussion, one hour. Introduction to development of rap music and hip-hop culture, with emphasis on musical and verbal qualities, philosophical and political ideologies, gender 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 development in the U.S. and abroad, and its impact on subsequent musical styles. P/NP or letter grading.

121. Cross-Cultural Perspectives in Jazz. (4) Exploration of assimilation and retention of jazz from the U.S. in various countries, with particular emphasis on cultural and social features which form the basis for new jazz-ethnic music blends.

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 repertoires subjected to study for students with music backgrounds. Concurrently scheduled with courses C222A-C222B-C222C. Letter grading. C122A. Early Jazz to Swing Era. C122B. Bebop to Avant-garde. C122C. Jazz since the Sixties.

123. Music of Bebop. (4) Lecture, three hours. Study of jazz bebop tradition, including analysis of compositions and song forms, styles of improvisation, and developments from 1940 to the present.

125A-125B-125C. Jazz Composition and Arranging. (2-2-2) Lecture, two hours; outside study, four hours. Examination of various aspects of jazz composition. Differentiation between improvisation and notated composition, 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 the Sixties.

126A. Introduction to Jazz Arranging and Orchestration. (2) Seminar, two hours. Requisite: course 126C. Study and practice of skills used in arranging and orchestrating music for jazz ensembles. Students create and orchestrate their own arrangements. Study of specific instruments and their unique use and application in jazz (jazz notation and terminology, transposition, doubling, and chord spelling). 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, 126B, 126C. Continuation of concepts from course 126A, with focus on full sectional writing and in-depth score analysis. Culminates with arrangements to be read by UCLA Jazz Orchestra I. Letter grading.

126C. Advanced Jazz Arranging and Orchestration. (2) Seminar, two hours. Enforced requisites: courses 126A, 126B, 126C. Continuation of concepts from course 126B, with focus on contributions of noteworthy arrangers/orchestralists. 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) (Formerly numbered 127B.) Laboratory, two hours; outside study, four hours. Requisites: courses 11A, 11B, 11C. Course 127A is enforced requisite to 127B, which is enforced requisite to 127C. Not open for credit to students with credit for course 127. 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 a grade of C or better. Medium-level jazz harmonic constructions. 129C. Requisite: course 129B with a 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 M136.) Lecture, three hours. Requisite: course 20A or 26B or 28 or Anthropology 9 or 3 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 demonstrations. Emphasis on historical knowledge of musicians and ethnomusicologists combined with those interested in jazz as cultural tradition. P/NP or letter grading.

M131. Developments of Jazz. (4) (Same as Music M131.) Lecture, four hours; discussion, one hour. Survey of historical and stylistic development of musical style referred to today as “Latin jazz.” P/NP or letter grading.

Ethnomusicology / 325
133. European Musics: Politics, Identities, Nationalisms. (5) Lecture, four hours; outside study, 12 hours. Limited to Ethnomusicology, Music, Musicology. Music as ideology and politics. Senior Arts and Humanities majors. European folk, popular, and classical music as practice and as products of political and economic power. Limited to 45 majors.

C136A. Music of Africa. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Introduction to music of Africa through general discussion of select topics and its place in, and its influence on, African arts, and contemporary music. Concurrently scheduled with course C236A. P/NP or letter grading.

C136B. 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 the diverse musical traditions found in African continent and become more cognizant of contributions that people of Africa have made to world music. Concurrently scheduled with course C236B. Letter grading.

146. Folk Music of South Asia. (4-4) Lecture, three hours; laboratory, two hours. Taught in rotation of survey of some regional genres, styles, and musical instruments found in India and Pakistan, with special reference to religious, social, economic, and cultural context of their occurrence.

147. Survey of Classical Music in India. (4) Examination of melodic, metric, and formal structures of Indian classical music in context of religious, sociocultural, and historical background of the country.

C150. Music and Politics in East Asia. (4) Lecture, four hours. Limited to Ethnomusicology, Music, Music History, World Arts and Cultures, Chinese, Japanese, Korean, and East Asian Studies majors. Political imperatives have long had a 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 C250. Letter grading.

C156A. Lecture, four hours. Requisite: course 20C. Limited to Ethnomusicology majors. Survey of traditional, popular, and Western-influenced music currently widespread in China, including musical analysis of different genres; examination of contexts in which they exist, their profound effects on Confucian and Communist ideologies on music. Concurrently scheduled with course C256A. 156B. Lecture, three hours; laboratory, two hours. Requisite: course C156A. Introduction to various notational systems. Analysis of repertoire.


158A-158B-158C. Studies in Chinese Instrumental Music. (4-4-4) Lecture, three hours; laboratory, one hour. 158A. Study of literature, major sources, paleography, theory, and philosophy of the P’i Pa’, including transcription and analysis. 158B. Study of literature, major sources, paleography, theory, and philosophy of the P’i Pa’, including transcription and analysis. 158C. Comprehensive study of Chinese musical instruments, classification system, systematic musical notation, and use in context of Chinese society.

C159. Music on China’s Periphery. (4) Lecture, four hours; outside study, eight hours. Designed for undergraduate Basic, Music History, and World Arts and Cultures majors. Survey of music from China’s border regions and neighboring countries: technical musical characteristics and important contextual 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.

160. Survey of Music in Japan. (4) Lecture, three hours. Survey of main genres of Japanese traditional music, including court, religious, and folk music, Koto music, Shamisen music, and music used in various theatrical forms. P/NP or letter grading.

161A-161Z. Advanced World Music Performance Organizations. (2 each) Activity, three hours; outside practice, three hours. Limited to Ethnomusicology majors. Advanced study of traditional vocal and instrumental music. May be repeated for credit without limitation. Letter grading.

161A. Music and Dance of Africa. (4) Limited to Ethnomusicology majors. Examination in composition and performance of jazz band repertoire in traditional jazz ensemble, Latin jazz ensemble, and contemporary jazz ensemble; 161Z. Open Ensemble.

162. Advanced Private Instruction in Music. (2) Lesson, one hour; outside study, five hours. Preparation: two years of courses 91A through 91Z or 92. Limited to Ethnomusicology majors. Advanced private or semiprivate music instruction with distinguished community-based musician, that must be arranged by students and approved by course instructor. May be repeated for credit without limitation. Letter grading.

164. World Music Composition. (4) Lecture, three hours; laboratory, three hours; outside study, six hours. Requisites: courses 11A, 11B, 11C. Limited to Ethnomusicology majors. Examination in composition using variety of Western and non-Western musical systems. Final project required. Letter grading.

C169. Music, Science, and Technology. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. 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, resultant quality, and dissonance; sound properties; and microphone systems. Concurrently scheduled with course C269. Letter grading.

171. Instruction in Advanced Jazz Performance. (2) Laboratory, one hour. Preparation: advanced performance in jazz. Study of jazz repertoire and techniques for specific instruments and voice. May be repeated for a maximum of 12 units.

172A. Cognitive Psychology of Music. (4) Lecture, four hours; discussion, one hour. Designed for nonmajors. Introduction to psychology of music; historical background and the broad field of study, including use of music as a stimulus, tests and measurements, and related modes of musical behavior. P/NP or letter grading.


C176. Psychology of Film Music. (4) Lecture, four hours; outside study, eight hours. Exploration of music in cinema, including the development 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.

C178. Aesthetic and Philosophical Foundations in Systematic Musicology. (4) Seminar, three hours; outside study, nine hours. Limited to Ethnomusicology majors. Comprehensive overview of critical approaches to aesthetics and philosophy of music; sociology of music, critical theory, hermeneutics, and music criticism. Concurrently scheduled with course C204. Letter grading.


181. Anthropology of Music. (4) 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.

C182. Music Industry. (4) (Formerly numbered C182.) (Same as Music CM182 and Music History CM186.) Lecture, four hours; outside study, eight 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 data of popularity and record sales, as well as 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 in cultural politics in nature, contrasted with those of applied research, practical and policy-oriented in approach. Concurrently scheduled with course C286. Letter grading.

186. Senior Recital or Project. (1) Tutorial, to be arranged. Limited to seniors. Preparation and performance of one-hour recital of jazz repertoire or preparation of research project as approved by appropriate faculty. P/NP grading.

188. Special Courses in Ethnomusicology. (4) Lecture, four hours; outside study, eight hours. Select- ed topics in ethnomusicology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.
Graduate Courses

C200. Audiovisual Archiving in 21st Century. (4) Seminar, three hours. Designed for Ethnomusicology majors. Focus on theory, present state, and future of audiovisual archives, with specific focus on ethics, copyright, contracts, fieldwork, preservation, and access and issues related to technology, space, budgets, and staffing. Concurrently scheduled with course C100. S/U or letter grading.

201. History of Ethnomusicology. (4) Seminar, three hours; outside study, nine hours. Limited to graduate ethnomusicology students. Basic literature and schools of thought in field of ethnomusicology from the late 19th century to the 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 the 1980s to the present. Letter grading.


205. Seminar: Information Technology and Research Skills. (4) Seminar, three hours. Limited to graduate ethnomusicology students. Basic skills for research on and about music that is essential to student careers as ethnomusicologists; specifically information technology skills, acoustics, and representational tools for nonlinguistic acoustic phenomena. Basic understanding of acoustics, ability to represent sounds in various graphic forms appropriate to them, and ability to locate and organize information sources related to field of ethnomusicology. Letter grading.

206. Integrating Theory with Ethnography. (4) Seminar, three hours. Designed to show how theory and primary research cannot exist without each other, and how various authors have integrated theoretical writings and ideas with their ethnographic or historical data. Reading of several recent ethnographies, mostly about music and possibly historical studies, in tandem with theoretical readings that inform arguments of these books. Letter grading.


208. Seminar: Latin American Music. (4) Seminar, three hours. Review of bibliographic, methodological, and philosophical bases of musical research in Latin America, working from both general and specific perspectives. Exploration of research problems and investigations on specific musical cultures and distinct genres of musical expression.

CM210A-CM210B. African American Musical Heritage, (3-3) (Same as Afro-American Studies CM210A-CM210B) Lecture, four hours; discussion, one hour. Concurrently scheduled with courses CM110A-CM110B. S/U or letter grading. CM210A. Sociocultural history and theories of cultural music covering Africa and its impact on America; music of 17th through 19th centuries; minstrelsy and its impact on representation of blacks in film, television, and theater; religious music, including hymns, spirituals, and gospel; black music of Caribbean and Central and South America; and music of black Los Angeles. CM210B. Sociocultural history and survey of African American music covering blues, pre-1947 jazz styles, rhythm ‘n’ blues, soul, funk, disco, hip-hop, and symbiotic relationship between recording industries and effects of political and cultural on popular music music productions.


CM212. 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.


230. European Musics: Politics, Identities, Nationalisms. (4) Seminar, three hours; outside study, nine hours. Designed for graduate students. European classical, popular, and traditional musics, with particular attention to ways 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 ways musicians, ordinary people, and politicians have used music to affect processes involved in contesting and resolving tensions created between and among these identity formations. Historical period coverage primarily from the 19th and 20th centuries, but also from examples from all over European continent. Letter grading.

233A-233B-233C. 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. May be repeated for credit in Progress (233A, 233B) and letter (233C) grading.

C236A. Music of Africa. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Designed for graduate students. Introduction to music of Africa through general discussion of select topics such as continent and its peoples, function, musician, instruments, musical structures and related arts, and contemporary music. Concurrently scheduled with course C136A. 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 familiar with the musical traditions of Africa and how they have made to world music. Concurrently scheduled with course C136B. Letter grading.


241. Music of Iran and Other Non-Arabic-Speaking Communities. (4) Lecture, three hours. Requisite: course 292 or course in ear training, analysis, and theory. Comparative study of music of Iran and other related areas, including Turkey, with particular reference to their historical and cultural background, sound, music theory, instruments, instrument building style, technique of improvisation, and contemporary practice. Concurrent participation in Near East performance ensemble (course 91N) required.
248. 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. During first term, emphasis on music history and traditional theory; second term, analysis 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 are directly and indirectly expressed in music. Whether an explicit influence 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 C150. Letter grading.

251. Music of Indonesia. (4) Lecture, three hours; outside study, nine hours. Requisite: course 20C. During first term, emphasis on music and related performing arts of Java. Focus on music and performing arts of Bali and other Indonesian islands during second term. Concurrent participation in one Indonesian performance group (course 91B or 91H) required. S/U or letter grading.


C256A. Music in China. (4) Seminar, three hours. Limited to Ethnomusicology majors. Survey of traditional, popular, and Western-influenced musics currently widespread in China, including musical analysis of different aspects of contexts in which they exist. Investigation of profound effect of Confucian and Communist ideologies on music. Concurrently scheduled with course C156A. Letter grading.

C259. Music on China’s Periphery. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Ethnomusicology, Music, Musicology, and World Arts and Cultures majors. Survey of musics from China’s border regions and neighboring countries: technical musical characteristics and important contextual issues related to traditional and modern styles from Mongolia, Uighurs of Xinjiang, Tibet, Tibet-Burman peoples, Hmong, and indigenous peoples of Taiwan. Concurrently scheduled with course C159. S/U or letter grading.

M261. Gender and Music in Cross-Cultural Perspective. (4) Same as Women’s Studies M261.) Seminar, three hours. Designed to foster in-depth understanding of gender as a cultural category. Topics range from ethnicity of gender and sexual identity, to commodification of messages of resistance, and gender 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. Investigation of theoretical paradigms, issues, and research models of popular music, with emphasis on world music genres, local/global markets, mass mediation, appropriation and aesthetics of style, ethnographic methods, and impact of popular music studies on ethnomusicology. Letter grading.

264. Urbanism and Music. (4) Seminar, three hours; outside study, nine hours. Theoretical and methodological issues in study of the city as cultural entity that affects and is affected by music making. S/U or letter grading.

265. Religion and Music. (4) Seminar, three hours: outside study, nine hours. Cross-cultural examination of role of musical expression as spiritual medium and as artistic expression in world’s religions. S/U or letter grading.

266. Charles Seeger’s Life and Thought. (4) Seminar, three hours; outside study, nine hours. Charles Seeger devoted his life to the study of the influence on three fields he helped to found (ethnomusicology, systematic musicology, historical musicology), as well as his interest in applied musicology and American composition in the 20th century. S/U or letter grading.

267. Music and Ecology. (4) Seminar, three hours: outside study, nine hours. Relationship between music and consciousness in different world cultures and role music plays in ecstatic experiences. Phenomena include trance, spirit possession, shamanism, visionary ecstasy, mysticism, and artistic inspiration. S/U or letter grading.

268. Modernity and Musical Experience. (4) Seminar, three hours; outside study, 10 hours. Limited to graduate students. Examination of possibilities for sub- ject-centered musical ethnomusicology to account for fragmented musical experience in modern world. Consideration of local and “world” musics in relation to modernity, postmodernity, globalization, notions of self and subject, and media images. Letter grading.

C269. Music, Science, and Technology. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Designed for Ethnomusicology, Music, and Musicology majors. Introduction to music theory and technol- ogy for both creation and dissemination of music. Introduction to tools and techniques such as CD mastering, digital sampling, recording, and music synthesis. How music of the east and west is understood by such technologies. Concurrently scheduled with course C169. Letter grading.

271. Seminar: Acoustics of Music. (5) Seminar, three hours. Requisite: course 170. Selected topics in acoustics, including laboratory methodologies and practical applications. Topics include Western and non-Western instruments, tuning systems, psychoacoustics, and methods of spectral analysis. May be repeated once for credit.

273. Seminar: Psychology of Music. (6) Seminar, three hours. Requisite: course 173. Selected topics in psychology of music, including recent findings in brain research, musical perception, learning, cognition, memory, memory, therapy, affect, meaning, and measurement. May be repeated once for credit.


276. Seminar: Electroacoustics. (4) Lecture, four hours; outside study, eight hours. Exploration of music in film, animation, and dance through lens of cognitive psychology, with focus on interpretation of film music relative to model of musical meaning. Concurrently scheduled with course C176. Letter grading.

279. Seminar: Systematic Musicology. (4) Seminar, three hours. Requisite: course 170. Exploration of specific topics in general field of systematic musicology covering disciplines such as anthropology, aesthetics, acoustics, music perception, philosophy, organology, sociology, and experimental approaches. May be repeated for credit.

280. Teaching World Music and Music Appreciation. (4) Seminar, three hours. Preparation: two ethnomusicology courses or concurrent enrollment in course 20A, 20B, or 20C. Designed for ethnomusicology and musicology graduate students. Practical overview of current teaching philosophies and texts used in teaching introductory music survey courses, specifically music appreciation and general world music letter. Letter grading.

281A-281B. Independent and Laboratory Methods in Ethnomusicology. (6-6) Seminar, three hours; laboratory, two hours. Requisites: courses 201A-201B. Fieldwork concepts and methods using technical equipment, conducting interviews, dealing with ethical issues, and designing research projects.

282. Seminar: Analysis. (6) Seminar, three hours. Requisite: course 180 or graduate ethnomusicology students. Intensive discussion of selected topics in the field of ethnomusicological analysis, including transcription and notation, with emphasis on analysis of musical performance and music events.

283. Seminar: Study of Musical Instruments (Or- ganology). (6) Seminar, three hours. Requisites: courses 201A-201B. Musical instruments studied in terms of their structures, performance contexts, cultural significance, and patterns of change.

284. Seminar: Anthropology of Music. (4) Requir- sites: courses 201A-201B. Application of current anthropo- logical paradigms and issues that have major impact on ethnomusicology.

285. Seminar: Comparative Music Theory. (6) Seminar, three hours. Comparative study of codified music theories of select cultures — Western and non- Western — considered in themselves and as expressions of their societies. Theory considered as a science of music; its place between cultural values and artistic practice in different civilizations.

C286. Public Ethnomusicology. (4) Lecture, four hours; outside study, eight hours. Designed for Ethnomusicology majors. How music industry functions and how industry practices are created 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 CM182. Letter grading.


CM288. Music Industry. (4) (Formerly numbered CM288.) (Same as Music CM282 and Musicology CM288.) Lecture, four hours; outside study, eight hours. Limited to Ethnomusicology, Music, and Musicology majors. Examination of influence of music industry on way music is created, performed, listened to, evaluated, and used today. Historical approach taken, beginning with music of 18th century and continuing through development of audio recordings to MTV and popular music today. Concurrently scheduled with course CM182. Letter grading.

289. Research Design and Grant Writing in Ethno- musicology. (4) Seminar, three hours: outside study, nine hours. Design of dissertation research proposal, locating and applying for dissertation fellowship grants, organizing and presenting research, and continued academic proposals with sophisticated methods and professional writing skills. S/U or 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 community within department. Topics vary from term to term and consist of presentations by guest lecturers, faculty members, and students. May be repeated for credit. S/U grading.

292A-292K. Seminars: Special Topics in Ethnomu- sicology. (4) Designed for graduate students. Utilization of special interests and expertise of regular and visiting faculty; topics of current interest presently offered in one- or two-credit format.

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 faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495A. Teaching Apprentice Practicum. (2) Eight weeks; outside study, one hour. Preparation: appointment as teaching apprentice in Ethnomusicology Department. Required of all new teaching apprentices. Special course dealing with problems and practices of teaching ethnomusicology and systematic musicology at college level. May not be applied toward degree requirements. S/U grading.
The B.A. degree in European Studies is based on four principles: (1) students acquire proficiency in a modern European language other than English, (2) students examine European societies and civilization in depth from a pan-European and regional perspective, in addition to the traditional national focus that language instruction typically provides, (3) they do so from an interdisciplinary point of view, taking courses in at least five different academic departments/programs, and (4) they take lower division courses to acquire a broad introduction to European heritage and upper division courses to study modern Europe in greater detail from the 19th century on.

**Admission**

Interested students should meet with the academic counselor to discuss the program requirements. To enter the major, students (1) must be in good academic standing (minimum 2.5 grade-point average), (2) have completed the foreign language requirements and six preparation for the major courses, (3) are expected to declare the major no later than the end of their sophomore year, and (4) should apply for the major in the academic counselor's office.

**Preparation for the Major**

The preparation for the major consists of 24 to 30 units of foreign language, 8 units of humanities and arts courses, and 16 units of social sciences courses as follows:

**Foreign Language (24 to 30 units):** Students prepare for the major by studying one modern European language other than English — the declared foreign language — through the intermediate level. Students must fulfill the specific requirements of their selected language department. The relevant language departments are French and Francophone Studies (French), Germanic Languages (Dutch, German, and Yiddish), Italian, Scandinavian Section (Danish, Finnish, Norwegian, and Swedish), Slavic Languages and Literatures (Czech, Hungarian, Lithuanian, Polish, Romanian, Russian, Serbian, Croatian, and Ukrainian), and Spanish and Portuguese.

In most cases, courses 1, 2, 3, 4, 5, 6, or the equivalent fulfill the requirement. The total number of units may vary according to the selected language. Students should complete the lower division foreign language requirement by the end of their sophomore year. If students wish to study a modern European language not taught in full by any UCLA department, they should consult with the academic counselor about how to fulfill the language requirement.

**Humanities and Arts (8 units):** (1) One course in literature or civilization taught in a language other than English, with instruction and reading assignments in that language, to be selected from Dutch 131, French 109, 114A through 120, German 132, 140A through 146, 152 through 162, Italian 103A, 103B, 103C, 113 through 120, Portuguese 120A, 120B, C124, C126 through C129, Russian 108, 130A, 130B, 130C, 140A through 140D, 150, Spanish 119A through 120A, 122 through 133, Yiddish 131A, or 131B; (2) two courses with a pan-European or regional focus from Art History 110C, M110D, Philosophy 118, Scandinavian 142, 143, C144 through C147, C180, C182, 184, CM186, 187 (one course from the list of courses in item 1 may be applied); (3) one course with either a pan-European or regional focus from item 2 or a national focus selected from Art History 110A, 110B, Dutch 113, English 115B, French 137, German 100C, 102A, 102B, Italian 110, M158, Polish 152B, Russian 120 through 128, Scandinavian 181, or Spanish 151A.

**Social Sciences (16 units):** (1) One modern European history course from History 120A through 120D, 121D, 121E, 121F, 122F, 123B, 123C, 131A, 134B, 134C, or 135C; (2) two courses with a pan-European or regional focus from Economics 181B, Geography 152, 183, Political Science 111C, 127A, 153A, 153B, 156B, Sociology M166 (one course from the list of courses in item 1 may be applied); (3) Sociology 1, 10, Statistics 10, 12; (2) two courses from one of the following series: History 1A, 1B, and 1C, or 2B, 2C, and 2D, or 3A, 3B, and 3C. Variable topics courses such as History 97C may also be applied toward the history requirement after consultation with the academic counselor.

**Transfer Students**

Transfer applicants to the European Studies major with 90 or more units should complete as many of the following introductory courses as possible prior to admission to UCLA: two years of a modern European foreign language other than English, one language department course in European literature or civilization or one course in a European country's literature or civilization, one course in a humanities and arts department with focus on Europe, two courses from two different social sciences departments that must have a distinct methodological or European content, and two European history courses. Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.
one course with either a pan-European or regional focus from item 1 or 2 or a national focus selected from History 124C, 125C, 125D, 127C, 127D, 128B, Political Science 128B, 152A, 152B, 152C, 156A.

Electives (12 units): One course from any approved humanities course list, one course from any approved social sciences course list, and European Studies 191 or 199 under the supervision of a faculty member, or a 195 internship course related to Europe.

Variable topics courses such as History 191C may be applied toward any of the above course requirements when they are relevant for the course category under which they are petitioned.

Study in Europe
The program strongly recommends that students spend at least one term studying in the European country most relevant to their work. Participation in the University of California Education Abroad Program or other study abroad programs is strongly encouraged. Students should consult with their academic advisor about how to optimize the choices of courses offered by the host university.

Double Majors
Through judicious use of electives, students may find it possible to obtain the B.A. degree with two majors (e.g., European Studies and History, European Studies and Spanish). Interested students should consult with the undergraduate academic advisors of both departments involved as early as possible in their B.A. program.

European Studies
Upper Division Courses
101. Introduction to European Studies. (4) Seminar, three hours. Designed for European Studies majors. Interdisciplinary seminar that introduces students to central topics, themes, and concepts of European studies, including the individual and the state, cultural life, economic relations, nationalism, and international relations. Letter grading.

191. Variable Topics Research Seminars: European Studies. (4) Seminar, three hours. Research seminar on selected topics in European studies. Reading, discussion, and development of culminating paper. May be repeated for credit with topic change. Letter grading.

199. Directed Research in European Studies. (4) Tutorial, to be arranged. Limited to senior European Studies majors. Supervised individual research under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. Letter grading.

Scope and Objectives
The Department of Family Medicine seeks to provide 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. 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 faculty members are active both in leadership roles in the doctoring curriculum and in the Primary Care College. All first-year students are assigned to work with a family medicine preceptor once a month on a longitudinal basis for the entire year as part of the clerkship program. In the third and fourth (clinical) years, required and elective opportunities exist. All students take a required four-week clerkship in the third year, which is offered at over 10 teaching sites.

For further details on the Department of Family Medicine, see http://fm.mednet.ucla.edu.

Family Medicine
Upper Division Course
199. Directed Research in Family Medicine. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.
Students are admitted for Fall Quarter only. Admission is highly competitive, and only a limited number of students can be accepted each year. Prior to entry, students are expected to complete at least 90 quarter units (60 semester units) with a 3.0 grade-point average or better and the general education requirements of the School of Theater, Film, and Television. Applicants are also required to submit two letters of recommendation and a portfolio of original written work consisting of (1) a personal essay, (2) a critical essay on a film or major television program, and (3) a creative writing sample. For more specific information on admission requirements, see http://www.ftt.ucla.edu/doj.cfm.

Due to curriculum changes, students in the Theater major are no longer allowed to change their major to Film and Television at the end of their sophomore year.

Preparation for the Major
Required: Film and Television 106A, 106B or 106C, 110A, and one theater course (history, literature, or production).

The Major
Required: Film and Television 100, 115, 130B, 150, 154, 155, 163, 185, 195; one cinema and media studies elective (not previously taken as preparation for the major) from 106B, 106C, 107, 108, 112, 113, 114, M117; one course from 130A or 130C; and a senior concentration (at least 20 units) from one of the following areas: (1) film production — courses 175A, 175B, 178, (2) television and video production/narrative — courses 165, 176A, 176B, 199, (3) television and video production/documentary — courses 176A, 176B, 186, 199, (4) screenwriting — courses 135A, 135B, 135C, 199, (4) animation — courses 181A, 181B, 181C, (5) cinema and media studies — courses 106A, 106B, 106C, 107, 108, 110C, 112, 113, 114, M117, 199.

Students should be mindful of the exigencies inherent in filmmaking and be prepared to meet the additional demands of time and costs. Students are required to perform assignments on each other's projects. In addition, the department reserves the right to hold for its own purposes examples of any work done in classes and to retain for distribution such examples as may be selected. Consult the Schedule of Classes for courses limited to majors only.

Film, Television, and Digital Media Minor
The Film, Television, and Digital Media minor is designed for students who wish to augment their major program of study with a series of courses that promote the study of film, television, and digital media as art forms 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 2.0 grade-point average), have completed at least two film and television courses with grades 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.


A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program. 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.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasa/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 Film, Television, and Digital Media offers Master of Arts (M.A.), Master of Fine Arts (M.F.A.), 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 M150. Lecture, five 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 video games, potentially usable in creation of moving image art forms: iconography, editing, composition, kinesthetics, sound, narrative, discourse, and performance. Letter grading.

100. Undergraduate Symposium. (1 or 2) Laboratory, three hours. Limited to Film and Television majors. Structured forum in which undergraduate majors meet on a regular basis to discuss curricular issues, meet with faculty, and have exposure to an array of guest speakers from within the film industry. May be repeated for a maximum of 8 units. Letter grading.

101. Story and Style: Theory and Practice of Filmmaking. (5) Lecture, three hours; screenings, three hours. Systematic analysis of how filmmakers use sound and image, and how 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. Letter grading.

105B. 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 the motion picture.

108. History of Documentary Film. (6) Lecture/screenings, eight hours; discussion, one hour. Development of critical standards and examination of 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 a maximum of 8 units. Letter grading.

Upper Division Courses

108. History of Documentary Film. (6) Lecture/viewing, four hours; discussion, one hour. Required: course 110A. Designed for seniors/juniors. 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.

M110. Women and Film. (6) Same as Women's Studies M111. Lecture, eight hours; discussion, one hour. Historical investigation of critical approaches to women and cinema that may include authorship, stardom, female genres, and images of women in Hollywood cinema, alternative cinema, and independent cinema from silent era to present. Letter grading.

112. Film and Social Change. (6) Lecture/screenings, eight hours; discussion, one hour. Development of documentary and dramatic films in relation to and as a force in social development. Letter grading.

113. Film Authors. (6) Lecture/screenings, eight hours; discussion, one hour. In-depth study of a specific film author (director or writer). May be repeated once for credit with consent of department and topic change.

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. Lectures and screenings of Hitchcock films in first seven weeks, with coverage of films that are closely patterned after Hitchcock's in last three weeks. P/NP or letter grading.

113B. Film Authors: Women Filmmakers. (5) Lecture, five hours; discussion, one hour. Consideration of contributions to world cinema made by women directors, with focus on women directors working in various eras and modes of production (e.g., silent cinema, independent film, 1970s films). Lectures from films of Dorothy Azner, Jane Campion, and Cheryl Dunye. P/NP or letter grading.

114. Film Genres. (5) Lecture/screenings, five hours; discussion, one hour. Study of specific film genre (e.g., Western, gangster, 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 Criticism. (4) Lecture, four hours; laboratory, to be arranged. Study of and practice in film criticism.

118. Film Composition. (4) Lecture, four hours; laboratory, to be arranged. Study and analysis of film composition.


126. Acting for Film and Television. (4) Laboratory, six hours. Projects in acting for television, film, and video. May be repeated twice for credit.

128. Media and Ethnicity. (4) Utilizing the Asian American experience, exploration of impact and uses of media on contemporary American ethnic communities. Role and techniques of media influence besides community utilization and production.

132B. Contemporary Topics in Theater, Film, and Television. (2) Lecture, two hours; screenings, two hours. Limited to juniors/senior and graduate theater/film and television students. Examination of creative process in theater, film, and television, with consideration of writing, direction, production, and performance. Overview of individual contributions in the collaborative effort; examination of distinctiveness and interrelations among these arts. Individual units include participation of leading members of theater, film, and television professions. May be repeated twice for credit. Concurrently scheduled with course CM129.

132C. Screenwriting Fundamentals. (2) Lecture, one hour. Corequisite for graduate students enrolled in course 431. Not open for credit to students with credit for course 130C. Examination of screenwriting fundamentals: structure, character and scene development, conflict, theme, how to write of authors such as Aristotle, Egri. P/NP or letter grading.

132D. Screenwriting Fundamentals Workshop. (4) Discussion; three hours. Problems in film and television writing. P/NP or letter grading.

130C. In-Depth Introduction to Fundamentals of Screenwriting. (4) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 130A. Structural analysis of feature films and development of professional writers' vocabulary for constructing, deconstructing, and reconstructing their own work. Screenings of films and selected film sequences in class and by assignment. P/NP or letter grading.

131. Nontheatrical Screenwriting for Film and Television. (4 or 8) Discussion; three hours. Research and writing of documentary, technical, educational, industrial, and propaganda scripts. May be repeated a maximum of 12 units.

135A-135B-135C. Advanced Screenwriting Workshops. (8-8-8) Laboratory, three hours. Requisite: course 130B. Course 135A is requisite to 135B, which is requisite to 135C. Courses in film and television writing. First act of original screenplay to be developed in course 135A, followed by second act in course 135B, and third act in course 135C. Letter grading.

13117. Chicano 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 dramas, Westerns, and gang films — that are major genres that account for films about or with Mexican Americans produced between 1908 and 1980. Emphasis on Chicano-produced films that subvert or signify on these Hollywood genres, including Zoot Suit, Ballad of Gregorio Cortez, and Born in East L.A. Consideration of shorter, more experimental work that critiques Hollywood image of Chicanos. Guest speakers include both pioneer and up-and-coming filmmakers. P/NP or letter grading.


126. Acting for Film and Television. (4) Laboratory, six hours. Projects in acting for television, film, and video. May be repeated twice for credit.

128. Media and Ethnicity. (4) Utilizing the Asian American experience, exploration of impact and uses of media on contemporary American ethnic communities. Role and techniques of media influence besides community utilization and production.

CM125. Contemporary Topics in Theater, Film, and Television. (2) Lecture, two hours; screenings, two hours. Limited to juniors/senior and graduate theater/film and television students. Examination of creative process in theater, film, and television, with consideration of writing, direction, production, and performance. Overview of individual contributions in the collaborative effort; examination of distinctiveness and interrelations among these arts. Individual units include participation of leading members of theater, film, and television professions. May be repeated twice for credit. Concurrently scheduled with course CM129.

130A. Screenwriting Fundamentals. (2) Lecture, one hour. Corequisite for graduate students enrolled in course 431. Not open for credit to students with credit for course 130C. Examination of screenwriting fundamentals: structure, character and scene development, conflict, theme, how to write of authors such as Aristotle, Egri. P/NP or letter grading.

130B. Screenwriting Fundamentals Workshop. (4) Discussion; three hours. Problems in film and television writing. P/NP or letter grading.

130C. In-Depth Introduction to Fundamentals of Screenwriting. (4) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 130A. Structural analysis of feature films and development of professional writers’ vocabulary for constructing, deconstructing, and reconstructing their own work. Screenings of films and selected film sequences in class and by assignment. P/NP or letter grading.

131. Nontheatrical Screenwriting for Film and Television. (4 or 8) Discussion; three hours. Research and writing of documentary, technical, educational, industrial, and propaganda scripts. May be repeated a maximum of 12 units.

135A-135B-135C. Advanced Screenwriting Workshops. (8-8-8) Laboratory, three hours. Requisite: course 130B. Course 135A is requisite to 135B, which is requisite to 135C. Courses in film and television writing. First act of original screenplay to be developed in course 135A, followed by second act in course 135B, and third act in course 135C. Letter grading.
140. Interactive Expression. (4) Lecture, six hours. Introduction to history and practice of interactive media, with emphasis on uniqueness of computer-mediated expression. Letter grading.

C142. Digital Imagery and Visualization. (4) Lecture, three hours; laboratory, three hours. Introductory hands-on investigation of techniques of digital still imagery and video imagery, in a context of examining dynamics of cultural constructions and visual codes. Students conceive and produce several digital image visualizations. Concurrently scheduled with course C242. Letter grading.

C143. Moving Digital Image. (4) Lecture, three hours; laboratory, three hours. Investigation of different ways of creating and manipulating live moving images (digital video) on desktop computers, exploring both creative and technical aspects of this production environment. Students conceive and produce a number of short projects. Concurrently scheduled with course C243. Letter grading.

C144. Interactive Multimedia Authoring. (4) Lecture, three hours; laboratory, three hours. Introduction to expressive and aesthetic potential of interactive digital media and its theoretical issues. Exploration of methodologies and tools for media integration, interface for personal/collective expression. Students produce and present on the web examples of this work. Letter grading.


C148. Advanced Digital Media Workshop. (4) Discussion, four hours; laboratory, two hours. Designed for students with previous laboratory course experience, course provides opportunity to create larger-scale digital media with advanced software tools and techniques in small process-oriented, creative workspace environment. May be repeated once for credit. Concurrently scheduled with course C248. Letter grading.

C149A-C149B. Music in Film: Another Way to Tell Stories. (4-4) 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 temping, creating and developing of new scores, studio visits, and creative/conceptual dialogue between musician and filmmaker. Preparation of film ready for temping by end of film. "Temp" deadline varied at beginning of second quarter. Concurrently scheduled with courses C445A-C445B. Letter grading.

150. Cinematography. (4) Lecture, three hours; laboratory, three hours. Limit to Film and Television majors. Introduction to image control in motion picture film and television production, with emphasis on role of the cinematographer. Letter grading.

151. Introduction to Experimental Filmmaking. (4) Lecture, three hours; laboratory, to be arranged. Limit to Film and Television majors. Techniques of image manipulation, design, and art direction. Production and completion of an exercise (no longer than three minutes), using 16mm or super-16mm sync film. May be repeated twice for credit. Letter grading.

152. Film and Television Sound Recording. (4) Lecture, three hours; laboratory, to be arranged. Limit to Film and Television majors. Introduction to principles and practices of film and television sound recording, including supervised exercises. Letter grading.


153. Motion Picture Lighting. (4) Lecture, three hours; laboratory, three hours. Requisite: course 150. Limited to Film and Television majors. Introduction to principles and tools of lighting used in visual storytelling through lectures, discussions, and screenings. Creative lighting techniques covering topics such as people, environment, spatial relationships, movement, color, special effects, and continuity.

154. Film Editing. (4) Lecture, three hours; laboratory, to be arranged. Limit to Film and Television majors. Introduction to artistic and technical problems of film editing. Emphasis on personal/collective experience in editing of image and synchronous sound.

C154B. Advanced Film Editing. (4) Lecture, three hours; laboratory, one hour. Preparation: submission of rough cut of student project or proposal to edit work of another director. Requisite: course 154. Limited to film and television majors in postproduction phase with advanced knowledge of organization and operation of postproduction process. Students may also propose to edit significant scene given to them by instructor. Concurrently scheduled with course C445B. Letter grading.

155. Introduction to Digital Media and Tools. (4) Lecture, six hours; laboratory, to be arranged. Limited to Film and Television majors. Instruction and exercises in basic concepts and software of virtual production environments and digital postproduction tools. Letter grading.

163. Directing the Camera. (4) Workshop, eight hours. Limited to Film and Television majors. Investigation of expressive potential of the image within and beyond the narrative from a directorial perspective. Experiments with working methodologies which stimulate visual creativity and positioning the image as the fundamental element of cinematic expression.

164. Directing the Actor. (4) Exercises in analysis of script content, and interaction with actors. Emphasis on eliciting best possible performance from the actor. May be repeated twice for credit.

165. Advanced Narrative Television Directing. (4) Laboratory, six hours. Requisites: courses 130B, 165. Limited to Film and Television majors. Supervised exercises in television multi-camera direction, with emphasis on creative use of cameras, sound, composition, and communication with those in front of and behind the camera. May be repeated twice for credit.

168. Creative Location Film Production. (8) Lecture, four hours; discussion, four hours; laboratory, to be arranged. Limited to directing or producer's program students. Problems of location, production, direction, and cinematography in various "real-locations," practical applications of solving problems and communication within limitations of production experience. Concurrently scheduled with course C448. Letter grading.

C170A. Introduction to Digital Effects. (4) Lecture, three hours; laboratory, to be arranged. Introductory study of digital effects production, with specific focus on motion graphics and compositing, effects processing and title sequences. Concurrently scheduled with course C470A. Letter grading.

175A-175B. Undergraduate Film Production. (8-4 to 8) Limited to Film and Television majors. 175A. Lecture, four hours; laboratory, eight hours. Writing, preproduction, and shooting. Limited to Film and Television majors. Includes 16mm sound sync film. 175B. Lecture, three hours; laboratory, eight hours. Completion of postproduction (editing, creation of non-sync sound tracks) for short film begun in course 175A.

176A-176B. Advanced Undergraduate Video Production (8-4 to 8). Discussion, three hours; laboratory, to be arranged. Requisite: course 155. Limited to Film and Television majors. Completion of a video project (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 a maximum of 12 units, but only 8 units may be applied toward Film and Television major.


181B. Writing for Animation. (4 to 8) Lecture, six hours; laboratory, to be arranged. Requisite: course 181A. Research and practice in creative writing and planning for animated film. May be repeated for a maximum of 16 units.

181C. Animation Workshop. (4 or 8) Lecture, six hours; laboratory, to be arranged. Preparation: storyboard at first class meeting. Requisite: course 181A. Organization and integration of various creative arts used in animation to form a complete study of a select-ed topic. May be repeated for a maximum of 16 units.

184. Overview of Contemporary Film and Television Industries. (4) Lecture, three hours. Examination of evolving economic structures and business practices in contemporary Hollywood film and television industries, with emphasis on operations of studios and networks, their marketing and distribution systems, and their relationship to independent production. 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.

186. Introduction to Documentary Video Production. (4) Lecture, three hours; laboratory, three hours; fieldwork, 12 hours. Limited to Film and Television majors. Viewing and discussion of selected documentaries and interviews in various aspects of film and television production. Letter grading.

187A-187B-187C. Producing and Directing Remote Multicamera Production. (4-6) Lecture/laboratory, three hours (additional hours to be arranged). Letter grading. 187A. Lecture/ laboratory/ fieldwork workshop course designed to provide disciplined planning, responsible leadership, and organizational and problem-solving skills required in developing remote production. Emphasizes clarity of vision, story telling, effective execution of pitch, preproduction, shoot, and editorial. 187B-187C. Instruction and supervised productions of the remote experience, with focus on development of production concept. Experience closely patterned after professional experiences in working with talent, production venues, and production logistics of remote on-location video programs.
Graduate Courses

200. Seminar: Film and Television and Consumption. (6) Seminar, three hours; film screenings, three hours. Theory and method in study of media industries, with focus on cultures of production (production world as cultural form). Investigation of ways production practice itself is sociological, institutional, cultural, and critical practice. Letter grading.

201. Seminar: Media Industries and Cultures of Production. (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 issues of cultural taste, consumerism, style/lifestyle, identity, and relationships between audience, industry, and mass-marketed images/medialities. Letter grading.

203. Seminar: Film and Other Arts. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Studies in interrelationships between film and fine arts, or performing arts, or literature, with emphasis on ways these other arts have influenced film. May be repeated twice for credit.

204. Seminar: Visual Analysis. (6) Seminar, three hours; film screenings, two to four hours. Study of visual analysis (or textual analysis), using DVD accessing features, as approach to learning what makes films great and distinct art form. Exploration of role of visual style in narrative fiction filmmaking to attempt to understand some ways it can operate. Letter grading.

205. Seminar: DVD for Film History and Analysis. (6) Seminar, three hours; laboratory, three hours. Preparation of individual original research projects in film and/or television history and analysis designed to be presented as DVD visual essays. Projects may be extensions of work intended for print publication or dissertation writing, or for pedagogical uses. Equal emphasis on research and creative development, and on comparing publication in DVD format versus print publication. Letter grading.

206A. Seminar: European Film History. (6) Seminar, three hours; film screenings, four to six hours. Required: course 106B. Designed for graduate students. Studies in selected historical movements such as expressionism, socialist realism, surrealism, neorealism, New Wave, etc. May be repeated twice for credit.

206B. Seminar: Selected Topics in American Film History. (6) Seminar, three hours; film screenings, three hours. Seminar with focus on specific topic or period in American film history. Letter grading.

206C. Seminar: American Film History. (6) Seminar, three hours; film screenings, four hours. Introduction to film as a great and distinct art history of the 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 1929. Historical, aesthetic, and filmic analysis of films. Literature and history surveys. Letter grading.

207. Seminar: Experimental Film. (6) Seminar, three hours; film screenings, two to four hours. Designed for graduate students. Studies in form, style, politics, and history of experimental, innovative, avant-garde, and minority film and video.
208A. Seminar: Film Structure. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Examination of various film conventions, both fictional and nonfictional, and of role of structure in motion picture. S/U or letter grading.

208B. Seminar: Classical Film Theory. (6) Seminar, three hours; film screenings, four hours. Study of principal theories that characterize theoretical writings of Arnheim, Eisenstein, Bazin, Kracauer, etc. Letter grading.

208C. Seminar: Contemporary Film Theory. (6) Seminar, three hours; film screenings, four to six hours. Required for graduate students. Designed for graduate students. Study of redefinition of aims and methods of film theory through contemporary writings. S/U or letter grading.

209A. Seminar: Documentary Film. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Nonfictional film and its relation to contemporary culture.

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.

209D. Seminar: Animated Film. (4) Seminar, three hours; laboratory, three hours. Designed for graduate students. Critical study of animation film, its historical development, structure, style, use, and relation to contemporary culture.

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.


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 by key works in this tradition, with attention to central issues of historical thought on the media.

215. Seminar: Theory and Method. (6) Seminar, three hours. Limited to Film and Television Ph.D. candidates. Examination of major modes of theoretical reflection on film and television through study of central texts of such traditions as phenomenology, auterism, semiotics, 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 the other(s).” The maturation of the other is concerned with theories of “difference” rather than similarity or identity — with how cultural politics of representation and representation of politics through metaphors of (1) difference without opposition, (2) heterogeneity without hierarchy, and/or (3) otherness without ethno-centricism. Examines role of women, national minorities, and Third World peoples who have been rendered others; place of cinematic apparatus in this process and how academization of others is positioned vis-à-vis mainstream critical discourse. Letter grading.

219. Seminar: Film and Society. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Study of ways film interacts 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.

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 the 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.

222. Seminar: Film Genres. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Study of aesthetic and ideological, psychological, and phenomenological approaches to vision as they relate to ways in which viewers experience and “see” film, television, and digital media. Letter grading.

223. Seminar: Visual Perception. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Aesthetic, psychological, and phenomenological approaches to visual perception and representation as they relate to the ways in which viewers experience and “see” film, television, and digital media. Letter grading.

224. Computer Applications for Film Study. (6) Lecture, three hours; film screenings, three hours. Survey of computer applications relevant to film study, principally computer-videographic systems and image capture technology. S/U or letter grading.

225. Seminar: Videogame Theory. (6) Seminar, three hours; laboratory, three hours. Videogame theory, with exploration of nature of medium, rather than looking at history, industrial practice, social effects, or any other of many interesting questions that games also raise. Acknowledgment of roots in film, television, and media studies and investigation of emerging videogame field. S/U or letter grading.

CM229. Contemporary Topics in Theater, Film, and Television. (2) (Same as Theater CM229.) Lecture, two hours; screenings, two hours. Limited to juniors/senior and graduate theater/film and television students. Examination of creative process in theater, film, and television, with consideration of writing, direction, production, and performance. Overview of individual contributions in the collaborative effort; examination of distinctive aspects of the medium and certain of these arts. Individual units include participation of leading members of theater, film, and television professions. May be repeated twice for credit. Concurrency required.


C243. Moving Digital Image. (4) Lecture, three hours; laboratory, three hours. Investigation of different ways of creating and manipulating linear moving images (digital video) on desktop computers, exploring both creative and theoretical aspects of this production environment. Students conceive and produce a number of short projects. Concurrently scheduled with course C143. Letter grading.

C244. 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, interaction, and interactivity, and visual construction. Students conceive, produce, and master individual interactive multimedia projects. May be repeated once for credit. Concurrently scheduled with course C144. Letter grading.


246. Seminar: Issues in Electronic Culture. (6) Seminar, three hours; laboratory, three hours. Critical studies seminar with major hands-on laboratory component that explores impact of new digital technologies on contemporary culture and aesthetics. Students do laboratory projects using visualization, image manipulation tools, and Internet authoring tools. Letter grading.


C248. Advanced Digital Media Workshop Group. (4) Discussion, four hours; laboratory, two hours. Designed for students with previous laboratory course experience. Concourse provides opportunity to create larger-scale digital media works with advanced software tools and techniques in small process-oriented, creative workshop environment. May be repeated once for credit. Concurrently scheduled with course C148. Letter grading.

249. Digital Revolution. (4) Lecture, four hours; discussion, one hour; laboratory, one hour. Comprehensive survey to introduce students to emerging digital technologies, resulting new media, and their artistic, economic, and social implications. Topics include digital editing, digital previsualization, multimedia, World Wide Web, interactive television, and virtual reality.

270. Seminar: Film Criticism. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Study of key aesthetic questions of analysis and evaluation in relation to central works of motion picture criticism. May be repeated once for credit.

271. Seminar: Television Criticism. (6) Seminar, four hours; screenings/discussion, three hours. Designed for graduate students. Analysis of major forms of television production and criticism it has elicited. May be repeated once for credit. S/U or letter grading.

272. Seminar: Contemporary Film and Television Criticism. (6) Seminar, three hours; film and television screenings, four to six hours. Limited to Film and Television Ph.D. candidates. Study and practice of analysis and criticism in critical television. Concurrently scheduled with course C149. Letter grading.


275. Seminar: Non-Western Films. (4) Seminar, three hours (additional hours as required). Designed for graduate students. Study of aesthetic and ideological impulses of selected films from Asia, Africa, and Latin America.

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 the 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 talent 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. Builds on principles taught in course 287A and presents continuation of study of development, production, and distribution of feature films for worldwide theatrical market, including including identifying material, attracting talent elements, and understanding basics of studio and independent financing and distribution. Minimum of two unproduced screenplays to be presented for review by class and instructor to begin identifying potential thesis projects. S/U or letter grading.

287C. Introduction to Art and Business of Producing III. (4) Seminar, three hours. Requisites: courses 287A, 287B. Builds on principles taught in courses 287A and 287B and presents continuation of study of development, production, and distribution of feature films for worldwide theatrical market, including identifying material, attracting talent elements, and understanding basics of studio and independent financing and distribution. Minimum of three screenplays to be presented for review by class and instructor to begin identifying potential thesis projects. S/U or letter grading.

288A-288B-288C. Feature Film Development I, II, III. (4-4-4) Lecture, three hours. Requisites: courses 287A and 287B. Builds on principles taught in courses 287A and 287B and presents continuation of study of development, production, and distribution of feature films for worldwide theatrical market, including identifying material, attracting talent elements, and understanding basics of studio and independent financing and distribution. Minimum of two unproduced screenplays to be presented for review by class and instructor to begin identifying potential thesis projects. S/U or letter grading.

289A. Overview of Network Television Management. (4) Lecture, three hours. Designed to help producers, as well as screenwriters and directors, focus on networking opportunities and to develop strategies to bring their features and television projects to marketplace. Cases study documents (drafts of screenplays, dailies, etc.) from current or recently produced projects provided. S/U or letter grading.

290C. Contracts and Negotiation. (4) Lecture, three hours. Survey of range of contracts involved in studio projects, including development and production 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.

291B. Feature Film Marketing. (4) Lecture, three hours. Course 291A is not required to 291B. Examination of different forms of representation offered by television, marketing, business affairs, media, and the impact of international market on distribution and exhibition of studio releases. S/U or letter grading.

291C. Feature Film Distribution and Exhibition. (4) Lecture, three hours. Course 291B is not required to 291C. Investigation of philosophy and structure, and major players that make up entertainment industry, with emphasis on film distribution and exhibition. Through lectures, readings, and guest speakers, exploration of interrelated arenas of production, marketing, business affairs, media, and impact of international market on distribution and exhibition of studio releases. S/U or letter grading.

292A. Running Shows: Producing for Broadcast and Cable. (4) Lecture, three hours. Course 292B is not required to 292C. Exploration of role of writers-producers or showrunners in creating television shows. Designed to train writers who typically enter field as staff writers and to develop concrete tools of producers. Training of next generation of nonwriting network and studio development executives. Lectures on writing, screening, and series development. S/U or letter grading.

292B. Nonwriting Producer, Network Executive, Studio Executive, or Agent? (4) Lecture, three hours. Course 292A is not required to 292B. In-depth look at role that key individuals play in getting television shows on air. Discussion of readings, lectures, and distinguished guests from each area of television industry: networks, studios, agencies, and production companies. S/U or letter grading.

292C. Seminar: Film and Television Curatorship. (4) Seminar, three hours. Directed to graduate students. Study and practice of issues in archival research and administration.

293. Seminar: Film and Television Curatorship. (4) Seminar, three hours. Designed for graduate students. Study and practice of issues in archival research and administration.

294A. Contracts and Negotiation. (4) Lecture, three hours. Survey of range of contracts involved in studio projects, including development and production 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 structure, economics, 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, guilds, distribution and financing, ancillary rights, and music rights. Advanced negotiation strategy exercises. S/U or letter grading.

294C. International Financing and Distribution. (4) Lecture, three hours. Course 294B is not requisite to 294C. Legal-based course dealing with independent finance and distribution of feature films. Topics include fundamentals of film financing, domestic distribution, international distribution and coproductions, role of foreign sales agents and of bankers and completion bond companies. S/U or letter grading.

295A. Art of Presentation. (4) Lecture, three hours. Cultivation of skills needed for students to present themselves and their project goals with clarity and precision to industry professionals. Oral presentations designed to enhance student ability to deliver convincing arguments on range of topics. S/U or letter grading.

295B. Advanced Film and Television Producing Workshop for Producers, Writers, and Directors. (4) Lecture, three hours. Course 295A is not requisite to 295B. Designed to help producers, as well as screenwriters and directors, focus on networking opportunities and to develop strategies to bring their features and television projects to marketplace. Case study documents (drafts of screenplays, dailies, etc.) from current or recently produced projects provided. S/U or letter grading.

295C. Advanced Producing: Role of Successful Producer. (4) Lecture, three hours. Designed to provide producers with comprehensive understanding of business acumen involved in purchasing scripts for studios and independent production companies. Through script analysis and in-class discussions, students encouraged to extract key elements of story elements, but marketing assets inherent in pieces of material. S/U or letter grading.

296A. Role of Talent Agencies. (4) Lecture, three hours. Introductory overview of various departments at agencies, including motion picture, television, new means of building finance capital for emerging independent filmmakers. Through lectures, readings, and guest speakers, exploration of interrelated arenas of production, marketing, distribution, and television, and examination of various interactions among each. Exercises encourage producers, writers, and directors to learn how to work effectively with individuals at talent agencies. S/U or letter grading.

296B. Who Represents Me? (4) Lecture, three hours. Course 296A is not requisite to 296B. In-depth analysis of different forms of representation offered by agents, managers, business managers, and lawyers and detail of legal rights and responsibilities of each. Exercises require students to represent rights holders in series of potential projects. S/U or letter grading.

297A-297B-297C. New Media Marketing I, II, III. (4-4-4) Seminar, three hours. Course 297A is requisite to 297B, which is requisite to 297C. Overview of changing world of storytelling through development of new technologies and technologies. Development of short teaser/trailer or website using digital resources (digital cameras, editing, and new media effects) to promote student feature or television thesis project. S/U or letter grading.

298A-298B. Special Studies in Film and Television. (2 to 4 each) Lecture/discussion. Designed for graduate students. Seminar study of problems in film and television, organized on topic basis. May be repeated once for credit.
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. SU/S/U grading.

400. Film Analysis for Filmmakers. (4) Lecture, two hours; laboratory, six hours. Limited to graduate film and television students. Conception and design of nonnarrative film imagery. One-minute experiments in the relation of meaning to technique, including manipulation of optics, photochemistry, elements of electronic processes, and display of time and motion. May be repeated once for credit.

401. Film Analysis for Filmmakers. (4) Lecture/ discussion/supervised exercises on a stage or in an exterior, screenings of scenes, and discussions aimed at learning to master the lighting to create an appropriate mood or atmosphere of a premastered scene recorded on a film or through an electronic system. May be repeated twice for credit. Letter grading.

402A-402B. Advanced Narrative Directing Workshops. (4 or 8-8) Limited to nine graduate and film and television students. Production of a 10- to 15-minute fiction film or project. Letter grading. 402A. Laboratory, six or 12 hours; fieldwork, to be arranged. Requisites: courses 404A, 405A, 410A, 410C. 433. Students budget and preproduce their projects by end of first term. 402B. Laboratory, 12 hours; fieldwork, to be arranged. Requisite: course 402A. In second term students must complete photography on location and/or in studio.


403A-403B-403C. Advanced Documentary Workshops. (4 to 8 each) Lecture/discussion/laboratory, 16 to 24 hours; fieldwork, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C. Limited to graduate film and television students. Production of advanced individual documentary film or video projects. Students conceptualize, research, write, shoot (on location), and edit projects to completion. May be repeated once for credit.

404A-404B. Advanced Abstract/Experimental Media Workshops, (8-8) Lecture/discussion/laboratory, 12 hours; fieldwork, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C. Limited to 10 students per section. Production of a 20-minute abstract or experimental film, video, or multimedia project. Students plan, design, and shoot their projects in first term and work as crew for each other in rotating assignments. In second term students must complete postproduction of their projects.

404C. Advanced Abstract/Experimental Media Workshop. (8) Lecture/discussion/laboratory, 12 hours; fieldwork, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C. Limited to graduate film and television students. Production of advanced individual documentary film or video projects. Students conceptualize, research, write, shoot (on location), and edit projects to completion. May be repeated once for credit.

405. Television Production Workshop. (8) Laboratory, eight hours; other, to be arranged. Limited to graduate film and television students. Basics of television production and direction, focusing on studio multiple camera shooting with remote camera. Use of various formats of video production, including scripted and nonscripted projects, culminating in a narrative three-camera project.

406. Experimental Video Workshop. (4) Laboratory, six hours; other, to be arranged. Limited to graduate film and television students. Introduction to independent and experimental video with examination of impact of new video technologies in television, covering concepts of television, digital video, high-definition TV, and film and tape postproduction.

407. Video Documentary Workshop. (8) Laboratory, 12 hours. Limited to graduate film and television students. Examination of shooting, editing, and postproduction of a variety of international works and producing a short documentary project using single-camera field production techniques.

408A-408B. Video Editing. (4-4) Discussion, four hours; laboratory, to be arranged. Limited to graduate film and television students. Individual instruction in electronic editing. 408A. Online Editing; 408B. Offline Editing.

409. Directing the Actor for the Camera. Workshop. (4) Workshop, six hours; laboratory, to be arranged; laboratory preparation, two to four hours. Limited to M.F.A. production program students. Team taught with five weeks designed to give the director/actor/camera techniques, and five weeks to offer basic strategies to elicit good performances from actors. Emphasis on problems faced when directing actors for film.

410A. Symposium. (2) 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 discussions of first-year technical craft courses. Exploration of strategies for learning production within academic environment. May be repeated for credit. Letter grading.

410B. Cinematography Workshop. (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 (camera, cranking of medium) as each student writes/directs/edits six-minute film. May be repeated for credit. Letter grading.

410C. Postproduction. (2) 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 practicality of medium) as each student writes/directs/edits six-minute film. May be repeated for credit. Letter grading.

410D. Postproduction Sound. (2) Formerly numbered 298A.) Seminar, three hours. Requisites: courses 405, 409. Limited to and required of first-year M.F.A. production program students. Technical and aesthetic aspects of postproduction sound recording, editing, and re-recording for film and television. Application of principles of sound design to student films while using UCLA’s John Candy Room and Scoring Stage for Automatic Dialogue Replacement (ADR), Foley, and mixing. Use of Pro Tools LE for recording, editing, and mixing, selection and use of microphones and mixing consoles, and incorporation of Final Cut Pro soundtracks into mix environment. Students record ADR and Foley and present mix of edited dialogue/ADR, Foley, sfx, and music tracks by end of term. Letter grading.

410E. Production. (12) Lecture, three hours; fieldwork, 24 to 40 hours. Requisites: courses 401, 409, 410A through 410D. Limited to and required of first-year M.F.A. production/directing students. Designed to give hands-on experience in film production. Students prepare and direct six-minute films and serve in specialized crew positions for each other. Letter grading.

411. Survey of Multimedia Production. (4) Lecture, three hours; laboratory, three hours. Introduction to various methods of digital production, with focus on photo manipulation, desktop nonlinear postproduction, and distribution on World Wide Web. Letter grading.


423A. Direction of Actors for Film and Television. (4) Lecture, four hours; workshop. Preparation: first film project. Limited to graduate film and television students. Required of all production majors shooting a fiction thesis. Exercises in analysis of script and character for purpose of directing actors in film and television productions. Emphasis on eliciting best possible performance from the actor. May be repeated twice for credit.

423B. Advanced Direction of Actors for Film and Television. (4) Studio workshop, six hours. Requisite: course 423A. Limited to graduate film and television students. Advanced study and practice of directing actors before a camera. Emphasis on developing techniques to immediately enhance communication between director and actor on the set in order to maintain continuity from shot to shot.


433. Writing the Short Screenplay. (4) Lecture, three hours. Limited to and required of first-year M.F.A. production program students. Conceptualization, development, and writing of a six-minute dramatic film script to be produced in courses 410A, 410B, 410C. 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. Conceptualization, development, and writing of dramatic film script to be produced as an advanced or thesis project. Letter grading.

437. Nontheatrical Writing for Film and Television. (4) Discussion, three hours. Limited to graduate film and television students. Advanced problems in the field of documentary and special feature projects, with emphasis on research and preproduction. May be repeated for a maximum of 16 units.

451. Advanced Design for Film and Television. (4) Lecture, to be arranged. Limited to graduate film and television students. Advanced study and practice of techniques and methods of design for motion pictures. Art direction for advanced workshop productions. May be repeated for a maximum of 12 units.
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.

452B. Music Recording Workshop. (4) Lecture, four hours; laboratory, eight hours. Supervised exercises in studio recording techniques, with emphasis on special requirements for motion pictures and television.

C452C. Digital Audio Postproduction. (4) Formerly numbered 452C. Lecture, three hours; laboratory, three hours. Limited to film and television majors. Through discussion, demonstrations, and laboratory assignments, exploration of digital audio tools and procedures available to today's filmmakers. Coverage of many technical, equipment, and software step-by-step exercises, with emphasis on creative process. Concurrently scheduled with course C152C. Letter grading.

453. Postproduction Sound Design. (2 to 4) Formerly numbered 298A. Lecture, three hours. Designed to give film and television students an insight into 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. The student sound designer is taught to enhance storytelling capabilities of film, evaluate music choices, pick composer, music edit, create sound design to enhance story points, discover design opportunities, and select the 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 postproduction sound choices that demonstrate effective use of sound design. S/U or letter grading.

454A. Advanced Film Editing. (4) Lecture, three hours; laboratory, one hour. Limited to film and television thesis and advanced project students in postproduction phase of thesis or advanced project. Organization and operation of postproduction processing.

454B. Advanced Film Editing. (4) Lecture, three hours; laboratory, one hour. Preparation: submission of rough cut of existing project or proposal to edit work of another director. Requisite: course 154. Limited to film and television students in postproduction phase with advanced knowledge of organization and operation of postproduction process. Students may also propose to edit significant scene given to them by instructor. Concurrently scheduled with course C154B. Letter grading.

454C. Advanced Film Editing: Postproduction Pathways. (2 to 4) Lecture, three hours; laboratory, two hours. Limited to departmental majors. Through discussions, demonstrations, outside speakers, and laboratory assignments, demystification of ever-changing world of postproduction. Students plan, schedule, and budget their postproduction workshop in preparation. May be repeated once for credit. Letter grading.

C455A-C455B. Music in Film: Another Way to Tell Stories. (4-4) Lecture, three hours. Course C455A is requisite to C455B. Exploration of concepts and issues that drive creation and use of music in film. 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 temping, creation and development of new scores, studio visits, and creation and discussion between musicians and filmmaker. Preparation of film ready for temping by end of first quarter and ready for scoring at beginning of second quarter. 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 differences and many similarities in directorial approach to same literary material in theater, film, and television.

464A-464B. Advanced Film Directing. (8-8) Hours to be arranged. Limited to graduate film and television students. Special problems in direction of fictional and documentary films.

465. Narrative Television Production. (8) Laboratory, eight hours. Supervised exercises in television multicamera direction, with emphasis on creative use of composition and sound, and communication with those in front of and behind the camera. Letter grading.

464A-466B. Advanced Professional Video Workshops. (8-8) Lecture, three hours; laboratory, to be arranged. Requisites: courses 405, 410A, 410B, 410C, 425A. Limited to graduate film and television students. Hands-on problems in working with various interrelated disciplines in a professional production experience, including interaction with students of design and acting from Department of Theater.

C468. Creative Location Film Production. (8) Lecture, four hours; discussion, four hours; laboratory, to be arranged. Limited to directing or producer's program students. Problems of location, production, directing, and cinematography in various "real-life" practical locations. Practical application of solving problems and communication within limitations of production experience. Concurrently scheduled with course C166B. Letter grading.

C470A. Introduction to Digital Effects. (4) Lecture, three hours; laboratory, to be arranged. Introductory study of digital effects production, with specific focus on the practice of 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 opportuni ties to explore one very specific kind of filmmaking. Through exploration of advertising, students gain knowledge about what kind of work is salable in American and 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 basic techniques of film production, including preproduction planning and production of a group short film. Lecture, six hours; laboratory, one hour.

476. Video I. (8) Discussion, three hours; laboratory, to be arranged. Designed for graduate students. Study of basic techniques of video production, including conceptualization, directing, effects processing, and title sequences. Lecture, six hours; laboratory, three hours.

480. Timing for Animation. (4) Lecture, three hours; laboratory, three hours. Process of animation timing through lectures and assignments. Letter grading.

482A-482B. Advanced Animation Workshops. (4 or 8 each) Lecture, three hours; laboratory, to be arranged. Requisites: courses 181A, 181B, 181C. Advanced organization and integration of various creative arts used in animation, resulting in production of a complete animated film. May be repeated for a maximum of 16 units.

483A-483B-483C. Advanced Computer Animation. (4 to 8 each) Lecture, six hours; laboratory, four to eight hours. Requisite: course 483A. Creation and production of complete and original advanced computer animated film. Requisites: courses 181A, 181B, 181C. Advanced organization and integration of various creative arts used in animation, resulting in production of a complete animated film. May be repeated for a maximum of 16 units.

485. Legal Issues in Animation. (4) Lecture, three hours; laboratory, three hours. Examination of legal issues in animation, including copyright, contracts, intellectual issues in animation, competing rights, employer/employee relationships, and representation in animation. S/U or letter grading.

487. Directed Individual Study: Postproduction Laboratory. (4) Laboratory, eight hours. Limited to M.F.A. production program students. Completion of projects in final stages of postproduction. May not be repeated.

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 a selective interactive animation project. May be repeated for a maximum of 16 units. 489A. Computer Animation in Film and Video. (4 to 8) Lecture, six hours; laboratory, four to eight hours; other, to be arranged. Preparation: completed animated film. Requisites: courses 181A, 181C. Instruction in and supervised production of computer animation. May be repeated for a 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 a complete and original computer animation film or tape. May be repeated for a maximum of 16 units.

495A. Practice of Teaching Film and Television. (2) Seminar, three hours. Required of all teaching assistants and associates in critical studies program. Orientation and preparation of graduate students who have responsibility to assist in teaching undergraduate courses in department; discussion of problems common to teaching experience. Should be taken term before student plans to advance to candidacy. Letter 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. 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 for a maximum of 16 units.

498. Professional Internship in Film and Television. (4, 8, or 12) Full-time or part-time at a studio or on a professional project. Designed for M.F.A. program advanced students. Internship at various film, television, or theater facilities accredits creative contribution, organization, and work of professionals in their various specialties. Given only when projects can be scheduled.
501. Cooperative Program. (2 to 8) Preparation: consent of graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596A. Directed Individual Studies: Research. (2 to 12) Hours to be arranged. Limited to graduate students. May be repeated with consent of instructor.

596B. Directed Individual Studies: Writing. (2 to 12) Hours to be arranged. Limited to graduate students. May be repeated with consent of instructor.

596C. Directed Individual Studies: Directing. (2 to 12) Hours to be arranged. Limited to graduate students. May be repeated with consent of instructor.

596D. Directed Individual Studies: Design. (2 to 12) Hours to be arranged. Limited to graduate students. May be repeated with consent of instructor.

596E. Directed Individual Studies: Acting. (2 to 12) Hours to be arranged. Limited to graduate students. May be repeated with consent of instructor.

596F. Directed Individual Studies: Production. (2 to 12) Hours to be arranged. Limited to graduate students. May be repeated with consent of instructor. Preparation: advancement to Ph.D. candidacy. Research and writing for May be taken for a maximum of 12 units. S/U grading.

597. Preparation for Ph.D. Qualifying Examinations in Film and Television. (2 to 12) Hours to be arranged. May be taken for a maximum of 12 units. S/U grading.


---

**FOREIGN LITERATURE IN TRANSLATION**

**Scope and Objectives**

The following courses offered in the departments of language and literature do not require reading knowledge of any foreign language.

**Foreign Literature in Translation**

**Course List**

**Afrikanis (Germanic Languages)**

40. From Oppressed to Oppressor and Beyond: Literature in Afrikanis from Preapartheid to Postapartheid Era in English Translation

**Ancient Near East (Near Eastern Languages)**

150A-150B. Survey of Ancient Near Eastern Literatures in English

**Arabic (Near Eastern Languages)**

150. Classical Arabic Literature in English

151. Modern Arabic Literature in English

**Armenian (Near Eastern Languages)**

150A-150B. Survey of Armenian Literature in English C152. Modern Armenian Drama as Vehicle for Social Critique C153. Art, Politics, and Nationalism in Modern Armenian Literature

**Asian (Asian Languages)**

151. Buddhist Literature in Translation

**Bulgarian (Slavic Languages)**

154. Survey of Bulgarian Literature

**Chinese (Asian Languages)**

C150A. Lyrical Traditions
150B. Traditional Narrative and Drama
151. Chinese Literature in Translation: Modern 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. Ancient Tragedy
143B. Ancient Comedy
144. Topical Studies in Ancient Culture
150A. Female in Greek Literature and Culture
150B. Female in Roman Literature and Culture
152. 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)**

113. Modern Dutch and Flemish Literature in Translation

**English**

108A-108B. English Bible as Literature
108C. English Bible as Literature: Special Topics
111A. Oral Tradition
111D. Celtic Mythology
111E. Survey of Medieval Celtic Literature
111F. Celtic Folklore

**French (French and Francophone Studies)**

112. Medieval Foundations of European Civilization
160. Francophone Cultures in English
161. French and Francophone Theater in Translation
164. French and Francophone Novel in Translation
166. French and Francophone Auto-biography in Translation
167. French and Francophone Intellectual History in Translation
172. Francophone Cinema and Literature in Translation
191A. Variable Topics Research Seminars in Translation

**German (Germanic Languages)**

50A-50B. Great Works of German Literature in Translation
55. City as Text: German Exile Culture in Los Angeles
55W. German Exile Culture in Los Angeles
56. Figures Who Changed World
57. Hollywood and Germany
58. Knights and Ladies, Sex and Power at Medieval Court
59. Holocaust in Film and Literature
60W. War
61A-61D. Transatlantic Culture: Modern City in Central Europe
62W. Technoscience and German Culture
M70. Origin of Language
100A. German History and Culture before 1500
100B. German History and Culture, 1500 to 1914
100C. War, Politics, Art
106. Faust Tradition from Renaissance to Modern Age

M108. Love and Sex in German Literary Tradition
112. Jewish Writing and Thought in German Culture, 1755 to Present
116. Special Topics in Modern Literature and Culture

**Hungarian (Slavic Languages)**

121. Survey of Hungarian Literature in Translation

**Iranian (Near Eastern Languages)**

150A-150B. Survey of Persian Literature in English

**Italian**

42A-42B. Italy through the Ages in English
50A-50B. Masterpieces of Italian Literature in English
102A-102B-102C. Italian Cultural Experience in English
110. Dante in English
121. Literature and Film
122. Italian Theater
140. Italian Novella from Boccaccio to Basile in Translation
150. Modern Fiction in Translation
M158. Women in Italian Culture
230A-230B. Folk Tradition in Italian Literature
260A. Alternative Perspectives in Italian Culture: Studies of Folk Tradition in Italian Literature

**Japanese (Asian Languages)**

C150. Topics in Japanese Literature and Philosophy
151. Japanese Literature in Translation: Modern
154. Postwar Japanese Culture through Literature
M156. Literature and Technology

**Jewish Studies (Near Eastern Languages)**

75. Modern Hebrew Literature Made into Film M150A-150B. Hebrew Literature in English M151A-151B. Modern Jewish Literature in English

**Korean (Asian Languages)**

150. Korean Literature in Translation: Classical
151. Korean Literature in Translation: Modern

**Old Norse Studies (Scandinavian)**

40. Heroic Journey in Northern Myth, Legend, and Epic C139. Saga C140. Viking Civilization and Literature

**Polish (Slavic Languages)**

152A-152B-152C. Survey of Polish Literature

**Portuguese (Spanish and Portuguese)**

40A-40B. Portuguese, Brazilian, and African Literature in Translation

46. Brazilian Culture and Civilization

**Romanian (Slavic Languages)**

152. Survey of Romanian Literature

**Russian (Slavic Languages)**


119. Golden Age and Great Realists
120. Literature and Revolution
124C-124T. Studies in Russian Literature
125. Russian Novel in Its European Setting
126. Survey of Russian Drama
M127. Women in Russian Literature
128. Russian Science Fiction
C170. Russian Folklore

**Scandinavian**

50, 50W. Introduction to Scandinavian Literatures and Cultures
141. Backgrounds of Scandinavian Literature C141A. Theory of Scandinavian Novel
142. Scandinavian Literature of the 19th Century
143. Scandinavian Literature of the 20th Century CM144A. Voices of Women in Nordic Literature C145A. Henrik Ibsen
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. All three plans lead to the Bachelor of Arts degree and subsequently 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 major are French 6, 12, or equivalent. Courses 105 through 109 are not sequential and may be taken in any order, provided the requisites for each course are fulfilled.

No credit is allowed for completing a less advanced course after successful completion of a more advanced course in French grammar and/or composition.

French B.A./French and Linguistics B.A.

Preparation for the Majors
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. Students in Plan III must also take Linguistics 20.

Transfer Students
Transfer applicants to the French majors 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. Students in Plan III must also complete an 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 Majors
Three plans are offered by the department:

Plan I: French/Francophone Studies in Literature and Culture
Plan I leads to the Bachelor of Arts in French. Required: Thirteen upper division courses, including French 100, 101, 102; two courses from 114A, 114B, 114C; at least six courses in French and Francophone literature and/or culture selected from upper division offerings in the department in language, civilization, literature, or the arts. Two upper division elective courses from outside the department may be substituted in the major program with consent of the undergraduate adviser.

Plan II: Interdisciplinary French/Francophone Studies
Plan II, with emphasis on French and Francophone culture, leads to the Bachelor of Arts in French and is a core program in French allowing for individual selection of relevant courses in related fields such as humanities, social sciences, women’s studies, and linguistics. Required: Thirteen upper division courses, including French 100, 101, 102; two courses from 114A, 114B, 114C; at least two courses in French and Francophone literature; one additional elective course normally selected from upper division offerings in the department in language, civilization, literature, or the arts; five upper division elective courses in fields relevant to French and Francophone studies to be selected in or outside the department in consultation with the undergraduate adviser.

Plan III: French and Linguistics
Plan III leads to the Bachelor of Arts in French and Linguistics. In addition to the normal preparation for the major, students are required to complete the sixth term of work in one other foreign language or the third term in each of two other foreign languages. Linguistics 20 is required as preparation for the major. Required: Twelve upper division courses, including French 100, 101, 102; two courses from 105, 107, 108A, 108B, 109; two courses from 114A, 114B, 114C, Linguistics 103, 110, 120A, 120B, and 165A or 165B.

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, 101, or 102, they may substitute for those courses in grammar and composition an equivalent number of upper division courses in the French and Francophone Studies Department in consultation with an adviser. All prospective French majors who are native or quasi-native speakers of French must see the undergraduate adviser before beginning upper division work in the major.

All majors must complete a minimum of nine courses of appropriate upper division work in the UCLA French and Francophone Studies Department. Freshmen and sophomores may take up to two courses taught in English, selected from French 164 through 167, in fulfillment of major requirements (if taken in the junior or senior year, these courses count as electives). A maximum of eight 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 any of the French majors.

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.

Honors Program
The department encourages those students in the French majors with initiative and independence of mind who desire an enriched individualized course of study to apply for the honors program.

The honors program is designed for French majors who have fulfilled their lower division requirements and have a 3.5 departmental grade-point average. Students whose GPA falls between 3.3 and 3.5 should submit a composition from an advanced language or literature course to the honors committee. If the work submitted meets with approval, students are admitted to the program.

To graduate with departmental honors, students must complete a minimum of two honors projects in the context of nonhonors upper division courses (French 115 and above) taken for honors credit. They must do an honors project (a research paper of 12 to 15 pages) in addition to the regular course requirements. An honors contract must be signed before the end of the third week of the term. After completing the project, students fill out a completion form.

On the basis of their coursework and field of interest, students are expected to formulate a research topic they wish to pursue in greater depth. They take course 198 where they receive regular personal supervision from a faculty member in the research, methodology, and writing of their approximately 30- to 35-page honors thesis (honors projects and the honors thesis are not to be confused).

Students may begin the honors program toward the end of their junior year or during their senior year. Students are allowed to enroll in graduate courses with the consent of the instructor but cannot use those courses to replace an honors project. Departmental honors are recorded on the final transcript if students fulfill all requirements for the program. They may submit their final honors thesis for the departmental prize.

French Minor
To enter the French minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (8 units): French 6 or equivalent and one course from 12, 14, 15, 41, or 60.

Required Upper Division Courses (20 units): French 100 or 101, and four additional departmental courses in language, culture, or literature to be selected in consultation with an undergraduate counselor.

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of French and Francophone Studies offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in French and Francophone Studies.

French
Lower Division Courses
1. Elementary French. (4) Lecture, five hours. P/NP or letter grading.
2. French Grammar. (4) Lecture, five hours. Enforced requisite: course 1 or a grade of C– or better. P/NP or letter grading.
3. Elementary French. (4) Lecture, five hours. Enforced requisite: course 1 with a grade of C– or better. P/NP or letter grading.
8. Intensive First-Year French. (12) Lecture, 15 hours. All-in-French intensive language program equivalent to first year of college French and designed to develop basic language skills. Additional work in language and media laboratory required. Offered in summer only. P/NP or letter grading.
9. Intensive Second-Year French. (8) Lecture, 10 hours; media laboratory, three hours. Enforced requisite: course 3. Intensive course equivalent to first two terms of intermediate French and designed to improve proficiency in reading, writing, and speaking. Offered in summer only. P/NP or letter grading.
14W. Introduction to French Culture and Civilization, in English. (5) Lecture, three hours; discussion, one hour. Enforced requisite: course 6. Principles of literary analysis as applied to selected texts in poetry, theater, and prose by French and Francophone writers. P/NP or letter grading.
Upper Division Courses


112. Medieval Foundations of European Civilization. (4) Lecture, three hours; discussion/screenings, two hours. Medieval texts, structure, political issues, 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’ Yvain), and Renaissance prose and poetry (including Marot, Du Bellay, Ronsard, Rabelais, Marguerite de Navarre, and Montaigne). P/NP or letter grading.

114B. 17th and 18th Centuries. (5) Lecture, three hours. Requisite: course 12. Study of selections from major works of classicism and the Enlightenment, including those by Racine, Pascal, La Fayette, La Fontaine, Lactos, Diderot, Voltaire, and Rousseau. P/NP or letter grading.


115. Studies in Medieval French Culture and Literature. (4) (Formerly numbered 115A.) Lecture, three hours. 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) (Formerly numbered 116A.) Lecture, three hours. Taught in French. Study of Renaissance French culture and literature, including la Pléiade and 16th-century poetry, linguistic and poetic revolution, 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) (Formerly numbered 117A.) Lecture, three hours. Taught in French. Study of 17th-century French culture and literature, including theater, philosophers, major cultural and political figures, 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) (Formerly numbered 118A.) Lecture, three hours. Taught in French. Study of 18th-century French culture and literature, including satires, novels, theater, philosophers, and theoretical writings. May be repeated for credit with topic change. P/NP or letter grading.

119. Studies in 19th-Century French Culture and Literature. (4) (Formerly numbered 119A.) Lecture, three hours. Taught in French. Study of 19th-century French culture and literature, including Romanticism, generation of 1848, naturalism and symbolism, and genres and trends from 1885 through World War I. May be repeated for credit with topic change. P/NP or letter grading.

120. Studies in 20th-Century French Culture and Literature. (4) (Formerly numbered 120A.) Lecture, three hours. Taught in French. Study of 20th-century French culture and literature, including early 20th-century writers, surrealism, literature from 1915 to 1945, post-World War II literature, existentialism, novels, and poetry. May be repeated for credit with topic change. P/NP or letter grading.

121. Studies in Francophone Cultures and Literatures. (4) (Formerly numbered 121A.) Lecture, three hours. Taught in French. Study of Francophone cultures and literatures, including works by poets, playwrights, and novelists from Caribbean, North Africa, Quebec, and sub-Saharan Africa, immigrant narratives, and colonialization and postcolonial studies. May be repeated for credit with topic change. P/NP or letter grading.


124. French and Francophone Theater. (4) Lecture, three hours. Taught in French. Through plays of 20th century, analysis of struggles of individuals and social groups in contexts that are historical, political, philosophical (existentialism, absurd), and cultural (colonialism and conformism). May be repeated for credit with topic change. P/NP or letter grading.

131. French and Francophone Theater. (4) Lecture, three hours. Taught in French. Study of contemporary French and Francophone world (Africa, Asia, Caribbean, Europe, government, institutions, and cultural, economic, social, and political issues. May be repeated for credit with topic change. P/NP or letter grading.

131. French and Francophone Theater. (4) Lecture, three hours. Taught in French. Study of contemporary French and Francophone world (Africa, Asia, Caribbean, Europe, government, institutions, and cultural, economic, social, and political issues. May be repeated for credit with topic change. P/NP or letter grading.


137. French and Francophone Intellectual History. (4) (Formerly numbered 125A.) Lecture, three hours. 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) (Formerly numbered 157.) Lecture, three hours. Requisite: course 12 or 100. Taught in French. Study of French theorists (Barthes, Baudrillard, Cixous, Derrida, Foucault, Ingarden) 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.

140. Women's Studies in French Literature. (4) (Same as Women's Studies M140.) Lecture, three hours. 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 generic, thematic, and sociocultural aspects. May be repeated for credit with topic change. P/NP or letter grading.

142. Francophone Cinema. (4) Lecture, three hours. Study of Francophone cinema (Africa, Caribbean, postcolonial communities in France) cinema and cinematographers in generic, thematic, and sociocultural aspects. May be repeated for credit with topic change. P/NP or letter grading.

150. Francophone Cultures, in English. (4) Lecture, three hours. Study of historical, anthropological, legal, literary, or filmic texts to provide students with broad view of some main issues in field of colonial and postcolonial Francophone studies. P/NP or letter grading.

161. French and Francophone Theater in Translation. (4) Lecture, three hours. Through plays of 20th century, analysis of struggles of individuals and social groups in contexts that are historical, political, philosophical (existentialism, absurd), and cultural (colonialism and conformism). May be repeated for credit with topic change. P/NP or letter grading.

156. French and Francophone Auto/biography in Translation. (4) Lecture, three hours. Study of autobiography in Francophone literature. May be repeated for credit with topic change. P/NP or letter grading.


159. Paris: Study of French Capital in Translation. (4) Lecture, three hours. Through plays of 20th century, analysis of struggles of individuals and social groups in contexts that are historical, political, philosophical (existentialism, absurd), and cultural (colonialism and conformism). May be repeated for credit with topic change. P/NP or letter grading.


191A. Variable Topics Research Seminars in Translation. (4) (Formerly numbered 165.) Seminar, three hours. Research seminars on topics to be announced each term. Topics include major writers, genres, cultural movements, or theoretical practices. Reading, discussion, and development of culminating project. May be repeated for credit with consent of major adviser. P/NP or letter grading.

191B. Variable Topics Research Seminars. (4) (Formerly numbered 165.) Seminar, three hours. Taught in French. Research seminars on topics to be announced each term. Topics include major writers, genres, cultural movements, or theoretical practices. Reading, discussion, and development of culminating project. May be repeated for credit with consent of major adviser. P/NP or letter grading.
198. Honors Research in French. (4) (Formerly numbered 170A.) 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. S/U 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, the city, revolution, avant-garde strategies, media, diaspora during postwar modernization, Algerian War, May 68, and beyond. Theorists include Barthes, de Certeau, Bourdieu, Baudrillard, Lyotard, Ross, Rey Chow, Virilio. S/U or letter grading.

203. Contemporary Francophone Literature. (4) (Formerly numbered C203.) 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 dissemination, 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 Guadard, Philippe Lejeune, Paul de Man, Jacques Derrida, Helene Cixous, Michel Foucault, Pierre Bourdieu, Toni Morrison, 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. Problematic 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, and performance and of theory of these genres. S/U or letter grading.

210. Paleography of Latin and Vernacular Manuscripts, 900 to 1500. (4) (Same as Classics M218, English M215, and History M218.) Lecture, three hours; discussion, two hours. Introduction to history of Latin and vernacular manuscript book from 900 to 1500 to (1) train students to make informed judgments with regard to place and date of origin, (2) provide training in accurate reading and transcription of later medieval scripts, and (3) examine manuscript book as witness to changing society that produced it. Focus on relations between Latin manuscripts and vernacular manuscripts with regard to their respective presentation of written texts. 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.


236. 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.

239. Research Resources for European Studies. (2) (Same as German M299, Information 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 libraries and databases. S/U grading.

370. Teaching French in Secondary School. (4) Lecture, three hours; discussion, one hour. Required of all candidates for general secondary instructional credential in French.

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 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.

FRESHMAN GENERAL EDUCATION CLUSTERS
College of Letters and Science
UCLA
A265 Murphy Hall
Box 951571
Los Angeles, CA 90095-1571
(310) 206-5446
http://www.ugeducation.ucla.edu/clusters/

Scope and Objectives
Available to entering freshmen only, cluster courses are an option for satisfying general education requirements. Clusters are yearlong, collaboratively taught, interdisciplinary courses that focus on a topic of timely importance, such as the global environment or interracial dynamics. The courses are taught by some of UCLA’s most distinguished faculty members and seasoned graduate students. During Fall and Winter Quarters, students attend lecture courses and small discussion sections and/or laboratories. In Spring Quarter, the same students enroll in one of a number of satellite seminars dealing with topics related to the cluster theme. Freshman clusters are designed to strengthen the writing, quantitative reasoning, critical thinking, and information literacy skills that students need to excel at UCLA. At the conclusion of the entire yearlong cluster, students complete nearly a third of their general education course requirements, satisfy their general education seminar requirement, and fulfill the Writing 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.ugeducation.ucla.edu/clusters/.
Among two or more groups and exploration of ways in American society through study of history, literature, Culture and Society. (5-5-5)

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A and 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 requisites: course 20B, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population.

Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A and 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 requisites: course 20B, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A and 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 requisites: course 20B, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

20A-20B-20CW. Interracial Dynamics in American

Special Topics. Seminar, three hours. Enforced requisites: course 20A, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.
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 environmental problems they produce. It also studies the distribution of human populations, 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 governments 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: 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 is an undergraduate minor in 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.

The Major

Required: Twelve upper division geography courses (48 units minimum) taken for a letter grade.

Geography/Environmental Studies B.A.

The major in Geography/Environmental Studies develops and deepens students' understanding of environmental issues; it explores problem-solving approaches from an interactive perspective on many aspects of social, physical, and biotic environments. The major's uniqueness lies in its emphasis on its geographical perspective of human impacts on natural systems, as well as of implications of global change on local and regional human systems.

Preparation for the Major

Required: Geography 1 or 2, 3 or 4 or 6, 5, and Statistics 12. All courses must be taken for a letter grade. Students are strongly advised to complete all preparation for the major courses before beginning upper division work in the major.

Transfer Students

Transfer applicants to the Geography major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one physical geography or biogeography course, one cultural geography or economic geography course, and one statistics course.

Refer to the UCLA Transfer Admission Guide 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 geography courses (48 units minimum) taken for a letter grade.

Geography/Environmental Studies B.A.

The major in Geography/Environmental Studies develops and deepens students' understanding of environmental issues; it explores problem-solving approaches from an interactive perspective on many aspects of social, physical, and biotic environments. The major's uniqueness lies in its emphasis on its geographical perspective of human impacts on natural systems, as well as of implications of global change on local and regional human systems.

Preparation for the Major

Required: Geography 1 or 2, 3 or 4 or 6, 5, and Statistics 12. All courses must be taken for a letter grade. Students are strongly advised to complete all preparation for the major courses before beginning upper division work in the major.

Transfer Students

Transfer applicants to the Geography/Environmental Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one physical geography or biogeography course, one cultural geography or economic geography course, one people and ecosystems course, and one statistics course.

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

The Major

Required: Twelve upper division geography courses (48 units minimum) taken for a letter grade.

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 6, and Statistics 12. All courses must be taken for a letter grade.

Transfer Students

Transfer applicants to the Geography major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one physical geography or biogeography course, one cultural geography or economic geography course, and one statistics course.

Refer to the UCLA Transfer Admission Guide 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 geography courses (48 units minimum) taken for a letter grade.

Geography/Environmental Studies B.A.

The major in Geography/Environmental Studies develops and deepens students' understanding of environmental issues; it explores problem-solving approaches from an interactive perspective on many aspects of social, physical, and biotic environments. The major's uniqueness lies in its emphasis on its geographical perspective of human impacts on natural systems, as well as of implications of global change on local and regional human systems.

Preparation for the Major

Required: Geography 1 or 2, 3 or 4 or 6, 5, and Statistics 12. All courses must be taken for a letter grade. Students are strongly advised to complete all preparation for the major courses before beginning upper division work in the major.

Transfer Students

Transfer applicants to the Geography/Environmental Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one physical geography or biogeography course, one cultural geography or economic geography course, one people and ecosystems course, and one statistics course.

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

The Major

Required: Twelve upper division geography courses (48 units minimum) taken for a letter grade.

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 6, and Statistics 12. All courses must be taken for a letter grade.

Transfer Students

Transfer applicants to the Geography major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one physical geography or biogeography course, one cultural geography or economic geography course, and one statistics course.

Refer to the UCLA Transfer Admission Guide 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 geography courses (48 units minimum) taken for a letter grade.

Geography/Environmental Studies B.A.

The major in Geography/Environmental Studies develops and deepens students' understanding of environmental issues; it explores problem-solving approaches from an interactive perspective on many aspects of social, physical, and biotic environments. The major's uniqueness lies in its emphasis on its geographical perspective of human impacts on natural systems, as well as of implications of global change on local and regional human systems.

Preparation for the Major

Required: Geography 1 or 2, 3 or 4 or 6, 5, and Statistics 12. All courses must be taken for a letter grade. Students are strongly advised to complete all preparation for the major courses before beginning upper division work in the major.

Transfer Students

Transfer applicants to the Geography/Environmental Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one physical geography or biogeography course, one cultural geography or economic geography course, one people and ecosystems course, and one statistics course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.
cluster — five courses from M106, M107, M109, 110, 113, M115, 116, 120, 121, 122, 123, 124, 125, 126, M127, M128, 129, 131, 132, 135, 136, 159C, 159D, 159E; (4) procedures — two courses (8 units) from 100A (2 units), 101A (2 units), 105A (2 units), 162, 163, 167 (6 units), 168, 169, 170, M171, 172; and (5) regions — one course from 122, 135, 136, M137, 152, 156, 180, 181, 182A, 182B, 183, 184, 185, 186, 187.

Geography/Environmental Studies majors are advised to complete the required courses in the natural and human systems cores before taking courses in the environmental studies cluster.

Honors Program
The honors program is designed for Geography and Geography/Environmental Studies majors who are interested in completing a research project that culminates in an honors thesis.

To qualify for graduation with departmental honors, students must have a cumulative grade-point average of 3.5 or better in all upper division geography courses and a 3.0 overall GPA. They must enroll in Geography 198A and 198B in two consecutive terms and earn grades of A– or better. They may elect to work with one or two faculty sponsors. Students are awarded highest honors, honors, or no honors based on an evaluation of the thesis by the faculty sponsor(s). Contact the undergraduate advising office for further information.

Computing Specialization
Majors in Geography and Geography/Environmental Studies may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the specified major, (2) completing Program in Computing 10A, 10B, 30, 60, and Mathematics 61 with a minimum grade of C in each course (Mathematics 32A and 32B are also recommended), and (3) completing at least two courses from Geography 104, 167, 168, M171. Students graduate with a bachelor’s degree in their major and a specialization in Computing.

Geography Minor
The Geography minor is designed for students who wish to deepen and/or broaden their major program of study with a distinctive yet flexible program of courses encompassing the relationship between environment and society. The minor allows students to develop a coherent strategy for understanding and explaining the manner in which people and the Earth interact. 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. No more than 8 units may be applied toward both this minor and a major or minor in another department or program, and at least three of the five upper division courses must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval.

All minor courses must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Geography/Environmental Studies Minor
The Geography/Environmental Studies minor is intended for students interested in environmental issues and emphasizes a systems approach to gaining a causal understanding of major environmental problems facing our society and the world at large. The uniqueness of the minor lies in its geographical perspective on the impact, at various geographical scales, of human activity on natural systems and on the implications of global environmental change on local, regional, and global human systems.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in the Geography Department Advising Office, 1255 Bunche Hall, (310) 825-1166. Courses should be selected in consultation with the departmental adviser.

Required Lower Division Courses (10 units): Geography 5 and one course from 1, 2, 3, 4, or 6. It is recommended that students take these courses before attempting upper division courses.

Required Upper Division Courses (20 units): Three courses from the environmental studies cluster specified within the major and two geography courses from outside the environmental studies cluster.

No more than 8 units may be applied toward both this minor and a major or minor in another department or program, and at least three of the five upper division courses must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval.

All minor courses 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 at least one upper division minor course with a grade of C+ or better, and file a petition in the Geography Department Advising Office, 1255 Bunche Hall, (310) 825-1166. For majors in Geography or Geography/Environmental Studies, only two courses may overlap between the major or this minor.

Required Lower Division Course (5 units): Statistics 12 with a grade of C or better.

Required Upper Division Courses (28 units minimum): Geography 167 (6 units), 168, 169, 170, and any three courses selected from 154, 162, 163, M171, 172. All upper division courses must be completed with a grade of C or better.

All minor courses must be taken for a letter grade, with 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://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Geography offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Geography.

Geography

Lower Division Courses
1. Earth’s Physical Environment. (5) Lecture, three hours; laboratory, two hours. Study of Earth’s physical environment, with particular reference to nature and distribution of landforms and climate and their 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.


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. Insights into global diversity through analysis of environmental, cultural, economic, and historical factors that define major world regions. Emphasis on contemporary issues that make these regions significant in current world affairs and on their histories and past and present connections with other regions. Examination of criteria used to construct regions and conflicts that occur when competing interests of how best to divide world into discrete and identifiable geographic areas. P/NP or letter grading.

88A-88L. Lower Division Seminars: Geography. (4 each) Directed study, three hours; reading period, one hour. Seminars designed to explore various themes and issues pertinent to environment and people. Seminar topics advertised in department during previous term. P/NP or letter grading.


Upper Division Courses

100. Principles of Geomorphology. (4) Lecture, three hours; reading period, one hour. Requisite: course 1. Recommended: course 100A. Study of processes that shape the world’s landforms, with emphasis on weathering and fluvial erosion, transport, deposition; energy and mass transfer; space and time considerations.

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 101A. Study of origin and development of coastal landforms, emphasizing past and present changes, hydrodynamic processes, sediment transfers, and such features as beaches, estuaries, lagoons, deltas, wetlands, dunes, seacafics, 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, emphasizing past and present changes, hydrodynamic processes, sediment transfers, and such features as beaches, estuaries, lagoons, deltas, wetlands, dunes, and seacafics, together with coastal zone management.

102. Tropical Climatology. (4) Lecture, three hours. In-depth exploration of development of tropical climate, with special reference to hurricanes, ENSO, and monsoons. Examination of human impacts of and adaptation to 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 effects on the environment. Focus on the three million years, including evidence for glaciation 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 the many relations between climate and the world of man. Application of basic energy budget concepts to the 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 the landscape. Students solve applied hydrology problems in laboratory and make hydrologic measurements in the field.

106. Applied Climatology: Principles of Climate Impact on Natural Environments. (4) Formerly numbered 106.) (Same as Atmospheric and Oceanic Sciences 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/NP or letter grading.

107. Soil and Water Conservation. (4) (Same as Environment M114.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Systematic study of processes of and hazards posed by erosion, sedimentation, and flooding prevention. Emphasis on practices 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. Examination of tropical ecosystems of eastern continents: biotic interactions and their natural environments. Emphasis on characteristics, distribution, environmental and cultural relationships of world’s principal vegetation patterns. P/NP or letter grading.

109. Human Impact on Biophysical Environment: What Science Has Learned. (4) (Formerly numbered 109.) (Same as Environment M109.) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of the interactions of humans and environment. Exploration in depth of three thematic topics (deforestation, desertification, and greenhouse gas increase and ozone depletion) and four major subjects (soil, biodiversity, water, and landforms). P/NP or letter grading.

110. Population and Natural Resources. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of debate about environmental limits to human population. Discussion of major debates about use of resources in context of increasing population in developing countries and decreasing population in Western countries. P/NP or letter grading.

111. Forest Ecosystems. (4) Lecture, three hours; field trips. 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 rainforests, their ecological principles, and forms of land use. Letter grading.

M115. Environmentalism: Past, Present, and Future. (4 or 5) (Formerly Environme nt M132 and Urban Affairs CM165.) Lecture, three hours. 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 evolution of environmental thought, how rise of modern sciences reshaped environmental thought, and how this was later transformed by 20th-century ideas. Emphasis on critical examination of debates over politics of American environmental thought and contemporary environmental questions as they relate to broader set of questions about nature of development, sustainability, and equity in environmental debate. Exploration of issues in broad context, including global climate change, rise of pandemics, deforestation, and environmental justice impacts of war. Letter grading.

116. Biogeography of Plant and Animal Invasions. (4) Lecture, three hours; reading period, one hour. Requisite: course 1 or 2 or 5. Examination of theories and examples of invasion of new environments by plants and animals introduced through natural processes or by human activity. P/NP or letter grading.

118. Medical Geography. (4) Lecture, three hours; reading period, one hour. Requisite: course 5. Examination of patterns of population/place/disease interactions and how these influence development on disease etiology and problems of healthcare.


125. Health and the Global Environment. (4) Lecture, three hours; reading period, one hour. Impact of the environment and lifestyle on individual health examined from a geographic perspective, with examples from both developed and developing countries. P/NP or letter grading.


137. Historical Geography of American Environment. (4) Seminar, three hours; discussion, one hour. Designed for juniors/seniors. Study of systematic changes of natural environment in the U.S. during historical time, with emphasis on interplay between human and natural factors. Change in natural factors of climate, soils, vegetation, and landforms, and human factors of settlement, economic activity, technology, and cultural traits. P/NP or letter grading.

138. Place, Identity, and Networked World. (4) Lecture, three hours; reading period, one hour. Communciations technologies, such as personal computers and Internet, seem to be connected to dramatic changes in identities of people, groups, and places. Exploration of those changes and their implications for social institutions and human values and practices. P/NP or letter grading.

140. Political Geography. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of spatiality of political activity, spatial constitution and differentiation of political power, control over space as central component to political struggles. Studies at local, national, state, and global levels. P/NP or letter grading.

142. Population Geography. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of social and behavioral perspectives influencing people in their patterns of demographic change, migration, and mobility, with special emphasis on spatial relationships and selected case studies. P/NP or letter grading.

144. Ethnicity in the American City. (4) Lecture, three hours; reading period, two hours. Limited to juniors/seniors. Designed to encourage and facilitate critical thinking about geographical aspects of ethnic identity in contemporary America. Use of comparative perspective to explain changing distribution, social, economic, and political behavior, and adjustment problems ethnic groups face in contemporary American city. P/NP or letter grading.

145. Landscape and American Dreams. (4) Lecture, three hours; one-half day field trip. Introduction to concepts, methods, and site of landscape study in cultural and historical geography through reflections on cultural landscapes and their representation in Europe, the U.S., and California. Survey of specific concepts or method of each week, with detailed discussion of its expression in American and Californian geography. P/NP or letter grading.

146. Feminist Geography. (4) Same as Women’s Studies M146.) Lecture, three hours; discussion, one hour. Critical engagement of gender as concept of geographic inquiry. Gender as spatial process, analysis of feminist geographic theory and methods, landscape of gender, challenges of representing gender, spaces of femininity, masculinity, and sexuality. P/NP or letter grading.

147. Social Geography. (4) Lecture, three hours; discussion, one hour. Study of spatiality of social differences on Korean women across time and location. Critical explorations of identity, social categories, and spatial structures. Importance of space and place in social life. P/NP or letter grading.


149. Transportation Geography. (4) Same as Urban Planning M150.) Lecture, three hours. Requisite: course 3 or 4. Designed for juniors/seniors. Study of geographical aspects of transportation, with focus on characteristics and functions of various modes and on complexities of intra-urban transport. P/NP or letter grading.


152. Cities of Europe. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Urbanization of Europe, growth of city systems and internal spatial structure, functions, and geographic problems of contemporary European cities. Particular attention to historical development and landscapes of capital cities such as Rome, Paris, and Berlin. P/NP or letter grading.

153. Past Societies and Their Lessons for Our Own Future. (5) (Same as Anthropology M158Q and Honors Collegium M152.) Lecture, two hours; discussion, two hours. Examination of modern and past tribal and band societies (Amazonian Indians, Kalahari bushmen, and others) that met varying fates, as background to examination of how modern state societies are coping or failing to cope with similar issues. P/NP or letter grading.

154. Images of Earth: World from Above. (4) (Formerly numbered 166.) Lecture, three hours. Use of maps, charts, diagrams, and other images to show how Earth has been represented through ages, how they have been influenced by current ideas and, in turn, how they have themselves influenced course of events. P/NP or letter grading.


158. Korean Urban Experience. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors with previous coursework in geography or East Asian studies. Study of cities by geographers entails analysis of evolution, functions, spatial patterns, and other geographical problems of urban societies worldwide. Korea’s urban experience as found in Seoul, South Korea, along with other cities in both Koreas and overseas where Korean diaspora resides. Korean experience to be juxtaposed against responses by other cities of world to similar challenges. Geography of housing and associated processes of urban redevelopment whereby built environment is continuously being reproduced and transformed. Current urban debates, as well as topics showing interplay between competing visions of city. P/NP or letter grading.
Procedures

162. Glacier Environments of California’s High Sierra. (4) Fieldwork, 10 hours; discussion, four hours. Introduction to alpine glacial environment through three hours of introductory lecture followed by intensive seven-day field trip to California’s High Sierra. Students carry out laboratory exercises, as well as data collection and interpretation of projects and their individual interests. Presentation of additional evening lectures, using presentation facilities at Sierra Nevada Aquatic Research Laboratory (SNARL). Offered in summer only. P/NP or letter grading.

163. Introduction to Geographic Information Systems (GIS). (4) Lecture, two hours; laboratory, eight hours. Requisites: courses 2, 5, 108, 112. Examination of field procedures and conceptual ideas in GIS. Concepts used in observation, measurement, analysis, and interpretation of geospatial phenomena in both physical and cultural environments. P/NP or letter grading.

164. Environmental Modeling. (4) Lecture, one hour; laboratory, two hours. Presentation of basic concepts related to computer modeling of biogeochemical cycles, geomorphic processes, and other phenomena relevant to changing Earth and its inhabitants. Laboratory exercises include building basic computer models and working with existing models. P/NP or letter grading.

165. Cartography. (6) Lecture, two hours; laboratory, six hours. Preparation: three courses from 1 through 5. Designed for juniors/seniors. Survey of the field of cartography. Theory and construction of map projections, compilation procedures, principles of generalization, symbolization, terrain representation, lettering, drafting and scribing, and map reproduction methods. P/NP or letter grading.

166. Introduction to Geographic Information Systems. (4) Lecture, two hours; laboratory, two hours. Designed for juniors/seniors. Introduction to basic geographic information systems (GIS) concepts and spatial analysis. Data structures, topology, and attribute information. Laboratory exercises use database query, manipulation, and spatial analysis to address "real world" problems. P/NP or letter grading.

167. Satellite Remote Sensing and Imaging Geographic Information Systems. (4) Lecture, two hours; laboratory, one hour. Introduction to fast-growing field of environmental monitoring from space. Application of Landsat, radar, Global Positioning System (GPS), and Earth Observing System satellites to land-use change, oceanography, meteorology, and environmental monitoring. Introduction to digital image processing and image geographic information system (GIS) software. P/NP or letter grading.

170. Advanced Geographic Information Systems. (4) Lecture, three hours; discussion, one hour. Requisite: course to full geographic information systems (GIS) functionality. Using ARC/INFO on UNIX workstations. Spatial manipulation, query, and computation of datasets carried out in project-oriented approach. P/NP or letter grading.

M117. Introduction to Statistical Development (4) (Same as Statistics M117.) Lecture, three hours; laboratory, one hour. Requisite: one course from Statistics 10, 11, 12, 13, or 14. Introduction to methods of measurement and interpretation of geographic distributions and associations. P/NP or letter grading.

172. Remote Sensing: Digital Image Processing and Analysis. (4) Lecture, three hours; laboratory, one hour. Requisite: course to full geographic information systems (GIS) functionality, using ARC/INFO or other GIS software. Fundamental statistical concepts used in digital image processing and analysis. Topics include descriptive statistics, geometric and radiometric correction, classification, image enhancement and filtering, and change detection schemes. Students will work in the laboratory with software programs.

173. Geographic Information Systems Programming and Development. (4) Lecture, two hours; laboratory, two hours. Enforced requisite: course 166. Introduction to fundamental concepts and architecture of GIS. Programming in GIS environment. Topics centered on GIS configuration and development using variety of programming languages. Lectures followed by laboratory exercises. P/NP or letter grading.

Regions

180. North America. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Regional synthesis of social and cultural phenomena relevant to changing Earth and its inhabitants. Laboratory exercises include building basic computer models and working with existing models. P/NP or letter grading.

181. Mexico, Central America, Caribbean. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of economic, social, and cultural phenomena relevant to changing Earth and its inhabitants. Laboratory exercises include building basic computer models and working with existing models. P/NP or letter grading.

182. Spanish South America. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of economic, social, and cultural phenomena relevant to changing Earth and its inhabitants. Laboratory exercises include building basic computer models and working with existing models. P/NP or letter grading.

182A. Brazilian South America. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of economic, social, and cultural phenomena relevant to changing Earth and its inhabitants. Laboratory exercises include building basic computer models and working with existing models. P/NP or letter grading.

182B. Brazil. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of economic, social, and cultural phenomena relevant to changing Earth and its inhabitants. Laboratory exercises include building basic computer models and working with existing models. P/NP or letter grading.

183. Europe. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of economic, social, and cultural phenomena relevant to changing Earth and its inhabitants. Laboratory exercises include building basic computer models and working with existing models. P/NP or letter grading.

184. Contemporary China. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Systematic and regional treatment of geography of China, including physical, cultural, and economic aspects and detailed studies of various regions. P/NP or letter grading.

185. South and Southeast Asia. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Regional synthesis with emphasis on the people of South or Southeast Asia in their physical, biotic, and cultural environment and its dynamic transformation. P/NP or letter grading.

186. Contemporary China. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Systematic and regional treatment of geography of China, including physical, cultural, and economic aspects and detailed studies of various regions. P/NP 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 the area extending from Iran to Morocco and from Turkey to Sudan. Emphasis on geographical themes and problems during historical and modern times. P/NP or letter grading.

Special Studies

194. Research Group Seminars: Geography. (2) Seminar, two hours; research group meeting, two 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 meet concurrently with graduate research seminar. May be repeated for credit.

C194A. Research Group Seminars: Controversies in Earth System Science. (1) Seminar, two hours. Designed for undergraduate students who are part of research group. Biweekly seminar to discuss emerging issues and controversies in earth system science. May be repeated for credit.

195. Community or Corporate Internships in Geography. (4) Tutorial, four hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

198A-198B. Honors Research in Geography I, II. (4-4) Tutorial, to be arranged. Preparation: 3.25 grade-point average overall, at least five upper division geography courses with 3.5 grade-point average. Limited to juniors/seniors. Development and completion of honors thesis or comprehensive research project under direct supervision of one or two faculty members. May be repeated for maximum of 16 units. Individual contract required. Letter grading.

199. Special Studies. (2 to 6) Tutorial, to be arranged. Limited to juniors with B average in major or seniors. May be repeated for maximum of 16 units. P/ NP or letter grading.

Graduate Courses

Environment

200. History and Paradigms of Geomorphology. (4) Lecture, two hours; discussion, one hour; reading period, eight hours. Preparation: two courses from 101, 103, 105, M107. Requisite: course 100. Analysis of geomorphic theories since the scientific revolution, with emphasis on catastrophism, uniformitarianism, glacial theories, isostasy and eustasy, evolution and cyclicity, thermodynamics and mechanics, quantification, and current paradigms. View of each theme in its contemporary and modern context.

201. Coastal Geomorphology Seminar. (4) Discussion, three hours; reading period, five hours; fieldwork. Requisites: courses 100, 101. Discussion of selected topics pertaining to geomorphic processes and responses observable in the coastal zone. May be repeated for credit.

202. Fluvial Geomorphology Seminar. (4) Discussion, three hours; reading period, five hours; fieldwork. Requisites: courses 100 and 105, or Civil Engineering 100. Discussion of selected topics pertaining to action of running water in shaping the physical landscape. May be repeated for credit.

203. Glacial Geomorphology Seminar. (4) Discussion, three hours; reading period, five hours; fieldwork. Requisites: courses 100 and 105, or Civil Engineering 100. Discussion of selected topics pertaining to action of snow and ice in shaping the physical landscape. May be repeated for credit.

204A-204B-204C. Advanced Climatology. (4) Lecture, three hours; laboratory, one hour. Preparation: first year of calculus and acquaintance with Fortran or other computer language. Discussion of selected topics pertaining to action of running water in shaping the physical landscape. May be repeated for credit.

204A-204B-204C. Advanced Climatology. (4) Lecture, three hours; laboratory, one hour. Preparation: first year of calculus and acquaintance with Fortran or other computer language. Discussion of selected topics pertaining to action of running water in shaping the physical landscape. May be repeated for credit.
205. Seminar: Climatology. (4) Discussion, three hours; reading period, one hour. Requisites: courses 204A, 204B, 204C. Selected topics. May be repeated for credit.

M206. Introduction to Biophysical Modeling of Land Surface Processes and Land/Atmosphere Interactions. (4) (Formerly numbered 206.) (Same as Atmospheric 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 bio-physical modeling of land surface processes, including ideal canopy model, radiation, heat and CO2 fluxes, transfer, and satellite data application. Laboratory sessions included. S/U or letter grading.

207. Regional Climate and Terrestrial Surface Processes. (4) Seminar, three hours. Designed for graduate students. Physical concepts and basic 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 regional 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. Requisite: course 112. Intensive review and analysis of biophysical and cultural factors influencing animal distributions. S/U or letter grading.

212. Advanced Biogeography: Animals. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Requisite: course 112. Intensive review and analysis of biophysical and cultural factors influencing plant distributions.

213. Seminar: Biogeography. (4) Discussion, three hours; reading period, two hours. Requisite: course 208 or 212. Related research projects growing out of course 208 or 212. May be repeated for credit.

215. Quaternary Studies: Physical Aspects. (4) Discussion, three hours; reading period, two hours; fieldwork, three hours. Preparation: at least one course from 200 through 205 or one appropriate graduate course in atmospheric and oceanic sciences or Earth and space sciences. Analysis of changing physical environment of Quaternary period. May be repeated for credit.

217. Quaternary Studies: Ecological Aspects. (4) Discussion, three hours; reading period, two hours; fieldwork, three hours. Preparation: at least one course from 200 through 205 or one appropriate graduate course in atmospheric and oceanic sciences or Earth and space sciences. Analysis of changing physical environment of Quaternary period. May be repeated for credit.

218. Advanced Medical Geography. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Requisite: course 118. In-depth study of selected topics in medical geography and intense review of recent research.

223. Seminar: Humid Tropics. (4) Seminar, three hours; reading period, two hours. Designed for graduate students. Selected topics. Biophysical and cultural complexes of the humid tropics, with emphasis on problems related to human settlement and livelihood. May be repeated for credit. S/U or letter grading.

M229. Resource-Based Development. (4) (Same as Urban Planning M234C.) Discussion, three hours. Recommended preparation: Urban Planning 234A. Some major resource associated with development of specific natural resources. Topics include nature of particular resource (or region associated with it), its previous management, involvement of state, corpora- tions, and local groups, and environmental and social impact of its development. Letter grading.

M235. Human Geography

231. Termination and Theory in Political Econo- my: Deconstruction and Reconstruction of Approaches in Research, Writing, and Practice. (4) Discussion, three hours; reading period, one hour. Requisite: course 112. 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.

232. Seminar: Cultural Geography. (4) Seminar, three hours; reading period, two hours. Discussion on particular topics in cultural geography. Content may vary from year to year. May be repeated for credit. S/U or letter grading.

234. Environment and Subsistence in Indigenous Cultures. (4) Seminar, three hours. Discussion on resource management strategies and environmental issues in indigenous cultures. Topics vary from year to year.

235. Seminar: Social Geography. (4) Seminar, three hours; reading period, one hour. Process of doing social/cultural geography entails conceptualizing, adapting, and reformulating social and critical theories of space, subject, and power. Examination of this process by considering theoretical themes that shape concepts of social space and social research. Theoretical discus- sions of recent research in social/cultural geography, particularly around topics of gender, race, sexuality, subjects and spatiality resistance and agenda, and social difference and identity. S/U or letter grading.

237. Seminar: Historical Geography. (4) Seminar, three hours; reading period, two hours. Theory and practice of historical geography in North America and Europe. May be repeated for credit. S/U or letter grading.

240. Advanced Political Geography: Geopolitics. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Intensive study of theories and prin- ciples of geopolitical. Selected regions used as exam- ples of differing techniques of study in geopolitics. S/U or letter grading.

241. Seminar: Political Geography. (4) Discussion, three hours; reading period, two hours. Requisite: course 240. Related research projects growing out of course 240. May be repeated for credit.


248. Location and Space Economy. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Methods of locational analysis as applied to problems of regional growth and development. S/U or letter grading.

249. Seminar: Economic Geography. (4) Discus- sion, three hours; reading period, two hours. Requi- site: course 248. Related research projects growing out of course 248. May be repeated for credit.

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 loca- tions and size distribution of cities. S/U or letter grading.

251. Seminar: Urban Geography. (4) Discussion, three hours; reading period, two hours. Requisite: course 250. Related research projects growing out of course 250. May be repeated for credit.

Procedures

250. Advanced Field and Laboratory Analysis in Geomorphology. (4) Laboratory/work, 10 hours. Preparation: two courses from 200, 201, 202, 203, 215. A study of advanced field and laboratory procedures used in con- temporary geomorphic research, with emphasis on scientific design, instrumentation, and data evaluation.

252. Advanced Field Analysis: Biogeography. (8) Fieldwork, 10 hours. Observation, measurement, and analysis of biogeographic phenomena, including identification and evaluation of biotic populations and communities and their modifications resulting from the impact of human activity.

258. Advanced Projects in Geographic Information Systems (GIS)/Remote Sensing. (4) Discus- sion, one hour; laboratory, three hours. Recommended re- quisite: course 169 or 170 or Earth and Space Sciences 150. Familiarity with a GIS or image process- ing package expected. Individualized research projects conducted on UNIX platforms within a struc- tured course environment. All aspects of a modest but original project, including data acquisition, ingestion, and analysis; interpretation of results and presenta- tion in publication-style format.


M270A-M270B-M270C. Seminars: Climate Dynam- ics. (2 to 4 each) (Same as Atmospheric and Oceanic Sciences M270A-M270B-M270C.) Seminar, two hours. Archaeological, geochemical, micropale- ontological, and stratigraphic evidence for climate change throughout geological past. Rhythmology and dy- namics of climate subsystems: atmosphere and oceans, ice sheets and marine ice, lithosphere and mantle. Climate of other planets. Modeling, simula- tion, and prediction of modern climate on monthly, seasonal, and interannual time scale. May be repeat- ed for credit. S/U or letter grading.

M272. Spatial Statistics. (4) (Same as Statistics M222 and Urban Planning M215.) Lecture, three hours. Designed for graduate students. Survey of modern methods used in analysis of spatial data. Im- plementation of various techniques using real data sets from diverse fields, including neuroimaging, ge- ography, seismology, demography, and environmental sciences. S/U or 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 the 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 282. May be repeated for credit. S/U or letter grading.

286. Geography of Contemporary China. (4) Semi- nar, three hours; reading period, two hours. Designed for graduate students. May be repeated for credit. S/U or letter grading.

295. Seminar: Geographical Thought. (4) Discus- sion, three hours; reading period, two hours. De- signed for graduate students. Discussion and study of topics significant to growth of modern philosophy of geography.
C296A. Research Group Seminars: Controversies in Earth System Science. (1) Seminar, two hours. Biweekly seminar to discuss emerging issues and controversies in Earth system science. Topics include oscillatory climate phenomena, biogeochemical cycling, biocomplexity, land/atmosphere interactions, paleoecology, and human-induced environmental change. May be repeated for credit. Concurrently scheduled with course C194A. S/U grading.

C296B. Cultural Geography Methods Workshop. (1) Seminar, two hours. Biweekly forum for presentations and discussion of new concepts, theories, and methods at juncture of geography, humanities, and environmental studies. Principal focus on landscape, but scope of cultural study within geography also embraced. S/U grading.

C296C. 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.

C296D. Agriculture and Food Studies Colloquium. (1) Seminar, two hours. Biweekly seminar to discuss emerging issues and controversies in earth system science. Topics include oscillatory climate phenomena, biogeochemical cycling, biocomplexity, land/atmosphere interactions, paleoecology, and human-induced environmental change. May be repeated for credit. Concurrently scheduled with course C194A. S/U grading.

296E. Directed Individual Study or Research. (2 to 8) May be repeated for credit. S/U grading.

297A. History of Modern Geography. (4) Lecture, three hours; reading period, one hour. Evolution of field of geography in 19th and 20th centuries, with emphasis on professionalization of geography and its emergence as modern academic discipline. S/U or letter grading.

297B. Physical Basis of Geography. (4) Lecture, three hours; reading period, one hour. Critical evaluation of formative influences, paradigm shifts, and present challenges of physical geography, illustrated from historical developments and changing research frontiers in geomorphology, climatology, oceanography, hydrology, and soils. S/U or letter grading.

297C. Evolution, Ecology, Environmentalism, and Roots of Modern American Geography. (4) Seminar, three hours; reading period, one hour. Discussion of how contemporary development of modern concepts of evolution, ecology, and environmentalism influenced, and were influenced by, development of modern geography as academic discipline. S/U or letter grading.

298A. Philosophical Issues in Geographical Inquiry. (4) Lecture, three hours. Discussion of geographical research within context of philosophical debates concerning the nature of scientific inquiry. 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. Examiniation 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.

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 methods, materials, and evaluation. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 8) May be repeated for credit. S/U grading.

597. Preparation for Ph.D. Qualifying Examinations. (2 to 8) Independent study. May be repeated for credit. S/U grading.

598. Research for and Preparation of M.A. Thesis. (2 to 8) Independent study. May be repeated for credit. S/U or letter grading.


GERMANIC LANGUAGES

College of Letters and Science

UCLA
212 Royce Hall
Box 951539
Los Angeles, CA 90095-1539
(310) 825-3955
fax: (310) 825-9754
http://www.germanic.ucla.edu

Hans Wagener, Ph.D., Chair

Professors
Sue-Ellen Case, Ph.D.
Andrew R. Hewitt, Ph.D.
Douglas M. Kellner, Ph.D. (George F. Kneller Professor of Education and Philosophy)
Robert S. Kirsner, Ph.D.
Kathleen L. Komar, Ph.D.
John A. McCumber, Ph.D.
Wolfgang Nehring, Ph.D.
James A. Schultz, Ph.D.
Hans Wagener, Ph.D.

Professors Emeriti
Ehrhard Bahr, Ph.D.
Franz H. Bäuml, Ph.D.
Marianna D. Birnbaum, Ph.D.

Associate Professors
Todd S. Pressner, Ph.D.
Christopher M. Stevens, Ph.D.
Christopher J. Wild, Ph.D.

Lecturer P.S.O.E.
Lisa C. Parkes, 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

Grammar/Composition Courses

No credit is allowed for completing a less advanced course after successful completion of a more advanced course in Afrikaans, Dutch, and German 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.

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. Students in Plan C must also take Linguistics 20.

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/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Three plans are offered by the department:

Plan A: Literature and Culture

Plan A is designed for students who are interested in studying German language and thought by selecting courses in literature, film, folklore, and contemporary culture studies.

Required: German 130A, 130B, and 11 upper division German courses, at least three of which must be at the 150 level or above. Two of the 11 courses may be upper division courses in other departments. Students who enroll in any course taught in English translation in the department must sign a contract with the instructor that all texts authored in German are to be read in the original language. The con-

Germanic Languages / 351
trat must then be filed with the undergraduate adviser. Students may take up to two courses from the 120 series or below in satisfaction of major requirements. Two additional courses from the 120 series or below may be selected if students elect not to take courses in other departments. All courses must be taken for a letter grade.

Plan B: German Studies
Plan B is intended for students whose interests are primarily interdisciplinary in nature. Departmental majors receive credit only for upper division courses in German literature, film, folklore, and contemporary culture, but for courses in related fields such as history, political science, philosophy, music, and others.

Required: German 130A, 130B, seven upper division German courses (at least two of which must be at the 150 level or above), and four upper division courses in a related field or fields selected in consultation with the undergraduate adviser. Students who enroll in any course taught in English translation in the department must sign a contract with the instructor that all texts authored in German are to be read in the original language. The contract must then be filed with the undergraduate adviser. Only two such contract courses may be applied toward the major. All courses must be taken for a letter grade.

Plan C: Germanic Languages/Linguistics
Plan C is intended for students interested in the study of languages and linguistics and allows students to study more than one Germanic language.

Required: German 130A, 130B, 150, 170, C172, and eight additional upper division courses as follows: three courses in other Germanic language (Scandinavian languages taught in the Scandinavian Section may be applied by petition to the undergraduate adviser), three linguistics courses from outside the department (i.e., anthropology, applied linguistics, linguistics, sociology) selected in consultation with the undergraduate adviser, and two electives from department offerings (excluding German 100A, 100B, 100C, and courses taught in English translation). All courses 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.
German Languages / 353

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 early period, such as heroic and court Epics, 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, Hesse, 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 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 transfer to be thematized. P/NP or letter grading.

55W. German Exile Culture in Los Angeles. (5) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 55. Focus on city as text, a major creative narrative site for exiles during the New Romantic Age and its transnational incarnations. Focus on work produced in Los Angeles, or in direct connection with Los Angeles, from 1940s—on its significance from anthropological, philosophical, political, and historical perspectives. Satisfies Writing II requirement. Letter grading.

56. Figures Who Changed World. (5) Lecture, three hours; discussion, one hour. Introduction to strains of German philosophy and political thought that resonated internationally. Use of version of “great men” model of history to move beyond such models in its understanding of how, exactly, intellectual currents actually fermented change in world. P/NP or letter grading.

57. Hollywood and Germany. (5) Lecture/screenings, five hours; discussion, one hour. Examination of images of Germany generated by Hollywood, cultural/historical interface between Hollywood and Germany, and contemporary critiques of long-standing relationship between these cultural sites. Discussion of how and why cultural stereotypes are generated and maintained, and why film is a uniquely powerful tool in ideological discourse. P/NP or letter grading.

58. Knights and Ladies, Sex and Power at Medi- eval Court. (3) Discussion, one hour. Introduction to culture of high medieval court, one of great achievements of European Middle Ages. P/NP or letter grading.

59. Holocaust in Film and Literature. (5) Lecture/screenings, five hours; discussion, one hour. History of Holocaust and its present memory through examination of challenges and problems encountered in trying to imagine its horror through media of literature and film. P/NP or letter grading.

60W. War. (5) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Reflection on cultural history of war — on its significance from anthropological, cultural, and philosophical perspectives rather than from perspective of political and historical gains and losses. Emphasis on World War I, war in which political and military confrontation served as basis for modernity and cultural transfer to be thematized. P/NP or letter grading.

61A-61D. Transatlantic Culture: Modern City in Central Europe. (5 each) Lecture, three hours; discussion, one hour. Historical exploration of major Central European cities and their cultures. P/NP or letter grading. 61A. Berlin; 61B. Weimar; 61C. Vien- na; 61D. Prague.

62W. Technoscience and German Culture. (5) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Study of German culture to challenges presented by technology and science. From Romanticism to critical theory and postmodernism, from Schopenhauer, Nietzsche to Habermas and Wolf, strands of German intellectual tradi- tion provide illuminating contrasts to American context. Satisfies Writing II requirement. Letter grading.

M70. Origin of Language. (5) (Same as Communi- cative Approaches M70 and Studies M70) Lecture, three hours; discussion, one hour. Theoretical and methodological issues surrounding origin of lan- guage. Topics include evolutionary theory, evolution of man, how language is organized in brain, and science of language, including physiology of speech, phonetics, and comparative reconstruction. Letter grading.

88. Lower Division Seminar. (4) Seminar, three hours. Course of variable content limited to topics of current interest and offered whenever staff member is available. P/NP or letter grading.

Upper Division Courses

100A. German History and Culture before 1500. (4) Lecture, three hours; discussion, one hour. Lectures, discussions, and readings in English; knowledge of German not required. 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.

100B. German History and Culture, 1500 to 1914. (4) Lecture, three hours; discussion, one hour. Lectures, discussions, and readings in English; knowledge of German not required. 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.

100C. War, Politics, Art. (5) Lecture, three hours; discussion, one hour. Analysis of interrelationship between politics, social conditions, and arts with respect to war. World Wars I and II and German history to be used as model for principal questions of society and philosophical thinking. P/NP or letter grading.

102A. German Film in Cultural Context: Early Ger- man Film. (4) Lecture, two hours; discussion, one hour. Lectures and texts in English; additional readings in German for majors. Survey of German film between 1919 and 1945. Analysis of technological and stylistic development of film. Silent Expressionist films to Nazi propaganda and entertainment films. Film discussions enhanced by interactive media. Letter grading.

102B. German Film in Cultural Context: New Ger- man Film. (4) Lecture, two hours; discussion, one hour. Lectures and texts in English; additional readings in German for majors. Survey of German film since 1960 in its thematic and stylistic diversity. Films authored by Werner Herzog, Fassbinder, and Marga- rette von Trotta are juxtaposed with commercial com- edies of 1990s. Film discussions enhanced by inter- active media. Letter grading.

M104. Tristan, Isolde, and History of Heterosexual- ity. (4) (Same as Women’s Studies M119.) Lecture, three hours. German, French, and English versions of Tristan and Isolde story from Middle Ages to 20th century. Particular attention to relation between repre- sentation of “heterosexual” love in each text and con- temporaneous ideas about human sexuality. P/NP or letter grading.

106. Faust Tradition from Renaissance to Modern Age. (4) Lecture, three hours. Lectures and discussions of Faust theme in European literature and intel- lectual history, including chabopubk of Dobtor Faustus, Marlowe’s and Goethe's dramas, and Thomas Mann’s and Bulgakov’s novels. Letter grading.

M108. Love and Sex in German Literary Tradition. (4) (Same as Women's Studies M108.) Lecture, three hours. Study of major literary works that address is- sues of idealized desire, emotional/sexual boundaries, and development of sexual identity. Letter grading.
110. Nietzsche and Critique of Western Culture. (4) Lecture, two hours; discussion, one hour. Readings that focus on Nietzsche’s critique of Christianity, master-slave dialectic, and individualism, and the reciprocal relation between poetry and philosophy. German majors required to complete all readings in German. Letter grading.

112. Jewish Writing and Thought in German Culture, 1775 to Present. (4) Lecture, four hours. 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.

113. German Exile Culture in Los Angeles. (4) Lecture, three hours. 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.

114. Special Topics in Modern Literature and Culture. (4) Lecture, three hours. 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.

117. Thomas Mann, Hesse, Böll, and Grass: German Nobel Prize Winners, in English. (4) Lecture, three hours. Survey of Nobel Prize-winning German texts with eye for degree to which these authors’ visions reflect Nobel’s ideals of peace and progress of human liberties. Authors (Hauptmann), excerpts from Buddenbrooks (Mann), and Siddharta (Hesse). Viewing of films based on Lost Honor of Katharina Blum and Tin Drum. Letter grading.

118. Feminist Issues in German Literature and Culture. (4) Lecture, three hours. 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 Germany). Letter grading.

119A. Introduction to German Drama, (5) Lecture, four hours. Enforced requisite: course 3. Introduction to four German plays (readings variable) and to different types of drama — tragedy, comedy, tragicomedy, absurd, expressionist, heroic, and epic — and drama theory. Reading, discussion, and analysis of plays in detail, practice in performing roles in class, and writing of short responses in German. May be repeated for credit. Letter grading.

119B. German Play Production. (5) Lecture, four hours. Requisites: courses 3 (enforced), 119A. Staging of production of play in German, working intensively on German plays together in class and individually over Pure Voice. Students responsible for different tasks in theater production, including dress rehearsals and technical jobs such as costumes, set, lighting, programs. Students with minor parts work collaboratively on technical aspects and program notes, which involve further reading (in consultation with instructor). Two performances take place at end of term. May be repeated for credit. Letter grading.

120. German Folklore. (4) Lecture, three hours. Survey of various folklore genres in cultural context, including legends, proverbs, and cultural enactments such as carnival. Letter grading.

122. Fairy Tales and Fantasy. (5) Lecture, three hours; discussion, one hour. Literary and reception of folklore collections in Europe, with particular attention to ideology and influence of Grimm’s tales. Interpretation of selected tales and their transformations and appropriation in literature, film, advertising, and pedagogy. P/NP or letter grading.

130A-130B. Conversation and Composition on Contemporary German Culture and Society I, II. (4-4) Lecture, three hours. Requisite: course 6. Course 130A is requisite to 130B. 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.


134. Advanced German Language through Culture and Current Affairs. (4) Lecture, three hours. Requisites: courses 130A, 130B. Advanced German language course that juxtaposes cultural history with current events to teach complex speaking and writing skills of interpretation, analysis, and criticism. Readings may include selections from Luther, Heine, Freud, and current authors. Students create their own interactive media presentations. Letter grading.


140A. Introduction to German Poetry. (4) Lecture, three hours. Close reading of representative examples of German lyric poetry from early as well as recent literary periods; consideration of poetic conventions and forms, diction, imagery, symbolism, and metrics. Letter grading.

140B. Introduction to German Drama. (4) Lecture, three hours. Analysis of 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.

140C. Introduction to German Narrative Prose. (4) Lecture, three hours. 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.

142. Introduction to 18th-Century Studies. (4) Lecture, three hours. Topics in Enlightenment literature, social history, and culture. Works by Goethe, Lessing, Schiller, Kant, Mozart, and others. Letter grading.

144. Introduction to 19th-Century Studies. (4) Lecture, three hours. Presentation of major texts from Romanticism to realism. Works by Kleist, Büchner, Heine, Fontane, and others. Letter grading.

145. 19th-Century German Philosophy. (4) Lecture, three hours; discussion, one hour. German philosophy, which may generally be characterized as philosophy that takes activity rather than passive subsistence to be fundamental nature of all things, is one of Germany’s greatest gifts to humanity. Exploration of first half of two-century history of German philosophy — period from Kant to Nietzsche, including Hegel, Kierkegaard, and Marx. Letter grading.

146. Introduction to Modern Literature. (4) Lecture, three hours. Analysis of selected modern works written between 1890 and 1945, including texts by authors such as Thomas Mann, Kafka, Rilke, Brecht, and others. Letter grading.

147. 20th-Century German Philosophy. (4) Lecture, three hours; discussion, one hour. German philosophy, which may generally be characterized as philosophy that takes activity rather than passive subsistence to be fundamental nature of all things, is one of Germany’s greatest gifts to humanity. Exploration of second half of two-century history of German philosophy — period from Nietzsche through Habermas, including Heidegger, Gadamer, Jaspers, and Frankfurt School theorists. Letter grading.

148. Introduction to Contemporary Literature. (4) Lecture, three hours. Analysis and discussion of German, Austrian, Swiss, and ex-GDR literatures from 1945 to present. Examination of writers such as Heinrich Böll, Günter Grass, Friedrich Dürrenmatt, Elfriede Jelinek, and Christa Wolf with view to their specific political and cultural context. Letter grading.

150. Language and Linguistics. (4) Lecture, three hours. Requisite or corequisite: course 130A. Theories and methods of linguistics, with emphasis on structure of modern standard German, its phonology, morphology, syntax, semantics, and pragmatics. Other topics include diachronic, spatial, and social variation of German (i.e., its historical development, dialectology, and sociolinguistic dimensions). Letter grading.

152. Studies in German Literature before 1750. (4) Lecture, three hours. Requisite: course 140A. Readings and analysis of major works from Middle Ages to baroque. Letter grading.


162. Advanced Study of Contemporary Literature and Culture. (4) Lecture, three hours. Requisite: course 130A. Literature after 1945 in German-speaking countries, including issues such as national borders, ethnic identity, gender relations, and commercialization of culture. Letter grading.

170. Current Topics in Germanic Linguistics. (4) Lecture, three hours. Requisite: course 130A. In-depth investigation of one topic in field of Germanic linguistics, such as phonetics and phonology, morphology and syntax, semantics and pragmatics, social and spatial variation (i.e., sociolinguistics and dialectology of German), or history of German. Letter grading.


187. Undergraduate Seminar. (4) Seminar, three hours. Requisite: course 150 or 40. 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.

197. Individual Studies in German. (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.

199. Directed Research or Senior Project in German. (4) Tutorial, three hours. Requisite: course 130A. Open to juniors/senior who have completed 130A and have demonstrated promise of academic work for a major research project. Supervised individual research or investigation under guidance of faculty mentor. Cumnulating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.
201A. Bibliography, Research Methods, and Scholarly Writing. (4) Lecture, three hours. Introduction to current state of advanced research and analysis of literary and philological materials, with emphasis on bibliographies and such tools of research as reference works, series publications, journals, archives, literary histories, and special attention to online resources. Practical exercises in analysis of sources, compilation and presentation of bibliographies, and essay drafts. Letter grading.  
201C. Theories of Literary Interpretation. (4) Lecture, three hours. Advanced analysis and discussion of various models of literary interpretation and schools of thought such as hermeneutics, psychoanalytic criticism, social historical approaches, semiotics, 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 after Geoffrey Chaucer. Letter grading.  
202B. Readings in Middle High German Literature. (4) Lecture, three hours. Introduction to medieval German literature and literary history and to use of contemporary theory in study of medieval texts. Continued practice in reading Middle High German, although most texts to be read in modern translation. Letter grading.  
204. Early Modern German Literature. (4) Lecture, three hours. Selected readings from 1500 to 1700, with introduction to development of German as modern literary language and to genres and cultural models. Impact of Thirty Years' War on German literary production and reception in German baroque. Letter grading.  
207. Weimar Classicism. (4) Lecture, three hours. Reading and interpretation of major works of German classicism. May include problems in reception of classicism by later authors and cultural theorists. Letter grading.  
208. Romanticism. (4) Lecture, three hours. Analysis of selected works and theories of German Romantics such as Friedrich Schlegel, Novalis, and Hoffmann with introduction to relationship between Romanticism and other periods. Letter grading.  
210A. Naturalism, Symbolism, and Expressionism. (4) Lecture, three hours. Analysis of selected works (poetry, drama, prose) of early modernism from Hauptmann to Kafka. Discussion of sociological spectra and pluralism of styles and forms. Letter grading.  
210B. 20th-Century Novel to 1945. (4) Lecture, three hours. Prose works in first half of 20th century as they express experience, crisis of consciousness, and cultural conflicts between wars, as well as innovations in narrative technique. Letter grading.  
211. Postwar Literature. (4) Lecture, three hours. Study of major works by German-speaking authors written after World War II. Examination of issues such as identity crises, nationalism and divided Germany, gender expectations, and social-political attitudes. Letter grading.  
212. Contemporary Literature and Culture. (4) Lecture, three hours. Analysis of current cultural issues and their relation to literary production and interpretation. Topics may include areas such as feminism, postcolonialism, postmodernism, and contemporary theory. Letter grading.  
213. Topics in Literature and Film. (4) Lecture, three hours. With focus on two different modes of cultural representation, examination of topics in German literature and film from Weimar Republic to present. Study of media theory, feminist film theory, and interrelationships between film, literature, and social history. Letter grading.  
217. History of German Language. (4) Discussion, three hours. Historical survey of development of standard literary German language from time of Indo-European unity through proto-Germanic, West Germanic, medieval period, Reformation, baroque period, and Enlightenment until its final codification at end of 19th century. S/U or letter grading.  
231. Gothic. (4) Discussion, three hours. Systematic study of phonology and grammar of Gothic language, with readings in Wulffina's translation of Bible and introduction to history of Gothic and their place in development of modern German. S/U or letter grading.  
232. Old High German. (4) Discussion, three hours. Introduction to earliest phases of German literature, with extensive readings in major documents of that period (750 to 1050). Emphasis on grammatical interpretation of these documents and identification of dialects used in their composition. S/U or letter grading.  
C238. Linguistic Theory and Grammatical Description. (4) Lecture, three hours. Requisite: course 150 or Linguistics 20. Problems in structure of Dutch and German, considered from theoretical frameworks such as sign-oriented grammar, functional linguistic approaches, discourse grammar, and cognitive linguistics. Discussion of formal linguistic approaches. Concurrently scheduled with course C172. Graduate students meet as group one additional hour each week and write research papers of greater length and depth. Letter grading.  
251. Seminar: Germanic Linguistics. (4) Seminar, three hours. Current topics in synchronic or diachronic linguistics, such as specific issues in generative grammar, sociolinguistics and dialectology, or language contact. Letter grading.  
252. Seminar: Historical and Comparative Germanic Linguistics. (Seminar, three hours. Topics selected from field of historical German phonology and syntax according to needs and preparation of students enrolled (e.g., West Germanic problem and classification of early non-Germanic languages, development of Germanic verbal and nominal morphology prior to Germanic syntax). S/U or letter grading.  
257. Seminar: Age of Goethe. (4) Seminar, three hours. Selected topics in literature and culture between 1740 and 1840 with special emphasis on work of Goethe and Schiller as it relates to philosophic texts such as Hegel's Phänomenologie des Geistes or as it relates to historical events such as French and American Revolutions. Letter grading.  
258. Seminar: Romanticism. (4) Seminar, three hours. Discussion of specific author or topic from Romantic period, possibly in close connection with course 208B. Critical review of secondary works. S/U or letter grading.  
260. Seminar: Modern Period. (4) Seminar, three hours. In-depth analysis of one particular issue in pre-1945 German literature and culture. Letter grading.  
261. Seminar: Contemporary Literature. (4) Seminar, three hours. In-depth analysis of one particular issue in post-1945 German literature and culture. Letter grading.  
262. Seminar: German 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 interpretive 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 in modern world as it is 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 that 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. Three combination of lectures, online demonstration, and hands-on activities in and outside class, students understand how to efficiently use library and databases. S/U or letter grading.
Undergraduate Study

Gerontology Minor

To enter the Gerontology minor, students must have an overall grade-point average of 2.0 or better.

Required Upper Division Courses (28 units):
- Gerontology M140 and six courses from M104C, M104D, M104E, M119O, M119X, M150, Community Health Sciences 90, Psychology M117J, 124G, 195A (only 8 units may be applied toward the minor; fieldwork placements must be approved by the chair of the minor), Women's Studies 185 (only when the special topic is women, health, and aging).

All minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Gerontology

Upper Division Courses

M104C. Diversity in Aging: Roles of Gender and Ethnicity. (4) (Same as Social Welfare M104C and Women's Studies M104C.) Lecture, four hours. Exploration of complexity of variables related to diversity of the aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in a multidisciplinary perspective utilizing faculty from a variety of fields to address issues of diversity. Letter grading.

M104D. Public Policy and Aging. (4) (Same as Social Welfare M104D.) Examination of theoretical models and concepts of the policy process, with application to aging policy. Analysis of decision-making processes that affect aging policy. Description of history of contemporary aging policy. Exploration of current policy issues affecting the elderly. P/NP or letter grading.

M104E. Social Aspects of Aging. (4) (Same as Social Welfare M104E.) Topics include theories of aging, economic factors, changing roles, social relationships, and special populations. Weekly seminars organized around a key aspect of social gerontology. P/NP or letter grading.

M119O. Psychology of Aging. (4) (Same as Psychology M119O.) Requisite: Psychology 115. Designed for juniors/seniors. Aging refers to develop-mental changes occurring at end stages of life. Some alterations that occur represent improvement, others are detrimental. Examination of impact of aging process on mental phenomena and exploration of ways in which positive changes can be maximally utilized and impact of detrimental alterations minimized. P/NP or letter grading.

M119X. Biology and Behavioral Neuroscience of Aging. (4) (Same as Psychology M119X.) Lecture, three hours. Designed for juniors/seniors. Biologic mechanisms of aging process and its terminal phase, death, have been increasingly studied in recent years. Establishment of what is known experimentally about biology and behavioral neuroscience of aging and evaluation of theories developed to account for this knowledge. P/NP or letter grading.

120. Sex and Aging. (4) Lecture, three hours. Sexuality in aging from psychological, psychobiological, physical, and psychosocial perspectives, with emphasis on differences between females and males concerning physical and social changes that occur with aging and how this impacts on emotional well-being and human sexual response. P/NP or letter grading.
M140. Introduction to Study of Aging. (4) (Same as Psychology M140 and Social Welfare M140.) Lecture, three hours. Designed for juniors/seniors. Perspectives on major features of human aging — biological, social, psychological, and humanistic. Introduction to information on the range of influences on aging to prepare students for subsequent specialization. P/NP or letter grading.

M141. Women, Health, and Aging: Policy Issues. (4) (Same as Health Services CM141 and Women’s Studies M141.) Lecture, three hours; discussion, one hour. Preparation: two upper division social sciences courses, two upper division biological sciences courses. Social and economic context of older women’s aging, major physical and psychological changes older women experience, delivery of health services to this population, and policies that respond to their health needs. Letter grading.

M150. Sociology of Aging. (4) (Same as Sociology M150.) Lecture, three hours; discussion, one hour. Study of sociological processes shaping definition, society. Topics include race, class, and gender in aging over life course; interpersonal relations and social worlds of aged; caregiving relations and institutions; professions concerned with aged and aging.

195. Community or Corporate Internships in Gerontology. (4) Tutorial, one hour; internship (approved community setting). Requirements: courses M119O or M119X, M140. Limited to juniors/seniors. Internship in applications of gerontology in supervised setting in community agency or business. Students meet on regular basis with sponsor and provide periodic reports of their experience. Culuminating report required. May be repeated for credit, but only 8 units may be applied toward minor. Individual contract with supervising placement sponsor required. Information and contracts may be obtained from Gerontology Advising Office, 8631 Franz Hall. P/NP or letter grading.

196. Research Apprenticeship in Gerontology. (2 to 4) Tutorial, three hours per week per unit. Requirements: courses M119O or M119X, and M140. Limited to juniors/seniors. Entry-level research apprenticeship with practical applications of gerontology through research under guidance of faculty mentor. Individual contract required. Information and contracts may be obtained from Gerontology Advising Office, 8631 Franz Hall. P/NP or letter grading.

199A. Directed Research or Senior Project in Gerontology. (2 to 4) Tutorial, to be arranged. Requires: courses M119O or M119X, and M140. Limited to juniors/seniors. Supervised individual research under guidance of gerontology faculty mentor. Culuminating paper required. May not be repeated for credit. Individual contract required. Information and contracts may be obtained from Gerontology Advising Office, 8631 Franz Hall. Letter grading.

199B. Guided Research or Senior Project in Gerontology. (4) Tutorial, to be arranged. Requires: courses M119O or M119X, and M140. Limited to juniors/seniors. Supervised individual research under guidance of gerontology faculty mentor. Culuminating paper required. May be repeated for credit. Individual contract required. Information and contracts may be obtained from Gerontology Advising Office, 8631 Franz Hall. P/NP grading.

<http://www.international.ucla.edu/idps/globalstudies/>

John A. Agnew, Ph.D., Chair
Faculty Advisory Committee
John A. Agnew, Ph.D. (Geography)
Andrew Apter, Ph.D. (Anthropology, History)
Michael Mare, Ph.D. (Sociology)
Saloni Mathur, Ph.D. (Art History)
Kal Raustiala, Ph.D., J.D. (Law)
Allen J. Scott, Ph.D. (Geography, Public Policy)
Kenneth L. Sokoloff, Ph.D. (Economics)
Dominic R. Thomas, Ph.D. (Comparative Literature, French and Francophone Studies)
Daniel S. Treisman, Ph.D. (Political Science)
Amy B. Zegart, Ph.D. (Public Policy)

Scope and Objectives
The Global Studies major provides undergraduates 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
Global Studies B.A.

Admission
To enter the Global Studies major, students must have a minimum grade-point average of 2.5 and must have completed all non-language preparation for the major courses and one modern foreign language equivalent to level 3 at UCLA. Interested students are strongly advised to meet with the academic counselor to discuss the requirements and must file a petition in the Undergraduate Advising Office, 10375 Bunche Hall, to declare the major.

Preparation for the Major
Required: Global Studies 1; one statistics course selected from Political Science 6, 6R, Statistics 10, 11, or 12; demonstrated proficiency equivalent to level 6 at UCLA in one modern foreign language; and five additional courses as follows: (1) one culture and society course selected from Anthropology 9, Comparative Literature 1C or 2CW, 1D or 2DW, Ethnomusicology 25, Geography 3, 6, History 2B, or World Arts and Cultures 20, (2) one governance and conflict course selected from History 22, Political Science 10, 20, 30, 50, 50R, or Sociology 1, and (3) one markets course selected from Economics 165, 1, 2, or Geography 4. The remaining two courses, taken from two separate categories, may be selected from the three lists above. One course from the following list may be applied toward the culture and society category: Asian 70C, French 14, 14W, Italian 42A, 42B, Portuguese M42, M44, Russian 90B, 90BW, Spanish M42, M44.

Transfer Students
Transfer applicants to the Global Studies 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.

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: Global Studies 100A, 100B, 110A, 110B, 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 M147, Communication Studies 22, Comparative Literature 100, C173, English 114, Film and Television 110C, French 142, Geography 133, 138, Sociology 151, 154, M162, 191F, Women’s Studies M147C, M154Q, M162, World Arts and Cultures 102; (2) governance and conflict — Asian American Studies 171A, Geography 140, History 121E, 121F, 135C, Political Science 125, 138B, 140, Public Policy CM117, Sociology 182; (3) markets — Anthropology 153P, Chicana and Chicano Studies 125, Economics 110, 120, 121, 122, 181B, Geography 148, History 131A, International Development Studies M100B, Political Science 124A, M167C, Sociology 183.

During their senior year, students must also take Global Studies 191, 194, 199A, and 199B.

Global Learning Institutes
After successful completion of Global Studies 100A and 100B, majors are expected to attend

GLOBAL STUDIES
Interdepartmental Program
College of Letters and Science
UCLA
10375 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
(310) 206-2806
fax: (310) 206-3555
e-mail: undergraduate@international.ucla.edu
a summer Global Learning Institute at one of several locations around the world in which they enroll in Global Studies 110A and 110B. Students who cannot attend the summer travel study program must instead take two upper division courses on the globalization of one of the world's regions, subject to approval by the program chair.

At the end of the institute, students may stay in the foreign country to pursue internships in local government, corporate, or nonprofit organizations.

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 70Q, Comparative Literature 1C or 2C, 1D or 2D, Ethnomusicology 25, French 14, 14W, Geography 3, 6, History 2B, Italian 42A, 42B, Near Eastern Languages 50C, Portuguese M42, M44, Russian 90B, 90BW, Spanish M42, M44, World Arts and Cultures 20, (b) governance and conflict — History 22, Political Science 10, 20, 30, 50, 50R, Sociology 1, and (c) markets — Economics 1, 2, Geography 4.


Global Studies minors are highly encouraged to participate in a summer Global Learning Institute. The courses offered, Global Studies 110A and 110B, may be applied toward any two of the elective categories (culture and society, governance and conflict, and markets).

No more than two upper division courses (8 to 10 units) may be applied toward both this minor and a major or minor in another department or program.

All minor courses must be taken for a letter grade, with 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 Course

1. Introduction to Global Studies. (5) Lecture, three hours; discussion, one hour. Enforced requisite: course 100A. 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.

100A. Globalization: Concepts and History. (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; and issues confronting globalized world today. Structured around three thematic categories — culture and society, governance and conflict, and markets — designed to capture principal dimensions of meaningful connections among nation-states, nongovernmental organizations, ethnic, cultural, and religious groups, and populations around world. P/NP or letter grading.

Upper Division Courses

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; and issues confronting globalized world today. Structured around three thematic categories — culture and society, governance and conflict, and markets — designed to capture principal dimensions of meaningful connections among nation-states, nongovernmental organizations, ethnic, cultural, and religious groups, and populations around world. P/NP or 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.


191A. Variable Topics Research Seminars: Global Studies — Senior Seminar. (4) Seminar, three hours. Enforced requisites: courses 110A, 110B. Limited to senior Global Studies majors. Organized on topics basis with readings, discussions, papers, and development of culminating project. May not be repeated for credit. Letter grading.


Health Services

School of Public Health

UCLA

31-269 Center for the Health Sciences

Box 951772

Los Angeles, CA 90095-1772

(310) 825-2594, 825-7863

fax: (310) 825-5317

http://www.ph.ucla.edu/hs/

Robert M. Kaplan, Ph.D., Chair

Patricia A. Ganz, M.D., Vice Chair

Professors

Emily K. Abel, Ph.D.
Kathryn A. Atchison, D.D.S., M.P.H.
Roshan Bastani, Ph.D.
Robert H. Brook, M.D., Sc.D.
E. Richard Brown, Ph.D.
William S. Comanor, Ph.D.
William E. Cunningham, M.D., M.P.H.
Susan L. Etter, Ph.D.
Jonathan E. Fielding, M.D., M.P.H., in Residence
Patricia A. Ganz, M.D.
Lillian Gelberg, M.D.
Neal A. Halfon, M.D.
David E. Hayes-Bautista, Ph.D.
Ronald D. Hays, Ph.D.
Felicia S. Hodge, Dr.P.H.
Robert M. Kaplan, Ph.D. (Fred W. and Pamela K. Wasserman Professor of Health Services)
Gerald F. Kominski, Ph.D.
Mark S. Litwin, M.D., M.P.H.
Carol M. Mangione, M.D., M.S.H.S.
Marvin Marcus, D.D.S.
Vickie M. Mays, Ph.D.
John W. Peabody, M.D., Ph.D., in Residence
Thomas H. Rice, Ph.D.
Lisa V. Rubenstein, M.D., in Residence
Stuart O. Schweitzer, Ph.D.
Martin F. Shapiro, M.D.
Paul R. Torrens, M.D., M.P.H.
Kenneth B. Wells, in Residence
Antronette K. Yancey, M.D., Ph.D.

Professors Emeriti

Ronald M. Andersen, Ph.D.
Lesler Breslow, M.D., M.P.H.

Associate Professors

Paul C. Fu, Jr., M.D., M.P.H.
Clifford Y. Ko, M.D.
Jack Needleman, Ph.D.
Alex N. Ortega, Ph.D.
Ninez A. Ponce, Ph.D., in Residence

Assistant Professors

Moiira Inkelas, Ph.D.
Miriam J. Laugesen, Ph.D., in Residence
Patricia H. Parkerton, Ph.D., in Residence

Lecturer

Bruce W. Bennett, Ph.D.

Adjunct Professors

Ellen Alkon, M.D., M.P.H.
Arlene Fink, Ph.D.
Dana P. Goldman, Ph.D.

358 / Health Services
public and private agencies involved in health services research and policy analysis.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnnet.ucla.edu/gasa/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 Health Services offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Health Services.

Health Services

Upper Division Courses

100. Health Services Organization. (4) Lecture, four hours; discussion, one hour. Preparation: 4 units of social sciences. Structure and function of American 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. Introduction to 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.

CM141. Women, Health, and Aging: Policy Issues. (4) (Same as Gerontology M141 and Women's Studies M141.) Lecture, three hours; discussion, one hour. Preparation: two upper division social sciences courses, two upper division biological sciences courses. Social and economic context of older women's aging; major physical and psychological changes older women experience; delivery of health services to this population, and policies that respond to their health needs. Concurrently scheduled with course CM241. Letter grading.

197. Individual Studies in Health Services. (2 to 4) (Formerly numbered 199.) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A-200B. Health Systems Organization and Financing. (4 to 6 each) Lecture, four to six hours; discussion, two hours. Limited to graduate health services students. In-depth analysis of health 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. Qualitative 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.

M204A-M204B-M204C. Seminars: Pharmaceutical Economics and Policy. (1-1-2) (Same as Economics M204A-M204M-M204N) Seminar, three hours every other week for three terms. Requisites: course M236, Economics 201A, 201B, 201C. Limited to graduate public health and economics students. Various topics in economics of pharmaceutical industry, including rates of innovation, drug regulation, and economic impact of pharmaceuticals. In Progress (M204A, M204B) and S/U or letter (M204C) grading.

205. 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 processes. Letter grading.


207. Current Topics in Health Services: Practice and Policy Perspectives. (2) (Formerly numbered 207A-207B-207C.) Seminar, two hours. Required of Dr.P.H. students. Examination and discussion of current health services topics in various practice sectors, with focus on organizational leadership and direction in addressing these issues. Journal club discussions of relevant scientific literature, presentations of dissertation work by advanced Dr.P.H. students, and interactive lectures/discussions by professionals in public health practice and healthcare management. S/U or letter grading.


220. Seminar: Cost Containment. (4) Seminar, three hours. Through lectures and discussion of journal articles, analysis of success and failure of alternative methods of controlling U.S. healthcare costs. Examination of how other countries have controlled their costs. Letter grading.

CM221. Tobacco: Prevention, Use, and Public Policy. (4) (Same as Community Health Sciences M223.) 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 interventions, cessation interventions, anti-tobacco efforts in U.S., and international trends in tobacco use. Concurrently scheduled with course C121. Letter grading.


Scope and Objectives

The field of health services examines the organization and financing of various activities to prevent and treat disease. This includes programs in both the public and private sectors at all levels — local, state, and federal.

Faculty members come from diverse fields such as economics, management, law, statistics, operations research, planning, medicine, history, sociology, and political science. These diverse backgrounds are harmonized by their devotion to the analysis of problems in the financing and delivery of health services, with focus on populations rather than individual patients.

The Department of Health Services offers both practice-oriented and research-oriented graduate programs. The primary professional degree, the Master of Public Health (M.P.H.), includes training in various aspects of health administration such as policy formulation, health planning, organization, and management. For more advanced professional work, the Dr.P.H. degree offers education in the full scope of public health services and prepares candidates for leadership in community health work at all jurisdictional levels. For information on the M.P.H. and Dr.P.H., see Public Health Schoolwide Programs.

For those interested in careers in research and teaching, the department offers M.S. and Ph.D. degrees in Health Services. These programs maintain close ties with related activities in the Schools of Dentistry and Medicine, including the Robert Wood Johnson Clinical Scholars Program, the Program in Prevention, and the Cancer Control Division. The RAND/UCLA Center for Health Policy Study and the RAND/UCLA Center for Healthcare Financing Research afford opportunities for joint activities with the RAND Health Sciences Program. Graduate students of the academic degree programs pursue careers in universities, as well as in

Emmett B. Keeler, Ph.D.
Martin L. Lee, Ph.D.
Antonio P. Leporeto, Ph.D.
Thomas M. Priselac, M.P.H.
Anthony H. Schiff, J.D.
Mark A. Schuster, M.D., Ph.D.

Adjunct Associate Professors

Barbara A. Berman, Ph.D.
Pamela L. Davidson, Ph.D.
Farah A. Hagigi, Dr.P.H., M.B.A., C.M.C.
Diana W. Hilberman, Dr.P.H.
Geoffrey F. Joyce, Ph.D.
Jeffrey Luck, Ph.D., M.B.A.
Annette Maxwell, Ph.D.
William J. McCarthy, Ph.D.
Naderah Pourat, Ph.D.
Maren T. Scheuner, Ph.D.
Richard E. Sinaiko, M.P.H.
Amadeep S. Thind, M.D.
L. Carl Volpe, Ph.D.
Elizabeth M. Yano, Ph.D.

Adjunct Assistant Professors

Aram Dobalian, Ph.D.
Beth Glen, Ph.D.
Robert J. Nordsythe, Ph.D.
Lori S. Pelliccioni, Ph.D., J.D.
Leah J. Vriesman, Ph.D.

Amardeep S. Thind, M.D.
Maren T. Scheuner, Ph.D.
Antonio P. Legorreta, Ph.D.
Martin L. Lee, Ph.D.
Emmett B. Keeler, Ph.D.

Program Requirements for UCLA
CM241. Women, Health, and Aging: Policy Issues. (4) (Same as Social Welfare M290D.) Lecture, three hours; discussion, one hour. Prerequisites: two upper division social sciences courses, two upper division biological sciences courses, Social and economic context of older women’s aging, major physical and psychological changes older women experience, delivery of health services to this population, and policies that respond to their health needs. Concurrently scheduled with course CM141. Letter grading.

M242. Determinants of Health. (4) (Same as Community Health Sciences M252.) Lecture, four hours. Discussion, one hour. Prerequisites: consent of instructor. Participating students will study selected topics in critical review and discussion of selected papers dealing with course topics, including small and large area variations in care, and development and implementation of clinical guidelines. Emphasis on implications for health policy. Letter grading.

M249L. Ethical Issues in Public Health. (4) (Same as Community Health Sciences M249L.) Lecture, four hours. Prerequisites: courses 200A, 200B. Case conferences, based on real-life experience, focus on ethical issues in health services organization and management, including ethical issues related to conflict of interest, quality of care, transparency, resource selection, choice of drugs, reproductive rights, AIDS, and resource allocation. Letter grading.

236. Microeconomics of Health Care. (4) (Same as Public Policy M268.) Lecture, four hours; discussion, two hours. Prerequisites: two upper division social sciences courses, two upper division social sciences courses, two upper division social sciences courses. Microeconomic aspects of healthcare system, including health manpower substitution, choice of efficient modes of treatment, market efficiency, and competition. Letter grading.

237. Special Topics in Health Services Research Methodology. (4) Lecture, four hours. Prerequisites: Biostatistics 200A. Approaches to conceptualization, modeling, design, literature reviews, sampling, data collection, and research. Development of health services research proposal required. Letter grading.

237B. Special Topics in Health Services Research Methodology. (4) Lecture, four hours. Prerequisites: Biostatistics 200A, or 200B or 201. Introduction to multivariate analysis techniques in health services research. Model specification and estimation, regression diagnostics, variable transformations, instrument variables. Application of statistical software using large-scale national database. Letter grading.

237C. Issues in Health Services Methodologies. (4) Lecture, four hours. Prerequisites: courses 237A, 237B, Biostatistics 200A, 200B (or 201). Designed for doctoral students. Intended to train students in statistical and economic methods used in health services research, with focus on practical application of advanced regression models. Letter grading.

238. Politics of Healthcare. (4) Lecture, four hours. Prerequisite: course 100. Concepts and procedures for political analysis; national, state, and local politics in healthcare; examination of selected case studies. S/U or letter grading.

239. Aging and Long-Term Care. (4) Lecture, four hours. Prerequisites: courses 200A, 200B. Community Health Sciences 270A, 270B. Long-term care of the chronically ill elderly examined from perspective of health, health service programs. Letter grading.

240. Healthcare Issues in International Perspective. (4) Lecture, four hours. Prerequisites: two upper division social science courses. Analysis of crucial issues in healthcare; manpower policy, economic support, health facilities, patterns of health service delivery, regulation, planning. Other healthcare systems probed in settings of European welfare states, developing nations, and socialist countries. S/U or letter grading.

M249J. Mental Health Services. (4) (Same as Psychiatry M251.) Lecture, three hours. Prerequisites: courses 200A, 200B. Designed for graduate students. Survey of contemporary American delivery of health services to emotionally and mentally ill and retarded. Analysis of characteristics of such services, with historical background of their evolution and projections of their future prospects. Letter grading.

249K. Health Practice Guidelines, Variations in Care, and Patient Outcomes. (4) Lecture, three hours. Prerequisites: courses 200A, 200B, M242, Biostatistics 100A, 100B. Designed for graduate students. Examination of contemporary issues in critical review and discussion of selected papers dealing with course topics, including small and large area variations in care, and development and implementation of clinical guidelines. Emphasis on implications for health policy. Letter grading.

M249L. Ethical Issues in Public Health. (4) (Same as Community Health Sciences M249L.) Lecture, four hours. Prerequisites: courses 200A, 200B. Case conferences, based on real-life experience, focus on ethical issues in health services organization and management, including ethical issues related to conflict of interest, quality of care, transparency, resource selection, choice of drugs, reproductive rights, AIDS, and resource allocation. Letter grading.

249M. Review of Current Health Services Management Literature. (2) Lecture, two hours. Designed to help students remain current on recent developments in health services management and to place these current developments in proper context of academic research and theory. Letter grading.

249N. Accessing, Analyzing, and Presenting Health Care Management Data. (2) Lecture, two hours. Designed to provide first-year M.P.H. health professional students with basic skills, and acquisition and quantitative analysis of data for healthcare management, as well as written and oral presentation of those results. Letter grading.

249O. Tobacco and Public Policy. (4) Lecture, four hours. Information and analysis of principal issues in tobacco control. As administrators, researchers, and activists in field of tobacco control, professionals in all specialties of public health should be fully informed on strategies to combat worldwide tobacco epidemic. Letter grading.

249P. Ethical Issues and Healthcare Executive. (2) Lecture, two hours. Introduction to ethical issues facing managers in healthcare organizations today. Understanding and resolving these issues within a framework. Ethical aspects of management and administration of health services, impact of judicial and legislative actions on scope of decision making, analysis and resolution of ethical issues within context of organizational decision making. Letter grading.

249Q. Editorial Board Apprenticeship. (2) (Formerly numbered 249Q.) (Same as Psychiatry M210.) Seminar, two hours. Designed for postdoctoral fellows and advanced Ph.D. students. Participation in peer review process for academic journal, Health Psychology, with consideration of interface between behavioral science, health, and medicine. Reading and discussion of submissions and advising of editor on suitability for full review. S/U or letter grading.

249R. Cancer Prevention and Control Research. (2) Seminar, two hours. Limited to graduate students. Presentations by faculty members and outside speakers, as well as students, on research topics in cancer prevention and control as well as career development issues such as grant writing, scientific review process, 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. Requirements: 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 integrative framework to understand key issues related to implementation of evidence-based practice and set of tools to apply evidence base to improving healthcare quality. Guest lecturers included who are nationally recognized experts in management, improvement, and evaluation of clinical practice. Interactive discussion and case analyses based on materials closely related to lecture material. S/U or letter grading.

249T. Cost-Effectiveness Analysis. (4) Seminar, four hours. Requirements: course 249G. 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.

250. Evolution of Health Professions in the 20th Century. (4) Lecture, two hours; discussion, two hours. During the 20th century there have been dramatic changes in composition of helping professions. Requisite forces responsible for these changes and description of processes by which lay persons are educated/socialized into major subgroups of health professions. Review of major social forces external to healthcare system that affect its composition. Letter grading.

251. Quality Improvement and Informatics. (4) Lecture, four hours. Requirements: course 100, Biostatistics 100A. Introduction to concepts of healthcare quality measurement, process improvement, and information systems, as well as organizational aspects of implementing them. Letter grading.

M252. Medicare Reform. (4) (Same as Public Policy M267.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Analytical and managerial skills learned earlier to be used to analyze problems with existing medicare program and to develop specific options for reforming features of program to accommodate coming pressures generated by retirement of baby-boom generation. Letter grading.

M253. Advanced Topics in Health Services Research: Access to Care. (4) (Same as Community Health Sciences M268.) Lecture, three hours. Requisite: courses 237A, 237B, and 237C, or Community Health Sciences 210, 270A, and 270B. Doctoral seminar designed to explore health services research regarding access to healthcare and policies to enhance access. Topics include conceptual frameworks, measurement issues, study designs, analytic approaches, and substantive findings and trends in access and access-related policies. Letter grading.

254. Multidisciplinary Perspectives: Research Approaches to Managed Care. (4) Seminar, three hours. Requirements: courses 100, or 200A and 200B. Exploration of perspectives and methodologies of nine academic disciplines relevant to health services research. Scholars in each discipline introduce their framework and discuss applications to current research in managed care. 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 at 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 burden of infectious diseases, health economics, and impact of healthcare policy on healthcare delivery. In Progress (260A) and letter (260B) grading.

265. Challenges in Clinical Health Services Research. (4) Lecture, four hours. Requirements: 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.

265A-265B. Community-Based Participatory Health Research: Methods and Applications. (4) Lecture, one hour; discussion, one hour; fieldwork, two hours. Limited to clinical scholars fellows. Mentoring of 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, nine hours. Requisite: knowledge 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 healthcare markets. 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 the U.S. Where appropriate, discussion of international issues as well. S/U or letter grading.

286. American Political Institutions and Health Policy. (4) Lecture, three hours; discussion, one hour. To effectively participate in policy process as analyst, policymaker, advocate, or citizen, it is necessary to understand institutional and political context within which policies are made. Introduction to federal and state policy-making, with focus on health policy. Discussion of federalism and constitutionalism. Examination of stakeholder forces, public, interest groups, and nature of issue space for health policy. Structure and process of political institutions at federal level, Congress, 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. Requisite: 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 on health services in the U.S. from point of view of system itself. Exploration of various types of technology 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 evaluating effectiveness of ongoing strategies to eliminate them, such as increasing insurance coverage and delivery of culturally competent healthcare. Examination of sociological models that explain disparities in healthcare and evaluation and expansion on these models.


401. Public Health Informatics. (4) Lecture, three hours. Preparation: general familiarity and understanding of basic information technologies. Recommended requisite: course 251. Introduction to field of public health information and delivery of information. Entire process, from systems conceptualization and design to project planning and development to system implementation, and evaluation. Letter grading.


M411. Issues in Cancer Prevention and Control. (4) (Same as Community Health Sciences M411.) Lecture, four hours. Designed for juniors/seniors and graduate students. Introduction to causes and characteristics of cancer epidemic, cancer control goals for nation, and interventions designed to encourage smoking cessation/prevention, cancer screening, and other dietary, psychosocial, and lifestyle changes. Letter grading.

M420. Children with Special Healthcare Needs: Systems Perspective. (4) (Same as Community Health Sciences M420) Lecture, three hours; fieldwork, one hour. Examination and evaluation of principles, policies, programs, and practices that have evolved to identify, assess, and meet special needs of infants, children, and adolescents with developmental disabilities or chronic illness, and strategies to improve their health. Letter grading.


M428. Child and Family Health Program Community Leadership Seminar. (2) (Same as Community Health Sciences M428.) Seminar, two hours. Designed for graduate students. Examination of characteristics of community-based organizations (CBOs) and role of leadership in decision-making process involved in major issues facing maternal and child health in Los Angeles County. Focus on specific leadership competencies that are or should be employed by organizations effectively serving maternal and child health programs and policies (or any population-level policies and programs). Leaders from CBOs in Los Angeles meet with students, comment on their practice experiences, and engage leadership concepts demonstrated by those CBOs. S/U grading.
430. New Developments in E-Health and Internet. (4) Lecture, four hours. Introduction of new technolo-
gies 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.

431. Managerial Processes in Health Services Or-
ganizations. (4) Lecture, one hour; laboratory, three hours. Requisites: courses 100, 234. Managerial skills
and behaviors applied to components of organizations at several levels: individual, interpersonal, group, inter-
group, system, and interorganization. Unique features of health services organizations are stressed as appli-
cations are presented. Letter grading.

432. Integrative Seminar: Health Services Man-
gement. (4) Seminar, four hours. Requisite: course 431. Residents and preceptors are responsible for
presenting cases of actual administrative problems for solution by teams of students and faculty. S/U or letter
grading.

433. Health Services Organization Policy and
Strategy. (4) Lecture, three hours; discussion, one hour. Requisites: courses 200A, 200B, 234, M326.
Biostatistics 100A, Management 403. Conceptual, analytical, and practical aspects of policy and strategy
formulation in health services organizations. Special
attention to structure and dynamics of competitive
markets, corporate-level strategic planning and mar-
teting, managerial ethics and values, organizational
creativity/innovation. Letter grading.

434. Employer/Employee Health Management. (4)
Lecture, two hours; discussion, two hours. Prepara-
tion: a combination of three graduate courses in health
planning, hospital finance, health policy, health insur-
ance, occupational health, health services research,
and health information systems. Requisite: course
100. Preview and analysis of how employer and em-
ployee groups provide, sponsor, and manage health-
related services for others. S/U or letter grading.

435. Healthcare Financial Management. (4) Lec-
ture, four hours. Requisites: courses 234, 403. Appli-
cation of financial management and accounting prin-
ciples to healthcare facilities, including unique finan-
cial characteristics of healthcare facilities, third-party
reimbursement, cost finding and rate setting, opera-
tional and capital budgeting, auditing, and risk man-
agement. S/U or letter grading.

437. Legal Environment of Health Services Man-
gagement. (2) Lecture, two hours. Requisites: courses
200A, 200B. Introduction to principles of medical auditing;
study of healthcare as result of growth of managed care. Let-
ter grading.

440. Health Information Systems: Organization
and Management. (4) Lecture, two hours; laboratory,
three hours. Requisite: course 440A. Health and ad-
ministrative research using clinical records. Principles
of planning for routine and special studies. Individual
investigation in methods of obtaining and processing
data to meet needs of programs in institution and agen-
ty. Introduction to principles of medical audit and
analysis of medical and health services. S/U or letter
grading.

441. Ambulatory Care in the U.S. (4) Seminar,
three hours. Requisites: courses 200A, 200B, 403,
Management 403. Introduction to organization and
management concepts, problems, and issues in amb-
ulatory health services, including financial manage-
ment and information systems requirements. Letter
grading.

442. Managed Care. (4) Lecture, four hours. Requi-
sites: courses 200A, 200B. Position of managed care
in the U.S. and how it functions. Introduction to impor-
tant technical and organizational developments. Ex-
ploration of changes in organization and delivery of
healthcare as result of growth of managed care. Let-
ter grading.

443. Biological and Social Bases of Prevention.
(4) Lecture, two hours; discussion, two hours. Requi-
sites: courses 100 (or 200A and 200B), Biostatistics
100A, Epidemiology 100. Designed for graduate stu-
dents in health professions. Understanding and status,
and potential of preventive medicine in public health practice, focusing on risk indicator approach (exercise, alcohol, stress,
etc.), with consideration of program settings, delivery
problems, and issues. Letter grading.

444. Applied Methodology in Health Planning. (4)
Lecture, three hours; fieldwork, four hours. Requi-
sites: courses 200A, 200B. Demonstration of method-
ology of health planning by involving students in for-
mulation of actual health plan for existing agency in
Los Angeles area. Letter grading.

445. Healthcare Marketing. (2 to 4) Lecture, two
hours. Requisites: courses 200A, 200B. Introduction to
concepts of healthcare marketing. Exploration of
principles of market-driven decision-making process.
Examination of development of key elements in annu-
al marketing process and of consumer, competitor,
customer analysis, market segmentation, and target
markets. Letter grading.

447. State Health Policy Issues. (4) Seminar, three
hours. Requisite: course 238. Focus on health policy
development and implementation at state government
level, with emphasis on financing, direct provision,
and regulation of public health services, facilities, equip-
ment technology, and manpower. Exploration of inter-
governmental relationships. S/U or letter grading.

447E. Health Insurance Principles and Programs.
(4) Lecture, four hours. Preparation: one health ser-
cvices course. Requisites: courses 100, 232. Examina-
tion of social, actuarial, and commercial assumptions
underlying private health insurance. Comparison with
government-sponsored health insurance. Analysis of
diversity of voluntary medical care insurance plans
under different sponsorships and with varied scopes of
coverage and benefits and their implications for public
and private medical care developments. S/U or letter
grading.

M448. Health Policy Issues for Dental Profession-
als. (2) Same as Dentistry M422.) Lecture, two hours.
Requisites: course 100, Biostatistics 100A, Epidemi-
ology 100. Current public health policy issues in
dental health, including cost, financing, role of gov-
ernment, and quality assurance. S/U grading.

M448D. Case Studies in Dental Practice. (2)
(Same as Dentistry M423A.) Lecture, two hours. Pro-
vides students with practical insights into organization

M449A-M449B. Child Health, Programs, and Poli-
cies. (4-4) (Same as Community Health Sciences
M436A-M436B.) Lecture, four hours. Requisite:
course 100. Course M449A is requisite to M449B. Ex-
amination of history of childhood health policy trends and
determinants of health, structure, and function of health
service system; needs, programs, and policies affecting
sex, age, and race at-risk populations. Letter grading.

450. Healthcare Financial Applications. (4) Lec-
ture, four hours. Requisites: courses 200A, 200B.
Study of healthcare financial management, including
variables of cost of funds, availability of physicians
to provide necessary patients, efficiency of operations,
and legal constraints. Letter 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,
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 stu-
dents. Individual directed 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 grading.

597. Preparation for Master's Comprehensive or
Doctoral Qualifying Examinations. (2 to 12) Tutori-
al, to be arranged. Limited to graduate students. May
not be applied toward any degree course require-
ments. 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) Tu-
torial, to be arranged. May not be applied toward any
degree course requirements. May be repeated for
credit. S/U grading.

HISTORY
College of Letters and Science
UCLA
6265 Bunche Hall
Box 951473
Los Angeles, CA 90095-1473
(310) 265-4601
fax: (310) 206-9630
http://www.history.ucla.edu

Edward A. Alpers, Ph.D., Chair

Professors
Edward A. Alpers, Ph.D.
Francis R. Anderson, B.A.
Andrew Apter, Ph.D.
Stephen A. Aron, Ph.D.
Peter Baldwin, Ph.D.
Ivan T. Berend, Ph.D.
Kathryn Bernhardt, Ph.D.
Russ H. Bloch, Ph.D.
Robert P. Brenner, Ph.D.
Brian P. Copenhaver, Ph.D.
Soraya de Chadarevian, Ph.D., Acting
Ellen J. DuBois, Ph.D.
John Duncan, Ph.D.
Christopher Ehret, Ph.D.
Caroline C. Ford, Ph.D.
Robert G. Frank, Jr., Ph.D.
Saul P. Friedlander, Ph.D. (1939 Club Professor)
Patrick Geary, Ph.D.
James L. Gelvin, Ph.D.
J. Arch Getty, Ph.D.
Undergraduate Study

History B.A.

The History Department's undergraduate program consists of 16 courses in history (six lower division — the Preparation for the Major, including the pre-major requirements; 10 upper division — the Major). All courses must be taken for a letter grade.

Preparation for the Premajor and Major

Required for the Premajor: Three courses, including two in Western civilization (History 1A, 1B, 1C) or two in world history (courses 20, 21, 22), and one course from 96W or 97A through 97O.

After completing the three courses with a minimum grade-point average of 2.0, students should petition to enter the major at the undergraduate counselor's office in 6248 Bunche Hall. Required for the Major: Three additional lower division history courses.

Transfer Students

Transfer applicants to the History major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one semester or two quarters of history of Western civilization or world history, one historical practice course, and three additional lower division history courses.

Transfer credit for the premajor courses is subject to department approval. Transfer students should consult the undergraduate counselor before enrolling in any courses for the major.

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

The Major

Required: At least 10 upper division history courses, including (1) two courses in U.S. history, (2) two courses in non-Western history from the same area (i.e., Latin America, Asia, Near East, Africa), (3) two courses in European history or in history of science, and (4) History 191.

The requirements for U.S., non-Western, and European history may be fulfilled with either upper or lower division courses, but majors are required to take a minimum of 10 upper division history courses.

There is no language requirement for the major; however, students wishing to enter the honors program or planning to do graduate work in history are urged to pursue language study early in their undergraduate careers.

Advanced Placement Credit in History

Effective Fall Quarter 2002 for entering freshmen, no course credit is granted for any AP Test.
Honors Program
The honors program is designed for History majors who are interested in completing a year-long research project that culminates in an honors thesis. A 3.5 departmental grade-point average is required for admission. To graduate with departmental honors, students must have a cumulative or overall GPA of at least 3.0 in all University-level coursework and at least a 3.5 GPA in all coursework required for the major.

The honors thesis must be completed in three terms, on the basis of work carried out in History 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. When students register for honors, they must provide the undergraduate affairs vice chair with a two-paragraph description of their thesis project, which must be approved in writing by the faculty member who agrees to act as their adviser. The undergraduate affairs vice chair must also approve the proposed project in writing. The faculty adviser is primarily responsible for guiding the thesis work to its completion and assigns grades for the honors courses after the thesis is complete. The honors thesis should be 40 to 60 pages in length and be based on primary source material. Determination of the level of honors awarded (no honors, honors, or highest honors) is made by the undergraduate affairs vice chair in conjunction with the honors committee, at the end of the term in which the thesis is completed.

History of Science and Medicine Minor
The History of Science and Medicine minor is designed for students who wish to augment their major, perhaps in one of the sciences, with a series of courses that analyze the historical growth, impact, and significance of science and medicine in Western and world culture. The minor consists of a choice of lower division courses that expose students to overviews of science and medicine in large time periods or to specific thematic concerns. Upper division courses offer more focused and often smaller classes that explore crucial episodes or areas with a more rigorous and sophisticated content and methodology.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units and at least one lower division course in the history of science or medicine for a letter grade, and file a petition with the minor adviser in 6265 Bunche Hall.

Required Lower Division Courses (12 units):
Three courses from History 2B, 2D, 3A through 3D, Philosophy 8.

Required Upper Division Courses (20 units):
Five courses from Anthropology 182, 183, History 179A through 180C, any upper division Honors Collegium courses with history of science or history of medicine content, Neurobiology M168 (or Physiological Science M168), Philosophy 124.

Each year certain undergraduate seminars in the History 191 sequence are designated as applicable to the upper division minor requirements. Students may also petition to have other relevant courses, including those from other departments, applied toward the upper division requirements.

At least one upper division course, to be selected and approved in consultation with the undergraduate or faculty adviser, must involve writing a research or interpretative paper of significant length and intellectual content. No more than one upper division course may be applied toward both this minor and a major or minor in another department or program. Transfer credit for courses may be subject to departmental approval.

One course may be taken on a Passed/Not Passed basis; all other minor courses must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of History offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in History.

History
Lower Division Courses
1A-1B-1C. Introduction to Western Civilization. (5-5-5) Lecture, three hours; discussion, two hours. Broad, historical study of major elements in Western heritage from the world of the Greeks to that of the 20th century, designed to further beginning students' general education, introduce them to ideas, attitudes, and institutions basic to Western civilization, and acquaint them, through reading and critical discussion, with representative contemporary documents and writings of enduring interest. P/NP or letter grading.

1A. Ancient Civilizations from Prehistory to Circa A.D. 843; 1B. Circa A.D. 843 to Circa 1715; 1C. Circa 1715 to the Present.

1A/1BH-1CH. Introduction to Western Civilization (Honors). (5-5-5) Lecture, three hours; discussion, two hours. Honors sequence parallel to courses 1A, 1B, 1C. P/NP or letter grading. 1A/1BH. Ancient Civilizations from Prehistory to Circa A.D. 843 (Honors); 1CH. Circa A.D. 843 to Circa 1715 (Honors); 1CH. Circa 1715 to the Present (Honors).

2A. Power, Ethics, and Technological Change. (4) Lecture, three hours; discussion, two hours. Examination of historical and theoretical relationships between ethical behavior, corporate practice and political and technological change. Topics include engineering practice and business ethics, corporate practices and social responsibility, and ethical behavior in the marketplace. Texts include Three Mile Island, Chernobyl, the DC-10, and Challenger Disaster. P/NP or letter grading.

2B. Social Knowledge and Social Power. (5) Lecture, three hours; discussion, two hours. History of social knowledge and social power in the 19th and 20th centuries. Everyday ideas and practices about human nature, common sense, and community and relations of those practices to social thought, social engineering, and social science. Themes include development of social knowledges through public activities and discourse; how social knowledge differs in agricultural, mercantile, industrial, and information-based political economies; and how social science addresses these issues. P/NP or letter grading.

2C-2D. Religion, the Occult, and Science. (5-5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

2C. Mystics, Heretics, and Witches in Western Tradition, 1000 to 1600. (5) Lecture, three hours; discussion, two hours. Specific aspects of elite and popular culture in medieval and early modern Europe. Manner in which men and women sought to explain, order, and escape terrors of their lives by embracing transcendent religious experiences and dreaming of apocalypse 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 the Present. (5) Lecture, three hours; discussion, two hours. Science and religion as historical phenomena that have evolved over time. Examination of earlier mindset before 1700 when into science fitted elements that came eventually to be seen as magical. How Western cosmologies became "disenchanted." Magical tradition transformed into modern mysticisms. 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. Survey of beginnings of physical sciences involving transformation from Aristotelian to Newtonian cosmology; mechanism of natural world, rise of experimental science, and origin of scientific societies. P/NP or letter grading.

3B. History of Science from Newton to Darwin. (5) Lecture, three hours; discussion, two hours. 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. Range of recent advances in physics of relativity and the quantum, and of nuclear weapons, to molecular reductionism in biology and campaigns for statistical objectivity, examination of influence of scientific thought as sociological, political, and philosophical 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.
22. Contemporary World History, 1760 to the Present. (5) Lecture, three hours; discussion, two hours. Broad treatment of world history of the mid-18th century. Examination, through lecture and discussion, of global implications of imperialism, total war, nationalism, cultural change, decolonization, changes in women’s rights and roles, and eclipse of world communism. Designed to introduce students to the study of history. Culminating project may be required. P/NP or letter grading.

88E. Sophomore Seminar: Special Topics in History. (5) Seminar, three hours. Maximum of 20 lower division students. Readings and discussions designed to introduce students to the study of history. Successful completion of this course is required for students planning to take more advanced courses in U.S. history; P/NP or letter grading.

88GE. Sophomore Seminar: Special Topics in History. (4) Seminar, four hours. Repeatable with permission of the department. Maximum of 20 lower division students. Readings and discussions designed to introduce students to the study of history. Successful completion of this course is required for students planning to take more advanced courses in U.S. history; P/NP or letter grading.

95. History Research Methods and Strategies. (1) Seminar, one hour. Development of competency with identifying, locating, critically evaluating, and using information for research projects. 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 the Internet. P/NP or letter grading.

96W. Introduction to Historical Practice. (5) Seminar, three hours. Enforced requisite: English Composition 9A or 9B or English as a Second Language 9B. Open only to students who have completed English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for former course 99W. Introduction to study of history, with emphasis on historical theory and research methods. Satisfies Writing II requirement. Letter grading.

97. Historical Practices Advanced Seminar. (1) Seminar, one hour. Corequisite: any course from History 97A through 97O. Limited to History majors. Exploration of topics covered in courses 97A through 97O in greater depth through supplemental readings, discussions, or other activities. P/NP or letter grading.

97A-97O. Introduction to Historical Practice: Variable Topics. (4 each) Seminar, three hours. Discussion classes of no more than 15 students. Introduc- tion to research in the discipline; emphasis on historical theory and research methods. Variable topics courses; consult Schedule of Classes for topics to be offered specific term. Prerequisites: History 97A. Ancient History; 97B. Medieval History; 97C. European History; 97D. U.S. History; 97E. Latin American History; 97F. Near Eastern History; 97G. East Asian History; 97H. History of Science/Technology; 97I. African History; 97K. History of Religion; 97L. Jewish History; 97M. Southeast Asian History; 97N. Indian History; 97O. World History.

M103A-M103B. Ancient Egyptian Civilization. (4-4) (Formerly numbered M104A-M104B.) (Same as Ancient Near East M103A-M103B.) Lecture, three hours; discussion, one hour (when scheduled). Course M103A is not requisite to M103B. Designed for juniors/seniors. Political and cultural institutions of ancient Egypt and ideas on which they were based. P/NP or letter grading. M103A. Chronological discussion of Prehistory, Old and Middle Kingdom. M103B. New Kingdom and Late period until 332 B.C.

M104. History of Ancient Mesopotamia and Syria. (4) (Formerly numbered M105.) (Same as Ancient Near East M104.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political and cultural development of "Fertile Crescent," including Palestine, from Late Uruk to neo-Babylonian period. L105A-105B-105C. Survey of Middle East from 500 to the Present. (4-4-4) (Formerly numbered 106A-106B-106C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Background and rise of empires, reorganization of the political system of the Middle East, and the creation of the modern Middle Eastern states. P/NP or letter grading. 105A. 500 to 1300; 105B. 1300 to 1700; 105C. 1700 to the Present.

M106. Premodern Islam. (4) (Formerly numbered 107.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors. Emphasis on early modern Islam with special attention to the role of religion in human thought and behavior, and the influence of Islamic law on society. P/NP or letter grading.

M107A-107B-107C. Medieval History. (4-4-4) (Formerly numbered 112A-112B-112C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Islamic civilization, the Middle Ages, and the history of the Islamic world. P/NP or letter grading.

M110A-M110B-M110C. Islamic Civilization. (4-4-4) (Same as Ancient Near East M110A-M110B-M110C and Iranian M110A-M110B-M110C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. The Islamic Empire, its rise, and the spread of Islam through the Middle East, North Africa, and the Horn of Africa, and the influence of Islamic law on society. P/NP or letter grading.

M111A-111B-111C. Middle Eastern History. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of political, economic, social, and cultural history of the Middle East in the 20th century. P/NP or letter grading.

M112A-112B-112C. History of Ancient Mediterranean World. (4-4-4) (Formerly numbered 115A-115B-115C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. M112A. Survey of history of ancient Egypt from earliest times to foundation of Persian Empire. M112B. History and institutions of Greece from early and middle to late classical periods. M112C. History and institutions of Rome from founding of city to death of Constantine.

M113A-113B. History of Ancient Greece. Field Studies. (4) (Formerly numbered 113D.) Fieldwork, three hours. Enforced corequisite: course 112C. Examination of history, art, and monuments of ancient Greece through daily lectures and field work on museums and archaeological sites. Part of UCLA Summer Travel Program. P/NP or letter grading.

M114A-114B-114C. History of Rome. (4-4-4) (Formerly numbered 117A-117B-117C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 114A. To the End of the Roman Republic. Emphasis on political and social changes of the late Republic leading up to the fall of the Roman Republic. 114B. To the Death of Caesar. Emphasis on development of imperial rule in Italy and the rise of Roman dominance over the Mediterranean. 114C. The Empire from Constantine to the Fall of the Western Empire. Emphasis on the history of the Roman Empire from the time of Constantine to the fall of the Western Empire.

M115A-M115B-M115C. Byzantine Studies. (4) (Formerly numbered 119A-119B-119C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 115A. Introduction to Byzantine History. Emphasis on the history of the Byzantine Empire from its origins to the fall of the Western Empire. 115B. The Eastern Empire in the 7th-12th Centuries. Emphasis on the history and institutions of Rome from founding of city to death of Constantine. 115C. The Medieval World. Emphasis on the history of the Middle Ages from the fall of the Western Empire to the present day. P/NP or letter grading.

M116C. Power and Imagination in Byzantium. (4) (Formerly numbered 122C.) (Same as Classics M170C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. M116C. Power and Imagination in Byzantium. (4) (Formerly numbered 122C.) (Same as Classics M170C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. M112A. Survey of history of ancient Egypt from earliest times to foundation of Persian Empire. M112B. History and institutions of Greece from early and middle to late classical periods. M112C. History and institutions of Rome from founding of city to death of Constantine.

120D. Film and History: Central and Eastern Europe, 1945 to 1989. (4) (Formerly numbered 124D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Postwar history of central and eastern Europe (1945 to 1989), using eight Czech, Polish, and Hungarian films to explore life under state socialist "modernization dictatorship." P/NP or letter grading.

121A-121F. History of Modern Europe. (4 each) (Formerly numbered 125A-125F.) 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) (Formerly numbered 125A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Reorganization of power, new forms of representation, and discourses about rule and obedience in Europe from the mid-15th through 16th century; popular culture; peasant society; fashioning of religion and power; localization. P/NP or letter grading.

121B. Baroque Culture and Absolutist Politics, 1660 to 1715. (4) (Formerly numbered 125B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Changing nature of state and social domination; redefinition 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) (Formerly numbered 125C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Enlightened 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) (Formerly numbered 125D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Restoration politics, Industrial Revolution, uprisings of 1848, unification of Germany and Italy, imperialism, rise of socialism, 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) (Formerly numbered 125E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. World War I, interwar period, and World War II. Social, cultural, political, and economic aspects, with focus on strain between model of parliamentary democracy and dynamics of mass politics (e.g., Bolshevik Revolution, Italian Fascism, national socialism, and Spanish Civil War). P/NP or letter grading.

121F. World War II and Its Aftermath, 1939 to the Present. (4) (Formerly numbered 125F.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. World War II, origins and persistence of Cold War, reconstruction in West, de-Stalinization, decolonization, crisis of welfare state, background to current situation, current political configuration. P/NP or letter grading.

122A-122F. Cultural and Intellectual History of Modern Europe. (4 each) (Formerly numbered 126A-126F.) 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 the time. P/NP or letter grading.


124A-124B-124C. History of France. (4-4-4) (Formerly numbered 128A-128B-128C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.


125A. Baroque and Enlightenment Germany. (4) (Formerly numbered 129A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Problems of class society and state formation, emancipation, assimilation, growth of national consciousness, emergence of "bourgeois public sphere," dynamics of gender in class society and Napoleon. Causes of centuries-long tensions between reform and reaction, 1848, and national unification. P/NP or letter grading.

125B. Nationalism and Modernization in 19th-Century Germany. (4) (Formerly numbered 129B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

125C. 20th-Century Germany. (4) (Formerly numbered 129C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Transitions that Germany has faced during this century: two world wars, shift from monarchy to republic to national socialism to "divided nation," and finally "re-unification." Consideration of political, social, economic, and cultural spheres. P/NP or letter grading.
152. Asians in American History. (4) (Formerly numbered 161.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of politically troubling question of entry into the U.S. of immigrants ineligible for citizenship and their citizen children in American history. P/NP or letter grading.

153. American West. (4) (Formerly numbered 162.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of West as frontier and as region, in transit from Atlantic seaboard and 17th to the present. P/NP or letter grading.

154. History of California. (4) (Formerly numbered 163.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Economic, social, intellectual, and political development of California from earliest times to the present. P/NP or letter grading.


151A. History of Chicano Peoples. (4) (Formerly numbered 159A.) (Same as Chicana and Chicano Studies M 159A.) Lecture; three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicano) community and people of Mexican descent (Indio-Mestizo-Mulato) north of Rio through 17th, 18th, and 19th centuries, with special focus on labor and politics. Provides integrated understanding of change in Chicano community by inquiry into major formative historical forces affecting community. Social structure, economy, labor, culture, political organization, conflict, and international relations. Emphasis on social forces, class 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, written examinations, library and field research, and submission of paper. P/NP or letter grading.

151B. History of Chicano Peoples. (4) (Formerly numbered 159B.) (Same as Chicana and Chicano Studies M 159B.) Lecture; three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicano) community and people of Mexican descent in U.S. through 20th century, with special focus on labor and politics. Provides integrat-ed understanding of change over time in Mexican community by inquiry into major formative historical and policy issues affecting community. Within framework of domination and resistance, discussion deals with social structure, economy, labor, culture, political organization, conflict, and ideology. Developments related to history of significance occurring both in U.S. and Mexico. Lectures, special presentations, readings, written examinations, library and/or field research, and submission of paper. P/NP or letter grading.

151C. Understanding Whiteness in American History and Culture. (4) (Formerly numbered M 144.) (Same as Chicana and Chicano Studies M 152B.) 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 "whiteness" and explore its significance to historical construction of race class in American history. Letter grading.

152A. Modern Brazil. (4) (Formerly numbered 173.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Selected topics in political, economic, social, and cultural development of Brazil, with emphasis on modernization and struggle for change, 1850 to the present. Discus-sions, films, slides, and guest speakers supplement and complement lectures. P/NP or letter grading.

152B. Brazil and Atlantic World, 1500 to 1822. (4) (Formerly numbered 174.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of colonial society in Brazil from discovery in 1500 to independence in 1822, placing it in context of Portugal's overseas expansion in Asia, Africa, and Americas. Emphasis on Portuguese, indigenous, and African roots of modern Brazil. P/NP or letter grading.

152C. History of Argentina. (4) (Formerly numbered 172.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of economic, political, social, and cultural developments which have shaped Argentina from colonial time to the present. Emphasis on 19th-century development of agro-export economy and 20th-century formation of mass society. P/NP or letter grading.

M164A-164Z. Topics in African History. (4 each) (Formerly numbered M175A-175Z.) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Examination of specific topics which have continental application rather than proceeding on strictly chronological or regional basis. P/NP or letter grading.

156A. Prehistoric Africa — Technological and Cultural Traditions. (4) (Formerly numbered M175A.) (Same as Anthropology M119.) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Study of prehistoric development of agro-export economy of South Africa and slavery on African society, with emphasis on Atlantic trade without neglecting those of ancient Mediterranean, Islamic, and Indian Ocean worlds. Aboli-tion and African diaspora. P/NP or letter grading.

156B. Africa and Slave Trade. (4) (Formerly numbered 175B.) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Social, economic, political, and cultural impact of slave trade on society, with emphasis on Atlantic trade without neglecting those of ancient Mediterranean, Islamic, and Indian Ocean worlds. Abolition and African diaspora. P/NP or letter grading.

156C. Africa in Age of Imperialism. (4) (Formerly numbered 175C.) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Topics include penetration of precapital-ist social formations by capital, emergence of classes, nature of colonial and postcolonial state, and struggle for national liberation in global context. P/NP or letter grading.

156D. Africa and Diaspora in Global and Comparative Perspective. (4) (Formerly numbered 175D.) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Forced migration of Africans through overseas slave trade was forma-tive event of modern world. Exploration of that experience and its lasting consequences by placing it in its global context — African, American, European, Islamic, and Asian. P/NP or letter grading.
164E. Africa from 1945 to the Present. (4) (Formerly numbered 175E.) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African Studies at UCLA. Designed for juniors/seniors. History of Africa south of Sahara from end of World War II to the present. Last phases of colonial rule in Africa. African nationalism, Pan-Africanism, liberation movements, and achievement of independence. Political, social, and economic change in colonies and in independent states of Africa. Neocolonialism, experimental in national development, apartheid in South Africa, ideological conflict in contemporary Africa, and Africa in world affairs since 1957. P/NP or letter grading.

165. Topics in African History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of specific historical themes and/or major issues in African history. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

166A-166B. History of West Africa. (4-4) (Formerly numbered 176A-176B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 166A. West Africa from Earliest Times to 1800; 166B. West Africa since 1800.

166C. Social and Economic History of West Africa since 1600. (4) (Formerly numbered 176C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Analysis of main currents of West African social, cultural, and economic history since fall of Songhai Empire, with emphasis on family, religious values, education, urbanization, migrations, arts, slavery, and slave trade. Roles of economic forces and institutions in promoting or inhibiting economic change in West Africa; ethnic diversity and sociopolitical integration; colonial economic systems and efforts at economic planning and development since the 1950s. P/NP or letter grading.

167A. History of Northeast Africa. (4) (Formerly numbered 177.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of history of Ethiopia, Sudan, and Somalia in regional context of northeast Africa from earliest times to the 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) (Formerly numbered 178A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of history of East Africa from earliest times to present, with emphasis on growth of complex societies, its place within wider Indian Ocean system, and colonial conquest to gaining of independence and postcolonial challenges. P/NP or letter grading.

167C. History of Central Africa. (4) (Formerly numbered 179A.) 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.

168A-168B. History of Southern Africa. (4-4) (Formerly numbered 179A-179B.) 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. From Origins to 1870. Origins of South African peoples and their interactions to 1870. 168B. Since 1870. Interactions between inhabitants of southern Africa since 1870.


170A. Culture and Power in Late Imperial China. (4) (Formerly numbered 183A.) Lecture, three hours; discussion, one hour (when scheduled). Recommended preparation: courses 11A, 11B. Designed for juniors/seniors. Analysis of relations of power and cultural expressions of dominance and resistance in late imperial China (1000 to 1700), with emphasis on interplay of economic forces, ideas, and social and political institutions. Examination of institutions of state, family, religion, school, and in religious death and afterlife; political, legal, and medical discourses of body, personhood, and social identity; love, sexuality, and private life. P/NP or letter grading.

170B. Selected Topics in Chinese History from 1500. (4) (Formerly numbered 183B.) 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 rural China. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

170C. History of Women in China, A.D. 1000 to the Present. (4) (Formerly numbered 183C.) (Same as Women's Studies M170C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of Bhakti or devotional traditions among Muslims, Hindus, and Sikhs; terrorism in Sri Lanka and Punjab; public culture, popular cinema, and street life. P/NP or letter grading.

171C. History of Women. (4) (Formerly numbered 170C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Important topics in Japanese history, including political change, economic development, social questions, and popular culture, as well as media and arts, explored through extensive readings. P/NP or letter grading.


173C. Shinto, Buddhism, and Japanese Folk Religion. (4) (Formerly numbered 186B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social dimension of various “Ways,” great and little: Shinto’s connection with cultural nationalism, Buddhism’s medieval “Reformation” and Zen’s relation to warrior culture, folk religious aspects such as shamanism, ancestor worship, and millenarianism. P/NP or letter grading.

174A. Early History of India. (4) (Formerly numbered 188A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to civilization and institutions of India. Survey of history and cultural distinctiveness of South Asian subcontinent from earliest times to founding of Mughal Empire. P/NP or letter grading.

174B-174C. History of British India I, II. (4-4) (Formerly numbered 189A-189B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 174B. Examination of expansion of British rule, theories and practices of governance, constitution of India as “oriental despotism” and nationalist growth, and other modes by which British achieved conquest of knowledge. 174C. Political economy of imperialism and Britain’s “civilizing mission.” Encounter, especially in terms of race and gender, between colonizers and colonized and to questions of resistance and nationalism.

174D. Classical Age of Indian History, A.D. 300 to 1000. (4) (Formerly numbered 188B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Age of glory under Imperial Guptas and subsequent consolidation under Harsha (north India) and Vakatakas, Chalukya, Pallava, and Chola (central and south India); emergence of Sanskrit as Pan-Indian language; spread of Indian culture in central and Southeast Asia. P/NP or letter grading.

174E. Bhakti Traditions in Indian History. (4) (Formerly numbered 189A-189B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of Bhakti or devotional traditions of India as part of “Great Tradition” of classical Hinduism; involvement of women; emergence of Sikhism. P/NP or letter grading.

175A. Cultural and Political History of Contemporary South Asia. (4) (Formerly numbered 189A.) 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 conflicting identity among Muslims, Hindus, and Sikhs; terrorism in Sri Lanka and Punjab; public culture, popular cinema, and street life. P/NP or letter grading.

175B. Indian Identity in the U.S. and Diaspora. (4) (Formerly numbered M189B.) 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 identity. P/NP or letter grading.

175C. Special Topics in Contemporary Indian History. (4) (Formerly numbered 189B.) 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) (Formerly numbered 190A-190B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 177A. National Histories of Southeast Asia. (4) (Formerly numbered 190YL.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Variable topics with focus on history of one or more of Southeast Asia’s nation-states: Indonesia, East Timor, Thailand, Cambodia, Burma, Laos, Malaysia, Singapore, Brunei, Philippines, Vietnam. P/NP or letter grading.

177B. Comparative Histories of Southeast Asia. (4) (Formerly numbered 190Z.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Variable topics with focus on history of Southeast Asia from thematic or comparative perspective. Topics may include history of human rights in Southeast Asia, gender and sexuality in Southeast Asia, and economic developments as well as interna- tional relations in post-1954 period. P/NP or letter grading.

178C. Medicine and Society in 19th-Century America. (4) (Formerly numbered 158C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Therapeutics, theories of disease, and medical science scrutinized with un- derstanding that these are never value-neutral, but are shaped by social structures of which they are products. Why have doctors become powerful figures over whom did they wield power in the 19th century? P/NP or letter grading.

180A. Topics in History of Science. (4) (Formerly numbered 195E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics may include science and colonialism, science and religion, environmental history, science in Enlightenment, development of theory of evolution, science and public policy, public nature of science. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

180B. Historical Perspectives on Gender and Science. (4) (Formerly numbered 195C.) Same as Women’s Studies M180B.) Lecture, three hours; dis- cussion, one hour (when scheduled). Designed for juniors/se- niors. Contributions of medieval Muslim and Jewish doctors, at Alexandria to healing at Epidaurus and Salerno, to three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historical cases illustrating how gender enters the arena of scientific endeavor and then encircles science. Topics include gendered conceptions of nature, persona of “man of science,” role of women in scientific revolu- tion, scientific investigations of women and feminine. P/NP or letter grading.

180C. Science and Technology in the 20th Centu- ry. (4) (Formerly numbered 195D.) Lecture, three hours; dis- cussion, one hour (when scheduled). Designed for seniors/juniors. Development of science and technology and their impact on society. Industrialization, global scientific community, social Darwinism, atomic bomb and nuclear proliferation, Cold War and American science, environmentalism, sociolo- gy and genetic engineering. P/NP or letter grading.

181B. Topics in Jewish History. (4) (Same as Jew- ish Studies M181B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Examina- tion of major issues in Jewish history. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

182A. Ancient Jewish History from Patriarchs to Rabbis. (4) (Formerly numbered 191A.) (Same as 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.

182B. Between Crescent and Cross: Jewish Medieval Ages. (4) (Formerly numbered 191B.) (Same as Jewish Studies M182B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of unfolding of Jewish history from rise to Christianity; expulsion of Jews from Spain in 1492, followed by transformations in Jewish society and identity over five centuries in Europe and Middle East, and concluding with national- ism. P/NP or letter grading.

182C. Jewish History from Spanish Expulsion to 1881. (4) (Formerly numbered 191C.) (Same as Jewish Studies M182C.) Lecture, three hours; discus- sion, one hour (when scheduled). Designed for juniors/se- niors. Survey of early modern Jewish history beginning with enormously repercussive expulsion of Jews from Spain in 1492, followed by transformations in Jewish society and identity over five centuries in Europe and Middle East, and concluding with national- ism. P/NP or letter grading.

182D. European Jewry from 1881 to the Present. (4) (Formerly numbered 191D.) (Same as Jewish Studies M182D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of dynamic and millennia-old interaction of Jews with great world cul- tures. Creative adaptations that have lent Jewish culture its distinct and various forms. P/NP or letter grading.

183A-183B. Third Reich and Jews. (4-4) (Formerly numbered 191E-191F.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of dynamic and millennia-old interaction of Jews with great world cul- tures. Creative adaptations that have lent Jewish culture its distinct and various forms. P/NP or letter grading.

185A-185B. American Jewish Experience. (4) (Formerly numbered 191I.) (Same as Jewish Studies M185A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of dynamic and millennia-old interaction of Jews with great world cul- tures. Creative adaptations that have lent Jewish culture its distinct and various forms. P/NP or letter grading.

186A-186B. History of Southeast Asia from 1948 to the Present. (4) (Formerly numbered 191J.) (Same as Jewish Studies M186A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of dynamic and millennia-old interaction of Jews with great world cul- tures. Creative adaptations that have lent Jewish culture its distinct and various forms. P/NP or letter grading.

187A. History of Southeast Asia. (4) (Formerly numbered 191K.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Overview of history of people of Vietnam to be- ginning with enormously repercussive expulsion of Jews from Spain in 1492, followed by transformations in Jewish society and identity over five centuries in Europe and Middle East, and concluding with national- ism. P/NP or letter grading.

M182D. European Jewry from 1881 to the Present. (4) (Formerly numbered M191D.) (Same as Jewish Studies M182D.) Lecture, three hours; dis- cussion, one hour (when scheduled). Designed for juniors/se- niors. Examination of some of most impor- tant currents and figures in Jewish intellectual history from the 18th century to the present. P/NP or letter grading.

M182G. Spirit of Secularism: Jewish Cultures in Secular Age. (4) (Same as Jewish Studies M182G.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examina- tion of emergence of distinct forms of Jewish culture in modern age, particularly those that challenge tradi- tional forms of Jewish religious culture (e.g., laws, customs, or rituals). P/NP or letter grading.

193A-193B. Religions of South and Southeast Asia. (4) (Formerly numbered M191A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Exploration of origin and historical development of anti-Semitism. P/NP or letter grading.

193C. Religions of South and Southeast Asia. (4) (Formerly numbered M191B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Exploration of origin and historical development of anti-Semitism. P/NP or letter grading.

193D. History of Southeast Asia from 1948 to the Present. (4) (Formerly numbered M191C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Exploration of origin and historical development of anti-Semitism. P/NP or letter grading.
M185D. Religions of Ancient Near East. (4) (Formerly numbered M185D3.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Main polytheistic systems of ancient Near East, with emphasis on Mesopotamia and Syria and with reference to religion of ancient Israel; varying concepts of divinity, hierarchies of gods, prayer and cult, magic, wisdom, and moral conduct. P/NP or letter grading.

185E. Special Topics in History of Religions. (4) (Formerly numbered 193E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics announced in Schedule of Classes and include ancient Germanic cults; Renais- sance mysticism; mysteries of low countries; goddesses; religion in secular age. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

186A. History of Early Christians. (4) (Formerly numbered 194A.) 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 by Christian movement. Topics include its religious, social, and political world, and methods of research. P/NP or letter grading.

186B. Religious Environment of Early Christians. (4) (Formerly numbered 194B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Rich variety in religious practice and thought in Mediterranean world of 1st century C.E. as in context of developing Christian movement. Topics include Platonism, Qur’ān, Philo, Stoics, Epicureans, traditional Greek and Roman religions, “mysteries,” astrology, magic, gnosticism, and emperor-worship. P/NP or letter grading.

186C. Jesus of Nazareth in Historical Research. (4) (Formerly numbered 194C.) Lecture, three hours; discussion, one hour (when scheduled). Recommended preparation: course 186A. Designed for juniors/seniors. Stimulated by significant post-Enlightenment historical evaluations, students are led into firsthand knowledge (in translation) of various multilayered sources for reconstruction of life, teaching, and initial impact of Jesus of Nazareth in his social, economic, political, and religious contexts. P/NP or letter grading.

M187A. Global Feminism, 1850 to the Present. (4) (Same as Women’s Studies M168A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to movements encountered in its religious, social, and political world, and methods of research. 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 topic change. P/NP or letter grading.

191A-191P. Undergraduate Variable Topics Research Seminars: History. (4 each) (Formerly numbered 197A-197P.) Seminar, three hours. Designed for juniors/seniors. Limited to 15 students meeting with faculty member. Organized on topics basis with reading, discussion, and development of culminating project. May be repeated once for credit. P/NP or letter grading.


M191DC. CAPPP Washington, DC, Research Seminars. (8) (Same as Political Science M191DC and Sociology M191DC.) Lecture, four 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, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), and preparation for qualitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

191DC. CAPPP Washington, DC, Research Seminars. (4) (Same as Political Science M191DC and Sociology M191DC.) Seminar, three hours. Limited to CAPPP Program students in Winter Quarter. Seminars for undergraduate students in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), and preparation for qualitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

195. Community or Corporate Internships in History. (4) Tutorial, three hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP grading.

196. Individual Studies. (4) Tutorial, three 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 with supervising faculty member required. P/NP grading.

197. Individual Studies in History. (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 with supervising faculty member required. P/NP grading.

198A. Honors Research in History. (4) Tutorial, to be arranged. Course 198A is requisite to 198B, which is requisite to 198C. Limited to juniors/seniors. Development of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for maximum of 16 units. Individual contract required. Letter grading.

198B. Honors Research in History. (4) Tutorial, to be arranged. Requisite: course 198A. Limited to juniors/seniors. Continued development of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for maximum of 16 units. Individual contract required. Letter grading.

199. Directed Research in History. (4) Tutorial, three hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project may be required. May be repeated for credit; History majors limited to 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

200A-200U. Advanced Historiography: (4 each) Seminar, three hours. Individual contract required. May be repeated for credit.


M200V. Advanced Historiography: Afro-American. (4) (Same as Afro-American Studies M200A.) Seminar, three hours. May be repeated for credit.

M200W. Advanced Historiography: American Indian Peoples. (4) (Same as American Indian Studies M200A.) Lecture, 90 minutes; seminar, 90 minutes. Introduction to culture-histories of North American Indians and review of Indian concepts of history. Ste-reotypical approach to content and methodologies related to Indian past that is interdisciplinary and multicultural in its scope. Letter grading.


200Y. Advanced Historiography: Application of Economics to History. (4) Discussion, three hours.

200Z. Advanced Historiography: Chicano. (4) Discussion, three hours. Graduate survey of leading literature in Chicano history, with emphasis on new methodological and theoretical approaches in the field.

201A-201U. Topics in History. (4 each) Seminar, three hours. Graduate courses involving reading, lecturing, and discussion of selected topics. Does not fulfill seminar requirements for Ph.D. degree. May be repeated for credit. Individual contract is required. Limited to course 191, undergraduates must obtain consent of instructor to enroll. 201A. Ancient Greece; 201B. Ancient Rome; 201C. Medieval; 201D. Early Modern Europe and Empire; 201E. Modern Europe; 201F. Russia/Eastern Europe; 201G. Britain; 201H. U.S.; 201I. Latin America; 201J. Near East; 201K. India; 201L. China; 201M. Japan; 201N. Africa; 201O. Science/Technology; 201P. History of Religions; 201Q. Theory of History; 201R. Jewish History; 201S. Armenia and Caucasus; 201T. Southeast Asia; 201U. Psychology.

202A-202B. Seminars: Comparative Modern Economic History. (4-4) Seminar, three hours. Course 202A is requisite to 202B. Designed for graduate students. Study of problems of modern economics in the 19th and 20th centuries, including such topics as industrialization, growth, demography, development, and economic change. In Progress (202A) and letter (202B) grading.

M203A-M203B. Social Theory and Comparative History. (4-4) (Same as Political Science M291A-M291B and Sociology M296A-M296B.) Seminar, three and one-half hours every other week. Introduction to historically rooted social theory and theoretically sensitive history, following program of Center for Social Theory and Comparative History. Each course may be taken independently for credit. S/U or letter grading.

M203C. Theories in Cultural History. (4) (Same as Sociology M296C.) Discussion, three hours. Introduction to social, linguistic, economic, or other new interpretative theories and practices developed in other fields and applied to historical material. Letter grading.

M207. Seminar: Ancient Mesopotamia. (4) (Same as Ancient Near East M250.) Seminar, three hours. Selected topics on political, social, and intellectual history of ancient Mesopotamia. May be repeated for credit.

211A-211B. Seminars: Armenian History. (4-4) Seminar, three hours. Course 211A is requisite to 211B and (211A) letter (211B) grading.

History / 373
374 / History
212. Methods in Armenian Oral History. (4) (Formerly numbered C212.) 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.
C219A. Early Medieval Intellectual History:
Thought, Literacy, and Religion Circa 400 to 1000.
(4) Lecture, three hours; discussion, one hour (when
scheduled). Examination of ideas and means by
which they were communicated in early Middle Ages.
Concurrently scheduled with course C117A. S/U or
letter grading.
C219B. Later Medieval Intellectual History:
Thought, Literacy, and Religion Circa 1100 to
1500. (4) Lecture, three hours; discussion, one hour
(when scheduled). Examination of evolution of ideas
and means by which they were communicated in later
Middle Ages. Concurrently scheduled with course
C117B. S/U or letter grading.
CM220A. Interfaces: Transmission of Roman Literature. (4) (Same as Classics 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. Concurrently scheduled with course C118A. 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.
222A-222B. Seminars: Medieval Intellectual History and History of Science. (4-4) Seminar,
three
hours. Course 222A is requisite to 222B. Selected
problems from medieval and early modern philosophy, science, political theory, theology. In Progress
(222A) and letter (222B) 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 the 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. Comparative 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. (44) 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 the 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 the 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
Women’s 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.
(4-4) 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.) History of educational thought and of social forces impinging on American education from the 19th century to the present. Analysis of relations between these ideas and forces, and aims and practices of American education today.

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 approaches to teaching, and research design. Forum for critical discussion of dissertation prospectuses and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

285. 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.

287A-287B. Seminars: African History. (4-4) Seminar, three hours. Course 278A is requisite to 278B. Topics vary according to participating faculty. May be repeated for credit. S/U or letter grading.

297A-297B. Seminars: History of Science. (4-4) Seminar, three hours. Course 297A is requisite to 297B. Readings and seminar-style discussions of such authors as Popper, Kuhn, Toulmin, Lakatos, Holton, Buchanan, Feyerabend, and others.

M296. History of Statistics. (4) (Same as Statistics M245.) 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 the emergence and use. S/U or letter grading.

297A-297B. Seminars: History of Science. (4-4) Seminar, three hours. Course 297A is requisite to 297B. Readings and seminar-style discussions of such authors as Popper, Kuhn, Toulmin, Lakatos, Holton, Buchanan, Feyerabend, and others.

M298. Interdisciplinary Studies in the 17th and 18th Centuries. (4) (Same as English M298.) 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 a common theme, team-taught by faculty from different departments. Topics vary according to participating faculty. May be repeated for credit with consent of instructors.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

490. Writing Workshop for Graduate Students. (4) Tutorial, three hours. Writing workshop on students’ papers-in-progress. Analysis and group discussion of rhetorical and stylistic principles, illustrated in students’ own and in professional historians’ work, help students improve their own writing. May be repeated once. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Studies. (1 to 8) Limited to graduate students. Individual directed reading arranged with professor. M.A. candidates may take this course only once. Number of times Ph.D. candidates may take this course is subject to consent of graduate studies committee. S/U or letter grading.


---

**History/Art History Interdepartmental Program**

**California Institute of Letters and Science**

UCLA
100 Dodd Hall
Box 951417
Los Angeles, CA 90095-1417
(310) 825-3992
fax: (310) 206-1903
http://www.humnet.ucla.edu/humnet/arthist/home.html

Steven D. Nelson, Ph.D., Chair
Faculty Advisory Committee
Robert L. Brown, Ph.D. (Art History)
Ronald J. Mellor, Ph.D. (History)
Steven D. Nelson, Ph.D. (Art History)
Deborah L. Silverman, Ph.D. (Art History, History)

**Scope and Objectives**

The interdisciplinary major in History/Art History allows students to study the relationship between art history and the history of society, politics, and culture.

**Undergraduate Study**

History/Art History B.A.

Lower division history and art history courses may be applied toward the general education requirements; a course taken to satisfy the American History and Institutions requirement may be applied toward the history section of the interdepartmental major. Each course must be taken for a letter grade.

Students wanting to confer with a counselor regarding program planning and major requirements should contact the history/art history counselor at (310) 825-3992.

**Preparation for the Major**

Required: History 1A, 1B, 1C; two courses from Art History 50, 51, 54, 57; one course from Art History 55A, 55B, 56A, 56B.

**Transfer Students**

Transfer applicants to the History/Art History major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of history of Western civilization, two art history courses in ancient, Renaissance and baroque, medieval, or modern art, and one non-Western art history course.

Refer to the UCLA Transfer Admission Guide at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

Required: One course from History 97A through 97O or 100; one course from 191A through 191O or 197; and courses as indicated in the following groups:

Group A: Two non-European history courses from History M103A, M103B, M104, 105A,
Grades of A– or better. To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative GPA of 3.85 or better in upper division courses in the major and an overall GPA of 3.65 or better, and (3) complete Art History 198A and 198B with grades of A– or better.

To qualify for graduation with highest honors, students must (1) complete all requirements for the major, (2) have a cumulative GPA of 3.85 or better in upper division courses in the major and an overall GPA of 3.65 or better, and (3) complete Art History 198A and 198B with grades of A– or better.

Honors Program

The honors program is designed for History/Art History majors who are interested in carrying out an independent research project that culminates in an honors thesis of approximately 30 pages. The program gives qualified students the opportunity to work closely with individual professors on an in-depth supervised research and writing project.

All junior and senior History/Art History majors who have completed a minimum of four upper division art history courses with a grade-point average of 3.5 or better and an overall GPA of 3.0 or better are eligible to apply. Consult the art history undergraduate counselor one term prior to beginning the honors program.

To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper division courses in the major and an overall GPA of 3.0 or better, and (3) complete Art History 198A and 198B with grades of A– or better.

Scope and Objectives

The Honors Collegium is an unusual educational alternative, with an interdisciplinary emphasis. The collegium 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. Many 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, which gives detailed course descriptions of current offerings, is available at http://www.ugeducation.ucla.edu/honors/hchome.html.

Honors Collegium

College of Letters and Science

UCLA
A311 Murphy Hall
Box 951414
Los Angeles, CA 90095-1414
(310) 825-1553
fax: (310) 825-0564
e-mail: honors@college.ucla.edu
http://www.ugeducation.ucla.edu/honors/

Robert N. Watson, Ph.D., Chair
Faculty Advisory Committee

Esteban C. Dell Angelica, Ph.D. (Human Genetics)
Sean A. Kelsey, Ph.D. (Philosophy)
Daniel H. Lowenstein, LL.B. (Law)
Jeffrey H. Miller, Ph.D. (Microbiology, Immunology, and Molecular Genetics)
Mark B. Moldin, Ph.D. (Earth and Space Sciences)
William G. Roy, Ph.D. (Sociology)
Zrinka Stahuljak, Ph.D. (French and Francophone Studies)
Brian D. Walker, Ph.D. (Political Science)
Robert N. Watson, Ph.D. (English)

Honors Collegium Lower Division Courses

2. Comparative Genocide. (4) Lecture, four hours; discussion, two hours. 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.

4. Immigrants and American Dream. (5) Seminar, three hours. Study of process of attaining the “American Dream;” including analysis of different perspectives on immigration and assessment of success based on such measures as occupational achievement, home ownership, and political participation. P/NP or letter grading.

5. Representing Cleopatra: History, Drama, and Film. (8) Seminar, three hours. Examination of leg- endary queen of Egypt as seen by her contemporaries and study of origins of myths about her and ways in which subsequent cultures and eras have imagined her in literary, visual, and cinematic representations. P/NP or letter grading.

7. Saint and Heretic: Joan of Arc and Gilles de Rais, History and Myth. (5) Seminar, three hours. Examination of both history of Joan of Arc and Gilles de Rais and of way in which, over time, their histories became legends, driven by various agendas including national identity, beatification, and gender politics. P/NP or letter grading.

8. Communication among Organisms. (4) Lecture, three hours; discussion, two hours. Study of commu- nication among a variety of taxonomic groups ranging from single-cell organisms to plants, whales, and nonhuman primates. 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 and in what has come to be known as postmodern era. Art criticizes master narra- tives of earlier age and fosters fragmentation, skepti- cism toward universal truth, commodification of knowledge, media creating reality, and globalization in industry and society. Satisfies Writing II requirement. Letter grading.

12. Sacred Form: Literature and Poetry in India from Bronze Age to Premodern Times. (4) Seminar, three hours. Exploration of cultural and literary development in India from early religious poetry (prior to 1000 B.C.) to broad range of literary styles and di- verse religious and philosophical movements through classical, medieval, and premodern periods. P/NP or letter grading.


14. Interaction of Science and Society. (4) 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 engi- neering and war against infectious diseases. P/NP or letter grading.

15. Acting Myth. (4) Seminar, three hours. Interdisci- plinary 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 quantifying aspects of voice production. Study of characteristics of professional voices as well as recorded samples of famous singers. P/NP or letter grading.

18. Trial of Socrates. (5) Seminar, three hours. Examination of life and times of Socrates and trial that led to his execution, including in-class staging. P/NP or letter grading.

20. What Is This Thing Called Science?: Nature of Modern Science. (5) Lecture, three hours; discussion, one hour. Exploration of difference between science and the popular worldview; study of history and philosophy of science and examination of its reliability as objective knowledge. 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's attempt to construct significance in a general climate of dislocation by way of literature, literary criticism, and other intellectual movements. Satisfies Writing II requirement. Letter grading.

23. Political Dissidence Today and in Ancient Greece: Trial and Death of Socrates in Its Classical and Modern Contexts. (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 theoretical presentations 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.

25. Artificial Intelligence: Machines as People, People as Machines. (5) Seminar, three hours; laboratory, one hour. Programming knowledge not required. Examination of human cognitive abilities and study of different historical approaches to programming human cognitive abilities and behaviors into computers, with focus on problem solving. 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 representation, with emphasis on cross-cultural 20th-century portrayals of medical practice. Mixture of lecture and discussion on representations of occupation, 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 societies. P/NP or letter grading.

28. Perils of Living in Space: Introduction to Space Weather. (5) Seminar, four hours. Preparation: high school calculus. Study of conditions in space that affect Earth and its systems, conditions that are consequences of behavior of sun, nature of Earth's magnetic field and atmosphere, and our location in solar system. P/NP or letter grading.


34W. Construction and Migration of Knowledge: Rhetoric and Media for Information Age. (6) Seminar, four hours; required requisite: English Composition 3 or 3H or English as a Second Language 36. Print and electronic genres, both mainstream and alternative, through study of rhetorics of popularization and of canonization in literature. Exploration of how electronic knowledge travels to nonspecialist readers; latter explains how ephemeral information becomes institution-alized. Satisfies Writing II requirement. Letter grading.

35. Scientific Methods: Critical Inquiry into Questions of Extraterrestrial Life. (4) Lecture, three hours; discussion, one hour. Course does not presume to answer question of whether or not there is intelligent life in the universe. P/NP or letter grading.

36. Gender, Work, and Family: Public Policy Challenge. (5) Seminar, three hours. Examination of challenges of reconciling work and family commitments for working people of both genders, with particular emphasis on recent changes in labor force participation, on ways in which gender, race, and class lines affect time allocation, on different conceptions that might support work-family balance. Primary focus on the U.S., with look at how other advanced industrial societies — specifically Western Europe — have addressed these issues. P/NP or letter grading.

37. Autobiography and Memoir. (5) Seminar, three hours. Study of memoirs and autobiographies of accomplished people (writers, scientists, statesmen, soldiers, adventurers, politicians, singers, artists, businessmen) to discuss what they did or did not do with their lives and then to try and understand one's own life by writing about specific incidents and broader life themes. P/NP or letter grading.

38W. Body-Mind Literacy. (6) Seminar, three hours; writing laboratory, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Study of how to write about health, illness, and social categories (race, ethnicity, nation, and generation). Satisfies Writing II requirement. Letter grading.

41. Rhetoric on Trial. (5) Seminar, three hours. Historical and literary study of theory and practice of classical rhetoric in Greco-Roman antiquity; analysis of relevance of ancient rhetorical techniques to contemporary forensic practices in rules of evidence, politics, and law. P/NP or letter grading.

42. Negotiating Conflict in Diverse Cultures. (5) Seminar, three hours; fieldwork, one hour. Exploration of art and science of negotiations in addressing campus and community conflicts, with focus on positions and interests of disputants, cultural and political context of disputes, and tactics and skills to address conflicts. P/NP or letter grading.

45W. Writing about Life Sciences. (5) Seminar, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36, Life Sciences 2 (may be taken concurrently). Study and practice of writing in life sciences, including popular, literary, and scientific discourse. Satisfies Writing II requirement. Letter grading.

50W. Writing Science. (6) Seminar, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Study and practice of scientific writing in popular domain in way that integrates sophisticated understanding of science with humane tradition of writing arts; study includes writings by journalists and scientists on variety of topics. Satisfies Writing II requirement. Letter grading.

51. Music and Society. (5) Seminar, four hours. Minimal experience reading music desirable but not required. Analysis of Western art music, with focus primarily, but not exclusively, on music of late-18th through early-20th centuries through multiple analytical prisms: sociological, historical, political, and musical. P/NP or letter grading.

53. American Folk Music, Protest, and Identity. (5) Seminar, three hours. Study of American folk music as prism to investigate more general relationships among cultural boundaries such as musical genres and social categories (race, ethnicity, nation, and generation). P/NP or letter grading.

54. Improvisation and Acting Techniques. (5) Seminar, four hours. Development of acting improvisation techniques based on literature in which students find themselves immersed within characters. Students prepare midterm and final scenes to be fully memorized and performed, as well as study acting techniques. P/NP or letter grading.

56. Language as a Window to the Mind. (4) Lecture, four hours; discussion, one hour. Study of topics in language and the mind, including language acquisition in the child, language production in the brain, relationship between language and other mental abilities, and autonomous nature of language as a system of knowledge. P/NP or letter grading.

57. Language, Performance, and Culture. (5) Lecture, three hours. Mixture of lecture and discussion on topic of language and its relationship to performance and culture in 19th and 20th centuries. Study of theorists such as Saussure, Barthes, and Cixous; Judy Butler, and others, playwrights such as Wilde, Stein, and Samuel Beckett, and films such as "His Girl Friday" and "Monkey Business." P/NP or letter grading.
58. Time in Society and History. (5) Seminar, four hours. Examination of concept of time from sociological, philosophical, anthropological, and physical perspectives, including study of how cultures have perceived time, how societies have organized themselves with time, how groups have clashed over time’s definition and measurement, and how academics in various disciplines have perceived time. P/NP or letter grading.

59W. Literature and Culture of the American South. (6) Seminar, four hours; writing laboratory, two hours. Examination of fiction, poetry, and nonfiction by Southern writers. P/NP or letter grading.

60. Discovering and Explaining Anomalies of English. (5) Seminar, four hours. Study of linguistic anomalies, historical facts of English that brought about these irregularities, and artificiality of notion of “standard English.” P/NP or letter grading.

62. Community and Self-Interest in History of American Capitalism. (6) Seminar, three hours. Exploration of historical origins of frequently contradictory values that inform American thought and culture: hierarchy and equality, institutional constraints and voluntarism, collective and individual actions, civic and autonomous individual. P/NP or letter grading.

64. Neuroscience and Psychology of Art and Biology of Aesthetics. (5) Seminar, three hours. Interdisciplinary approach to study of beauty, whether of faces, art works, or other subjects, is processed by brain and can be understood as neurological and psychological phenomenon. P/NP or letter grading.

65. Literature and Culture of Francophone World. (5) Seminar, four hours; study of literary texts from North and sub-Saharan Africa, Guadeloupe, Haiti, Martinique, Vietnam, and France and examination of cultures of colonial and postcolonial Francophone world. P/NP or letter grading.

67. Structure of Physical Reality. (4) Lecture, three hours; discussion, one hour. No special mathematical or computer knowledge required. Course in modern physics, introduction to potentially conflict-ridden language situations in three countries abroad and discussion of various aspects of minority languages in the U.S. P/NP or letter grading.

69. Artificial Life and Evolutionary Design: Theory and Practice in Multiagent Modeling. (5) Lecture, four hours; laboratory, two hours. Examination of computer simulations that apply experimental concepts and techniques taught in course. P/NP or letter grading.

70C. Culture, Ethnicity, Race, and Development: Multimedia and Multidisciplinary Approach. (5) Lecture hour; laboratory, two hours. Examination of intercultural apprenticeship, including evolution of cultural learning, ontology of cultural learning, changes in cultural learning over history, and conflicts between forms and goals of cultural learning in a multiscultural society. 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 meaning and understanding of art in cross-cultural context. P/NP or letter grading.

73. Elementary Particles in the Universe. (4) Lecture, two hours; discussion, 90 minutes. No special mathematical knowledge required. Examination of elementary particle physics, including status of its current study in laboratories around the world and its role in assessing the early evolution of the universe. P/NP or letter grading.

77. Writing Numbers. (5) Seminar, four hours. Not open to students with credit for introductory statistics. Whether it be to convince about lack of government support for arts, or global warming, or risks of living in high crime areas, mathematically well-formed arguments can be persuasive. Examination of techniques and development of skills to become effective student advocates. P/NP or letter grading.

80. Genomics and Boundaries of Self. (5) Seminar, three hours. Study of impact that knowledge of entire human genome sequences has on our concept of ourselves as individuals and our place in biological universe. P/NP or letter grading.

81. Eastern Christianity in Comparative Perspective: Historical, Cultural, and Philosophical. (5) Lecture, four hours; discussion, two hours. Exploration of philosophical and metaphorical beliefs of Eastern Christianity, comparing and contrasting Eastern churches to those that dominate in the West and examining how Eastern Orthodox outlook has developed within broader Judeo-Christian tradition. P/NP or letter grading.

82. Community and Labor Development from Ground Up. (4) Lecture, three hours; discussion, one hour. Introduction to practical applications of community 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.

83W. Politics and Rhetoric of Literature. (6) Seminar, four hours; writing laboratory, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Examination of relationships among politics, rhetoric, and literature in study of literature from classical times to the present, broadening into general discussions of development of political discourse in Western thought, particularly conflict between self and state, between ideology and the practical business of living. Satisfies Writing II requirement. Letter grading.

84. Conflicts between Languages. (5) Seminar, three hours. Analysis of conflict-ridden language situations in three countries abroad and discussion of various aspects of minority languages in the U.S. P/NP or letter grading.

85. Mestizaje and Memory in Americas. (5) Seminar, four hours. Examination of texts from colonial Spanish America and 20th-century North America to investigate how authors in these different contexts have struggled with between two cultures. P/NP or letter grading.

86. Psychology of Fear. (5) Formerly numbered Dentistry 98B. Seminar, three hours; fieldwork, one hour. Examination of phobias, including inquiry into how these are addressed by intervention fear, examination of structures and processes of irrational fears, and discussion of courage and fear reduction strategies. P/NP or letter grading.


87. Issues in American Foreign Policy: Methodology of Assessment. (4) Lecture/debate, three hours; discussion, one hour. Exploration in debate format of wide range of views on contemporary foreign policy issues to train students how to discern the ideological origins of policy arguments. Examination of material in major foreign policy journals. P/NP or letter grading.

Upper Division Courses

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 for research funding and regulations governing research. P/NP grading.

101B. UCLA Undergraduate Science Journal. (2) Seminar, two hours. For students on editorial board of annual UCLA Undergraduate Science Journal. Involves study of writing in the process 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 Westwind journal of undergraduate research and writing, including study of writing in various disciplines 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. (2) Seminar, two hours. 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 concerning 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. 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 further familiarize themselves with academic disciplines they would like to pursue in graduate school. Through course readings, guest speakers, and interactive assignments, students learn more about their graduate school options and how to navigate application process. P/NP grading.

M102. Culture, Media, and Los Angeles. (6) (Same as Afro-American Studies M102 and American Studies M160H.) Lecture, four hours; screenings, two hours. Designed for juniors and seniors. Role of media in society and its influence on contemporary cultural environment, specifically in Los Angeles; issues of representation as they pertain to race, ethnicity, gender, and sexuality. P/NP or letter grading.

103. Scientific Knowledge, Industrial Growth, and Social Policy. (5) Lecture, three hours; laboratory, two hours. Examination, using nanotechnology, of both benefits and risks to economy and society when new technologies are in process of development. P/NP or letter grading.
104. Trojan War: Antiquity and Afterlife. (5) Seminar, three hours. Focus on Troy as locale for ancient and modern imagination in poetry, archaeology, and historical fantasy. P/NP or letter grading.

M106. Imaginary Women. (4) (Same as Women’s Studies M106.) Seminar, four hours. Designed for juveniors/seniors. Study of four female cultural archetypes — absolutionist mother, intellectual woman, and warrior woman — as they appear in their classical and modern manifestations in European and American cultures. P/NP or letter grading.

107. Painful Birth: Rise of Modern Capitalism in Late Medieval Italy. (4) Seminar, three hours. Through medieval texts and representations of the human figure in art, examination of rise of merchant and banking class in late medieval Italy, focusing on ideological and economic issues rooted in contempt of commerce, procreation of the holy, and choice between Earth and sky. P/NP or letter grading.

108. Transnationalism, Diasporas, and Homeland-Hostland Politics. (5) Seminar, three hours. Examination of debates about transnationalism, global migration, and diaspora communities in the 20th and 21st centuries, with focus on the U.S., including comparative parative perspective. P/NP or letter grading.

109. Language, Meaning, and the Making of Poetry. (4) Seminar, three hours; workshop, one hour. In words of the Augustan professor, “Semiological warfare against the purveyors of semantic entropy.” In context of and opposition with contemporary speech, study of history of philosophic and poetic discourse on language and its potentials, including social and political implications. P/NP or letter grading.

110. Marxist and Post-Marxist Approaches to Cultural Studies. (4) Seminar, four hours. Examination of Marxist and post-Marxist approaches to study of culture, including classic texts, theoretical and empirical works, and the Marxist roots of postmodernism. P/NP or letter grading.

111. Stress and Coping. (4) Seminar, four hours. Examination of research and theory on stress and coping, with emphasis on physical and mental consequences of stress and moderators of both social support and personality in coping strategies. P/NP or letter grading.


113. Work, Gender, and Race in America. (5) Seminar, three hours; fieldwork, two hours. Exploration of how shifts from manufacturing to service work and from local to global markets have differentially affected nature of work in the U.S. for workers assessed by gender, race, ethnicity, and economic status. P/NP or letter grading.

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 in material construction and aesthetic influence has emerged. Study of works of three seminal architects: Frank Gehry, Thom Mayne, and Greg Lynn. Site visits and hands-on practice in how to read architectural plans and how to use computers and modeling in architectural study and design. P/NP or letter grading.

M116. Art Alive: Art and Improvisation in the Museum. (4) (Same as Theater M187.) Seminar, four hours. Offered in collaboration with Los Angeles County Museum of Art (LACMA), interpreted 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. Examination of moral and philosophical issue, but a sociohistorical one. What makes resistance possible are specific historical circumstances and social relations that enable ordinary men and women to oppose their oppressors. Examination of this premise through analysis of organized resistance to Nazi occupation in Europe. P/NP or letter grading.

117L. Resistance to Evil: Organized Resistance to Nazis in Occupied Europe. (2) Seminar, two hours. Continuation of course C with reading of texts in Dutch, Flemish, and some French selected from works that relate directly to material covered in course 117. P/NP or letter grading.

M118. Roots of Patriarchy: Ancient Goddesses and Heroines. (4) (Same as Women’s Studies M128.) Lecture, three hours. Examination of ancient goddesses and heroines — European, Neolithic, Near Eastern, Celtic, Scandinavian, Balto-Slavic, Indo-Iranian, and Greco-Roman — using translations of ancient texts, archaeological evidence, and feminist methodology in order to discover implications of ancient patriarchy on modern society. P/NP or letter grading.

M119. Nuclear Weapons: Critical Decisions. (4) (Same as Political Studies M111, and Public Policy M116, and Political Science M139B.) Lecture, three hours. Examination of critical decisions regarding nuclear weapons. First, the decision to build atomic bomb and ending with current policies on containing nuclear proliferation and on avoiding nuclear catastrophe. Letter grading.

M120. Art and Performance: Interdisciplinary Approach to Collections of Getty Center. (4) (Same as Theater M109.) Lecture, four hours; discussion, one hour. Drawing from objects in five major collections at Getty Museum, focus on five parallel historical periods in which political, social, and aesthetic philosophy of the age is 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 siecle Vienna, and post-Freudian visions; investigation of various interactions of these different conceptions in present day. P/NP or letter grading.

122. Violence Against Women in Cross-Cultural Perspectives. (4) (Same as Communication M135.) Seminar, four hours. Exploration of sources of violent acts against women in different societies. Topics include wife beating, female sexual slavery, female infanticide, dowry deaths, female genital "circumcision," rape, and emerging global human rights responses to these issues. P/NP or letter grading.

123. War and Peace in Africa. (4) Seminar, four hours. Investigation into main causes and forms of warfare on African continent, including relationship between internal war and transborder conflict, historic 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 anthropological 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.

126. Making Citizens/Making Societies: Political Cartography and Perspective. (4) Seminar, three hours. Examination of how society takes active concern in making sure that certain politically relevant dispositions, sensitivities, capacities, and skills are nurtured. Use large, shifting models of both aristocratic and democratic cultivation and their political implications. P/NP or letter grading.

127. Citizenship, Leadership, and Service. (4) Seminar, three hours; fieldwork, three hours. Interaction of historic studies, 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) (Formerly numbered M128.) (Same as Chicano and Chicana Studies M110SL and Spanish M127SL.) Seminar, four hours; field project, four to six hours. Recommended requisite: Spanish 100A. In-depth study of various topics surrounding different definitions of literacy, programs for adult preliterates, literacy and gender, approaches to literacy (whole language, phonics, Freire’s liberation pedagogy), history of writing systems, philosophy of letter writing, and national literacy campaigns. Required field project involving Spanish-speaking adults in adult literacy programs. P/NP or letter grading.


130. How Cold War Was Played. (4) Lecture/discussion. Examination of what happened in the Cold War, why it lasted so long, what its impact was on political and socioeconomic systems of two main protagonists, and what its legacy has become. P/NP or letter grading.


132. Bible as Political Theory. (4) Seminar, four hours. The Bible treated as political text, addressing prepolitical condition, formation of political community, state, survival without a state, and messianism, with focus both on institutions and on intellectual history. P/NP or letter grading.


M135. Narrative in Mass Communication. (6) (Same as Communication M135.) Seminar, four hours. Examination of narrative as primary function of mass media, beginning with social, psychological, cultural, and rhetorical functions of storytelling and building of narrative, then applying these to study of film, television, and print media. P/NP or letter grading.

137. Political Satire: Offensive Art. (5) Seminar, three hours. Study of political satire in several societies and variety of genres, including review of sociopolitical conditions that act to foster or constrain satire. P/NP or letter grading.

138. Disease and Human Condition. (5) Seminar, three hours. Exploration of scientific characteristics and historical manifestations of biographies that have shaped civilization; discussion of how historical manifestations of each disease are embedded in social and economic conditions of its time. P/NP or letter grading.

139. African American in Africa in Perspective. (5) Seminar, four hours. Study of saga of how African Americans have struggled to reassert their identity to Africa and Africans in both historical and contemporary American public school, showing how such entrenched inequalities tend to become permanent. Field component included. P/NP or letter grading.

142. Madness in the Enlightenment: Care and Cure of Mental Illness. (4) Seminar, four hours. Study of physicians and reformers of Enlightenment who treated mentally ill, examined in context of social, intellectual, and cultural history of the time. P/NP or letter grading.

151. American Jews and Israel in Mutual Perspective. (4) (Same as Chicanas and Chicanos Studies M124.) Lecture, three hours. Overview of immigration in 20th century, examining social, political, and economic contexts out of which different waves of Latin American immigration to U.S. has occurred. Letter grading.

144. Stigma: Anthropology of Dangerous Other. (4) Seminar, three hours. Cross-cultural perspective, analysis of apparently common causes and consequences of diverse forms of social inequality in which culturally ascribed stigma is common factor. P/NP or letter grading.


147. Feminism Around the World: Past and Present. (3) Seminar, three hours. Historical and global perspective on variety of feminist movements in the world, including their similarities and differences. P/NP or letter grading.


165. Women and Literature in Southeastern Europe. (5) Seminar, three hours. Examination, through prism of literature, of changing role of women in southeastern European countries (Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Greece, Macedonia, Montenegro, Romania, Russia, Serbia, Slovenia, Turkey) during last 60 years, with emphasis on economic, cultural, and political variables affecting women's roles. P/NP or letter grading.

166. Stories of Cultural Distance and Imposed Absence. (5) Seminar, three hours. Exploration of different approaches to modeling empirical phenomena of concern to social sciences. Topics include utility models, learning models, decision models, group competition models, and evolutionary models. Use of multagent computer simulations and group exercises to explore emergent behaviors among individuals interacting according to models for behavior. Discussion of advantages and drawbacks of more traditional mathematical modeling. Review of alternative forms of formal representations of hypothesized processes and issues related to verification of simulations. P/NP or letter grading.

152. Past Societies and Their Lessons for Our Own Future. (5) (Same as Anthropology M150Q and Geography M153.) Lecture, two hours; discussion, two hours. Examination of modern and past tribal and band societies (Amazonian Indians, Kalahari bushmen, and others) that met varying fates, as background to examination of how modern state societies are coping or failing to cope with similar issues. P/NP or letter grading.

153. International Flash Points. (5) Seminar, three hours. Debate-style seminar concentrating on explosive contemporary current international affairs, including North and South Korea, India and Pakistan, Israel and Palestinians, Iraq, Colombia, and Congo and Rwanda. P/NP or letter grading.

154. Interpreting Performance: Examination of Sources for Interpretive History for Performing Arts. (5) (Same as Theater M112.) Lecture, two hours; discussion, two hours. Examination of nature of performance in theory and practice and of social, historic, and cultural contexts in which performance traditions have evolved. Attendance at approximately five designated performances/events required. P/NP or letter grading.

155. The U.S. and World Post-9/11. (5) Lecture, two hours; discussion, two hours; tutorial, 90 minutes every other week. Survey of major questions confronting American foreign policy in period since September 11, 2001, in course organized in conjunction with series of public lectures on this topic. P/NP or letter grading.

156. Consciousness and Brain. (5) Seminar, three hours. Examination of philosophical and neuroscience aspects of how brain produces conscious experiences, including consideration of whether consciousness exists, what is meant by intentional experience, and role of language and self in consciousness. P/NP or letter grading.

157. International Relations of Middle East. (4) (Same as Chicana and Chicano Studies M128.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Role of great powers in Middle East, with emphasis on American, Soviet, and West European policies since 1945. P/NP or letter grading.


159. Cure of Mental Illness. (5) Seminar, three hours. Examination of human genomic project, comparative and collective religious response of Latin America and the U.S. to displacement, and fragmentation produced by conquest, colonization, underdevelopment, globalization, and migration. Letter grading.

175. Terrorism, Counterterrorism, and Weapons of Mass Destruction: Practical Approach. (5) Seminar, three hours. Terrorism, its origins, and ways of addressing terrorism at local, national, and global levels. Guest speakers from a variety of UCLA departments and from Los Angeles. 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 with humanities faculty members. 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 of humanities research journals and monographs. Weekly student research reports and presentations by humanities faculty members. May be repeated for credit. P/NP grading.

198. Directed Honors Studies. (4) Tutorial, two hours. Preparation: minimum of 4 units completed in Honors Collegium course to pursue in greater depth significant topics from one discipline through which to examine cultural modernity and national identity. Study of literature, history, and film from Australia, United Kingdom, the U.S., Near East, and South Asia as way of trying to define both hypocrisies and creativity of impostures. P/NP or letter 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 discipline. May be repeated for credit. P/NP or letter grading.

169. Imposture and National Identity. (5) Seminar, three hours. Cross-cultural approach to study of imposture assumptions of"window through which to examine cultural modernity and national identity. Study of literature, history, and film from Australia, United Kingdom, the U.S., Near East, and South Asia as way of trying to define both hypocrisies and creativity of impostures. P/NP or letter grading.

170. Venice Imagined. (5) Seminar, three hours. Study of literature and visual arts associated with city of Venice, Italy, concentrating first on period of early modern Venice as flourishing republic and then on its long decline, of special fascination to Romantic, modern, and contemporary authors. P/NP or letter grading.

171. Rationality and Emotions. (5) Seminar, three hours. Historical study of way in which philosophers, social theorists, and contemporary social scientists have characterized relationship between rationality and emotions, culminating in emerging consensus that emotions can positively influence rational decision making. Readings range from philosophy of ancient Greeks to writings of contemporary neuroscientists. P/NP or letter grading.

172. French Thinkers of Society. (5) Seminar, four hours. In-depth study of distinguishing perspectives of French theorists who wrote on society and its impact on individuals. Theorists include Rousseau, Marx, Mauss, Durkheim, and Baudrillard. P/NP or letter grading.

173. Lincoln and American Political Tradition. (5) Seminar, three hours. Examination of nuances of Lincoln's ideas and complexity of his political positions in his writing and early works, including study of his prose and method of reasoning in all his works. P/NP or letter grading.

174. Future Impact of Nano in New Technologies. (5) Seminar, four hours. Examination, for general audience, of science behind nanotechnology and way in which nano can potentially influence medical care, environment, energy issues, military, government, and economics. Demonstration of how nano, like current technology, cannot be separated from ethical, cultural, political, and social issues. P/NP or letter grading.

175. Terrorism, Counterterrorism, and Weapons of Mass Destruction: Practical Approach. (5) Seminar, three hours. Terrorism, its origins, and ways of addressing terrorism at local, national, and global levels. Guest speakers from a variety of UCLA departments and from Los Angeles. 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 with humanities faculty members. 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 of humanities research journals and monographs. Weekly student research reports and presentations by humanities faculty members. May be repeated for credit. 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 discipline. May be repeated for credit. P/NP grading.
Human Complex Systems Interdisciplinary Minor College of Letters and Science

UCLA
341 Haines Hall
Box 951553
Los Angeles, CA 90095-1553
(310) 825-2055
fax: (310) 206-7833
e-mail: dread@anthro.ucla.edu
http://hcs.ucla.edu

Dwight W. Read, Ph.D., Chair
Faculty Advisory Committee
Phillip Bonaich, Ph.D. (Sociology)
Susanne Lohmann, Ph.D. (Political Science)
William McKeel, Ph.D. (Management)
Dwight W. Read, Ph.D. (Anthropology)
Francis F. Steen, Ph.D. (Communication Studies)

Scope and Objectives

Human social systems are complex because humans conceptualize, communicate, and construct. Human social systems are shaped not only by factors extrinsic to the individuals making up the social systems, but also by the humans embedded within them. Humans are agents who analyze, reflect on, affect, shape, modify, and construct the social systems of which they are a part.

Students in the Human Complex Systems minor learn ways of thinking that help them make sense of and move effectively in today's world — a world that is complex, information-rich, and prone to fast and furious change. They develop analytical skills and learn methodological tools that are relevant for the workplace in the emerging techno-economy. Students who seek to enter graduate school are well prepared by virtue of participating in some of the most exciting and novel research programs linking the frontiers of the social sciences with computer science, life sciences, humanities, management, public policy, and media arts.

Undergraduate Study

Human Complex Systems Minor

To enter the Human Complex Systems minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (12 units minimum): Three courses, including one from Mathematics 2, Statistics 10, 11, 12, 13, or 14 and two from Anthropology 7, 8, 9, 33, Economics 1, 2, Geography 3, 4, any lower division history course, Political Science 10, 20, 30, 50, Sociology 1, 10, 24 (courses may be from the same department or from different departments).

Required Upper Division Courses (20 units minimum): Five courses selected from the following: (1) two core courses from Anthropology 131, Communication Studies 154, Human Complex Systems M130 or Management M118A, Political Science 146G, Sociology 111, (2) two method courses (Human Complex Systems M100/100L and 110), and (3) one elective course from Anthropology 131 (unless taken as part of the core), M186, 186P, Communication Studies 154 (unless taken as part of the core), Geography 142, 148, Human Complex Systems 120, M130 or Management M118A (unless taken as part of the core), Political Science M115A, M142D, 146G (unless taken as part of the core), 164, Public Policy 102, C119, Sociology 111 (unless taken as part of the core), or M118; other courses may be applied by petition, and students may petition to apply Human Complex Systems 197 at the same time the contract is signed.

No more than two courses (8 to 10 units) may be applied toward both this minor and a major or minor in another department or program. Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Human Complex Systems Lower Division Courses

1Q. Emerging Issues in Complex Systems Science. (2) Lecture, two and one half hours. Presentation of current faculty work in complexity science, particularly in human social and organizational dynamics, but also including aspects of arts, humanities, and natural sciences. Introduction to readings relevant to human complex systems and to current faculty members and researchers who teach and advise in program, P/NP or letter grading.

10A. Introduction to Complex Systems Science. (5) Lecture, four hours. How macroscopic patterns emerge dynamically from local interactions of large number of interdependent (often heterogeneous) entities, without global design or central control. 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 multiagent computational models that better capture these complex, adaptive, and self-organizing phenomena. Letter grading.

Upper Division Courses

M100. Formal Modeling and Simulations in Social Sciences. (4) Same as Anthropology M118 and Honors Collegium M150. Lecture, three hours. Exploration of different approaches to modeling empirical phenomena of concern to social sciences. Topics include modeling tools, learning models, decision models, group competition models, and evolutionary models. Use of multiagent computer simulations and group exercises to explore emergent behaviors among individuals interacting according to models for behavior. Discussion of advantages and drawbacks of more traditional mathematical modeling. Review of alternative forms of formal representations of hypothesized processes and issues related to verification of simulations. P/NP or letter grading.

100L. Modeling and Simulations Laboratory. (1) Laboratory, one hour. Designed for Human Complex Systems minor students. Discussion of observational techniques and engagement in live group simulations as experiential learning, with focus on how coherent behavior and complexity emerge from interactions between individual agents, such as formation of social and political movements. First-hand experience in observing interactional patterns and system dynamics, such as how individuals come to play leadership roles, how alliances and pairing occur in groups, and how culture (lasting patterns of interaction and belief) form. Letter grading.

110. Artificial Life: Experiments in Synthetic Anthropology. (5) Lecture, two hours; laboratory, four hours. Prior programming experience not required. Hands-on introduction to artificial culture — philosophy and practice of constructing highly interactive computer simulations of human social worlds. Formed and critical look at revolutionary new sciences of complexity: multiple agency, simultaneous causation and evolutionary emergence embodied in computational description, and understanding and explanation of human complex systems. Students design their own populations of cultural agents, create social and physical environments in which they live, and study consequences of counterfactual what-if scenarios. May be repeated for credit. Letter grading.

120. Artificial Life, Culture, and Evolution. (5) Lecture, two hours; laboratory, four hours. Prior programming experience not required. Hands-on introduction to artificial life and evolutionary computation as they contribute to philosophy and practice of artificial culture, description, understanding, and explanation of human complex systems through computer simulations. Informed and critical look at evolution, origin, and emergence of physical, biological, and cultural processes from perspective of revolutionary new sciences of complexity. Students design, modify, and experiment with interactive simulations featuring cellular automata, algorithmic patternning, and evolutionary and genetic programming. May be repeated for credit. Letter grading.

M130. Foundations of New (Bottom-Up) Social Science: Applications of Complexity Science and Agent-Based Models. (4) Same as Management M118A. Lecture, four hours. Limited to juniors/seniors. Introduction to (1) complexity science as applied to social behavior, (2) agent-based computational modeling, and (3) philosophies of scientific realism, model-centered science, and other recent trends in philosophy of science as they pertain to complexity science and computational modeling. Use of complexity science to bridge old and new conceptions of social science. Newtonian science, neoclassical economics, and old-style approaches to social science all build on assumptions that all basic agents comprising phenomena (atomic particles, atoms, molecules, organisms, people, groups, firms) are homogeneous and go forward in time under equilibrium conditions interspersed with occasional disequilibrium periods. Letter grading.
M193P. Journal Club Seminars: Human Complex Systems. (1) (Same as Anthropology M193P) Seminars, one hour. Limited to undergraduate students. Discussion of current research articles as published in professional journals. May be repeated for credit with topic change. P/NP grading.

197. Individual Studies in Human Complex Systems. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned readings and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Human Complex Systems. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Cullminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Adjunct Associate Professors
York Marahrens, Ph.D.
Linda L. McCabe, Ph.D.
Jeanette Papp, Ph.D.

Adjunct Assistant Professors
Christina Jamieson, Ph.D.
Rox Ophoff, Ph.D.

Scope and Objectives
The graduate Human Genetics Program prepares students for careers as independent laboratory researchers with a firm grasp of the developments in biological and medical research. The rapidly evolving field of human genetics now incorporates genetic, biochemical, cellular, and developmental studies of both humans and model organisms to tackle biomedical problems important for human health and disease. Areas of study include both Mendelian and non-Mendelian hereditary diseases, genomics and mapping, bioinformatics, developmental biology, neurogenetics, sex determination, cytogenticis, human malformation, and chromatin structure and function. Laboratory research is emphasized. Conceptual approaches to medically related biological problems are employed, frequently with the aid of automation and advanced imaging techniques, toward the goal of disease prevention, control, and eradication methods such as gene therapies. Coursework acquaints students with the most current literature and trains students in critical thinking, experimental design, and the ability to anticipate future developments.

Graduate study leading to a Ph.D. degree is emphasized. Under special circumstances, master's candidates are considered after consultation with faculty members and the chair.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of 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
M102W. DNA: Promise and Peril. (5) (Same as Sociology and Genetics M102W) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Sequence of entire personal genome is now available to us. Consideration of impact that knowledge of this genomic sequence has on concepts of ourselves as individuals and of our place in biological universe. Exploration of how this information influences concepts of race, ethnicity, and gender. Examination of ability of DNA-based forensics to identify specific individuals. As genes become commodities with value in marketplace, someone else may own our genes. Discussion of cloning of humans for reproductive and therapeutic purposes. Much has been made of medical implications of Human Genome Project, but we look at influence of this information on our concepts of self and identity. Satisfies Writing II requirement. Letter grading.

CM122. Mouse Molecular Genetics. (2) (Same as Microbiology CM122) Lecture, two hours; discussion, one hour; outside study, eight hours. Preparation: one statistics course and familiarity with any programming language. Designed for undergraduate and graduate engineering students, as well as students from biological sciences and medical school. Introduction to current quantitative understanding of human genomics and computational interdisciplinary research in genetics. Topics include introduction to genetics, human population history, linkage analysis, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genotyping technologies. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM224. Letter grading.

CM124. Computational Genetics. (4) (Same as Computer Science CM124) Lecture, three hours; discussion, one hour; outside study, eight hours. Preparation: one statistics course and familiarity with any programming language. Designed for undergraduate and graduate engineering students, as well as students from biological sciences and medical school. Introduction to current quantitative understanding of human genomics and computational interdisciplinary research in genetics. Topics include introduction to genetics, human population history, linkage analysis, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genotyping technologies. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM224. Letter grading.

C144. Genomic Technology. (4) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 4. Survey of key technologies that have led to successful application of genomics to biology, with focus on theory behind specific genome-wide technologies and their current applications. Concurrently scheduled with course C244. P/NP or letter grading.

CM156. Human Genetics. (4) (Same as Microbiology CM156 and Molecular, Cell, and Developmental Biology CM156.) Lecture, three hours; discussion, two hours. Requisite: Chemistry 139. Recommended: Molecular, Cell, and Developmental Biology 100 or C139 or M140. Application of genetic principles in human populations, with emphasis on cytogenetics, genetic diseases, population genetics, and family studies. Literature and readings in the literature, with focus on current questions in the fields of medical and human genetics and methodologies appropriate to answer such questions. Concurrently scheduled with course CM256. Letter grading.


199. Special Studies in Human Genetics. (2 to 8) Tutorial, to be arranged. Students select instructor among enrolled faculty members, 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. Requisite: Mathematics 170A or equivalent experience in probability. Mathematical description of biological relationships, with particular attention to areas where conditions for deterministic models are inadequate. Examples include stochastic models of immune system, population genetics, and computational interdiscipinary research in genetics. Topics include introduction to genetics, human population history, linkage analysis, association analysis, and association mapping. Concurrently scheduled with course CM124. Letter grading.

M229S. Seminar: Current Topics in Bioinformatics. (4) (Same as Computer Science M229S.) Seminar, two hours outside study, eight hours. Designed for graduate engineering students, as well as students from biological sciences and medical school. Introduction to current topics in bioinformatics, genomics, and computational genetics and preparation for computational interdisciplinary research in genetics and genomics. Topics include genome analysis, regulatory genomics, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genotyping technologies. Computational techniques include those from statistics, computer science, and computational biology through presentation of current research papers and reviews. Letter grading.

236A. Advanced Human Genetics. (4) (Formerly numbered 236B.) Lecture, three hours. Requisites: Chemistry 248A, CM253. Advanced topics in human genetics related to Mendelian disease, molecular and cellular genetics, and relevant technologies. Topics include cyto- genetics, genomics, proteomics, positional cloning, bioinformatics, gene therapy, and developmental genetics. Reading materials include original research papers and reviews. Letter grading.

236B. Advanced Human Genetics. (4) Lecture, three hours. Requisites: courses 236A, CM248, CM253. Advanced topics in human genetics related to complex traits and complex diseases, with emphasis on biostatistics and mathematical modeling. Reading materials include original research papers and reviews. S/U or letter grading.

C244. Genomic Technology. (4) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 4. Survey of key technologies that have led to successful application of genomics to biology, with focus on techniques that have become widespread and their current applications. Concurrently scheduled with course CM01. S/U or letter grading.

M252. Seminar: Advanced Methods in Computational Biology. (2) (Same as Chemistry M252.) Seminar, one hour; discussion, one hour. Designed for advanced undergraduate and graduate students. Introduction to computational methodology in bioinformatics and computational biology through presentation of current research literature. How to select and apply methods from computer and mathematical sciences to problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.

CM253. Advanced Principles of Molecular and Cellular Biosciences II. (6) (Same as Biological Chemistry M253, Chemistry CM253, and Molecular, Cell, and Developmental Biology CM253.) Lecture, five hours. Requisites: Chemistry 110A, 153A, 153B, 153C, 153D; CM169 and (CM223.) Application of genetic principles in human populations, with emphasis on cytogenetics, bioinformatics, population genetics, and family studies. Lectures and readings in literature, with focus on current questions in fields of medical and human genetics and methodologies appropriate to answer such questions. Concurrently scheduled with course CM156. Independent research project required. Letter grading.

CM255. Mapping and Mining Human Genome. (3) (Same as Microbiology M255.) Lecture, two hours; discussion, two hours. Requisites: Statistics 100A or CM223. Advanced genomics and statistical molecular genetic and cytogenetic techniques of gene mapping. Selected regions of human genomic map scrutinized in detail, particularly gene families and clusters of genes that have remained linked from mouse to human. Discussion of localizations of disease genes. S/U or letter grading.

CM256. Human Genetics. (4) (Same as Microbiology CM256 and Molecular, Cell, and Developmental Biology CM256.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Strongly recommended: Molecular, Cell, and Developmental Biology CM253. Introduction to human genetics, methodology and computer analysis of genetic data; survey of key technologies that have led to successful application of genomics to biology, with focus on techniques that have become widespread and their current applications. Concurrently scheduled with course CM156. Independent research project required. Letter grading.

CM260A. Introduction to Bioinformatics. (4) (Formerly numbered M260.) (Same as Chemistry CM260A and Computer Science CM221.) Lecture, three hours; discussion, one hour. Enforced requisites: Statistics 100A or CM223, one of Chemistry 170A or Statistics 100A or 110A, and Computer Science 180 or Program in Computing 60 with grade of C– or better. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new bioinformatic methods. Focus on sequence analysis and alignment algorithms. S/U or letter grading.


INDO-EUROPEAN STUDIES

Interdepartmental Program
College of Letters and Science

UCLA
100 Dodd Hall
Box 951417
Los Angeles, CA 90095-1417
(310) 825-4171
fax: (310) 206-1903
http://www.humnet.ucla.edu/pies/home.html

Stephanie W. Jamison, Ph.D., Chair

Faculty Advisory Committee

Vyacheslav V. Ivanov, Ph.D. (Slavic Languages and Literatures)
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://www.gdnet.ucla.edu/

gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree

The Indo-European Studies Program offers the Doctor of Philosophy (Ph.D.) degree in Indo-European Studies.

Indo-European Studies

Lower Division Courses


250A-250B. European Archaeology. (4-4) Seminar, three hours. Studies in ancient European archaeological materials and their relationship to Near East, Western Siberia, and Central Asia. May be repeated for credit. In Progress (250A) and S/U or letter (250B) grading.

260. Indo-European Comparative Mythology and Poetics. (4) Seminar; three hours. Preparation: ability to read original sources in at least one ancient Indo-European language. Comparison of major Indo-European mythological and poetic traditions and reconstruction of their common sources. Topics include divinities and their names; symbolic systems in social context; myths, folk narratives, belief systems; relations with other traditions; literary continuations of mythopoetic material. Concurrently scheduled with course 260. S/U or letter grading.


597. Preparation for M.S. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Preparation of research data and writing of M.S. dissertation. May be repeated for credit. S/U grading.


Upper Division Courses

131. European Archaeology from the Neolithic to Bronze Age. (4) Lecture, four hours. Survey of European cultures from beginning of food-producing economy in the 7th millennium B.C. to beginning of Bronze Age in the 3rd millennium B.C. P/NP or letter grading.

132. European Archaeology: Bronze Age. (4) Requisite: course 131. Survey of European cultures from around 3000 B.C. to the period of destruction of the Mycenaean culture about 1200 B.C. Aegean area and rest of Europe.

M150. Introduction to Indo-European Linguistics. (5) (Same as Linguistics M150.) Lecture, four hours. Recommended requisite: Linguistics 1 or 20. Indo-European languages (ancient and modern), including their relationships, chief characteristics, writing systems, and sociolinguistic contexts; nature of reconstructed Indo-European proto-language and proto-language. 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 C260. P/NP or letter grading.

199. Special Studies. (2 to 8) Tutorial, to be arranged. P/NP or letter grading.

Graduate Courses


INFORMATION STUDIES

Graduate School of Education and Information Studies

UCLA
Office of Student Services
102B GSEIS Building
Box 951520
Los Angeles, CA 90095-1520
(310) 825-5269
fax: (310) 206-4460
e-mail: info@gseis.ucla.edu
http://gseis.ucla.edu

Anne J. Gilliland-Swetland, Ph.D., Chair

Professors

Christine L. Borgman, Ph.D. (President of Information Studies)
Anne J. Gilliland-Swetland, Ph.D.
Leah A. Liebow, Ph.D.
Beverly P. Lynch, Ph.D.
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. Introduction to bibliographic acquired information, spanning 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**

100. Perspectives on Literacy. (4) Lecture, two hours; discussion, two hours. Designed for sophomores/juniors/seniors. Open to M.L.I.S. students and to graduate students from other schools/departments. Interdisciplinary introduction to literacy as a historical, social, and political issue. Topics include culture and literacy, historical development of literate societies, social definitions of illiteracy, literacy campaigns, literacy as a national and local policy issue. Letter grading.

110. Information Resources and Libraries. (5) Lecture, four hours; discussion, one hour; laboratory, two hours. Designed for sophomores/juniors/seniors. Not open for credit to M.L.I.S. students. Introduction to bibliographic and information resources that encompass both general and specialized materials as well as relevant research methodologies in social sciences, physical sciences, and humanities. Specifically designed to facilitate knowledgeable use of libraries and efficient retrieval of information. Letter grading.

111A-M111E. Ethnic Groups and Their Bibliographies. (4 each) Lecture, four hours. Introductions to bibliographical and research tools and methods for studying, with introductory information on ethnic group bibliographies on other ethnic groups may be added. Offered in collaboration with several centers for ethnic studies. May not be repeated for credit. P/NP or letter grading. 111A. American Indian History and Culture; 111B. African American History and Culture; M111C. Latino History and Culture. (Same as Chicana and Chicano Studies M112:); 111D. Asian American History and Culture; M111E. Jewish History and Culture. (Same as Jewish Studies M111E.)

180. Special Topics in Information Studies. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Selected topics or issues related to social, political, or cultural 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.

**Graduate Courses**

200. Information in Society. (4) Lecture, two hours; discussion, two hours. Examination of processes by which information and knowledge are created, integrated, disseminated, organized, used, and preserved. Topics include history of communication technologies, evolution of literacy, development of information professions, and social issues related to information access. Letter grading.

201. Ethics, Diversity, and Change in Information Professions. (4) Lecture, two hours; discussion, two hours. Service learning course that serves as forum to discuss, learn, and understand ethical challenges of multicultural information society that shape societal, professional community, and individual views and impact professional practice, decision making, and public policy. S/U grading.


208. Scholarly Communication and Bibliometrics. (4) Lecture, four hours. Preparation: one inferential statistics course. Survey of current theory, method, and empirical studies at intersection of scholarly communication and bibliometrics, seeking to understand flow of ideas through published record, whether in print, electronic form, or other media. Letter grading.


220. Design of Library and Information Services. (4) Lecture, two hours; discussion, two hours. Principles and methods for planning and designing user-driven library and information services. Principles and methods for assessing information needs of designated populations and for designing services that meet those needs. Letter grading.

**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://lsis.gis.eis.ucla.edu.
240. Management of Digital Records. (4) Lecture, three hours. Introduction to long-term management of digital content: archives, preservation, storage, 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, four hours. Requisites: courses 200, 260. Provides fundamental knowledge and skills enabling information professional 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 using print and electronic sources. Letter grading.

246. Information-Seeking Behavior. (4) Lecture, three hours; discussion, one hour. Study of factors and influences, both individual and social, associated with human beings needing, using, and acting on information. Topics include information theory, human information processing, information flow among social and occupational groups, and research on information needs and uses. Letter grading.


251. Seminar: Specialized Literatures. (4) Seminar, four hours. Requisite: course 245. Exposure to major literatures across spectrum of disciplines in three broad areas: (1) arts and humanities, (2) social sciences, (3) natural sciences and engineering. Students become familiar with knowledge structures; emphasis on reference and information sources for scholarly research. Letter grading.


258. Legal Information Resources and Libraries. (4) Lecture, four hours. Introduction to information resources in law, with emphasis on primary authority and indexes to legal literature. Legal research skills. Law library services and management. 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 generic concepts of organization, classification, hierarchy, arrangement, and display of records. Provides background for further studies in cataloging, reference, information retrieval, and database management. Letter grading.


270. Introduction to Information Retrieval and Management. (4) Lecture, two hours; discussion, two hours. Requisites: courses 245, 260. Design implications of interaction between users and features of automated information systems and interfaces that are specific to information-seeking process. Emphasis on search strategy and subject access through use of thesauri and other vocabularies. Letter grading.

279. Seminar: Information Systems. (4) Seminar, four hours. Preparation: at least one course from 246, 272, 276, 277, 455. Requisites: courses 200, 260. Content varies from term to term to allow emphasis on specialized topics such as vocabulary control, file design, indexing, classification, text processing, measurement of relevance, evaluation of information systems, and social and policy issues related to information technology and services. Letter grading.

280. Social Science Research Methodology for Information Studies. (4) Lecture, four hours. Understanding of nature, uses, and practice of research appropriate to information studies. Identification of research problems and evaluation of research. Social science quantitative and qualitative methods. Emphasis on inquiry methodology and empirical research. S/U or letter grading.


282. Principles of Information Systems Analysis and Design. (4) Discussion, four hours. Theories and principles of information systems design and development, including determination of requirements, technical design and evaluation, and internal organization. S/U or letter grading.

285. Introduction to Research Design and Methodology. (4) Seminar, three hours. Designed for Ph.D. students. Introduction to research traditions in library and information science: qualitative/quantitative social science methods, ethnographic/field approaches, and historical approaches. Epistemological foundations of research, formulating research questions, and designing appropriate research studies. Letter grading.

M225. Latin American Research Resources. (4) (Same as History M225 and Latin American Studies M220.) 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 and research sophistication as basis for enhanced research results.

227. Information Services in Culturally Diverse Communities. (4) Lecture, four hours. Issues in provision of information services in multilingual and multicultural social milieu 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. Preparatory: one research methods course. Recommended: one library automation course. Information systems and services from points of view of their cost and effectiveness in meeting desired objectives. Review of principles of costing. Study of literature in which measures have been developed to evaluate effectiveness 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. African Bibliography and Research Methods. (4) (Same as African Studies M229B) Discussion, four hours. Preparation: one course in African Studies or permission of instructor. Emphasis on relevant basic and specialized reference materials, using full range of available information resources, information organization of books, serials, and computerized databases. S/U or letter grading.

M229C. Introduction to Slavic Bibliography. (2) (Same as Slavic M229.) Lecture, two hours. Introduction to Slavic and East European bibliography for the humanities and social sciences. Emphasis 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 scholarly societies in the West; relevant reference sources, archival resources, and resources for library acquisition of Slavic materials; bibliographic information systems. Letter grading.

233. Records and Information Resources Management. (4) Lecture, three hours. Introduction to records and information resources management in corporate, government, and institutional settings, including analysis of organizational information flow, classification and filing systems, records retention scheduling, records protection and security, reprographics and image management technology, and litigation support. Letter grading.


Examination of several analytical frameworks that can provide that service. Letter grading.

290. Research Seminar: Information Studies. (1 to 2) Seminar, one to two hours. Designed for Ph.D. stu-
dents. Emphasis on original research, including the profes-
sional use of social, cultural, and psychological tools inclu-
ding principles for design of systems for acquiring, organizing, and retrieving information. May be repeated with topic change. S/U or letter grading.

291A. Doctoral Seminar: Theoretical Traditions in Information Studies. (4) Seminar, one hour; discus-
sion, two hours. Introduction to multiple approaches historically taken in study of information (e.g., library and information science, archival theory, social informatics). Assessment of influence of cognitive disciplines (e.g., linguistics, mathematics, philosophy, sociology). Evaluation of epistemological accounts of information sciences. Letter grading.

291B. Doctoral Seminar: Research Methods and Design. (4) Seminar, one hour; discussion, two hours. Survey of qualitative and quantitative theoretical research designs. Ethical issues: conceptualization and measurement; indexes, scales, and sampling; experimental, survey, field, and evaluation research; data analysis. Letter grading.

292. Information as Evidence. (4) Seminar, four hours. Through close reading of scholarly works, ex-
ploration of how certain objects (e.g., records, books, statistical) acquire their particular role as evidence of historical events, authoritative intention, social phenome-
na, collective trauma, and more. Special attention to kind of interventions that must be staged so that these objects retain their evidential value while subject to gradual decontextualization, physical degradation, and competition from contradictory evidence. S/U or letter grading.

293. Doctoral Seminar: Information Retrieval. (4) Seminar, four hours. Designed for Ph.D. students. In-
tellectual principles for organization of information, in-
cluding principles for design of systems for acquiring, organizing, and retrieving information. Also includes system-specific user studies to extend that design of information systems is predicated on their evaluation and use. S/U or letter grading.

294. Doctoral Seminar: Information Policy. (4) Seminar, four hours. Designed for Ph.D. students. Em-
phasis on organizational, political, and economic influences in development of library and information science and management of information organizations and resources. S/U or letter grading.

295. Doctoral Seminar: Information Seeking. (4) Seminar, four hours. Designed for Ph.D. students. Ex-
amination of behavioral and cognitive aspects of in-
quirer’s information needs and uses, including inquir-
er’s characteristics, information problems, psychologi-
cal needs, and uses of information and information technologies, and aspects of question negotiation. S/ U or letter grading.

296. Doctoral Seminar: Information Structures. (4) Seminar, four hours. Designed for Ph.D. students. Intellectual principles for organization of information, including principles for design of systems for acquiring, organizing, and retrieving information. System-specific user studies included to extend that design of information systems is predicated on their evaluation and use. S/U or letter grading.

297. Doctoral Seminar: Information Institutions and Professions. (4) Seminar, four hours. Designed for Ph.D. students. Identification to social theory and examination of several analytical frameworks that can be used to analyze social, cultural, and political roles of information institutions and professionals who direct them. Letter grading.

M299. Research Resources for European Studies. (2) Same as French M299, German M299, Italian M299, Slavic M299, and Spanish M299. Two hours. Essentials of library research strategy and effec-
tive searching in key print and online resources for European and Russian studies. Through combination of lecture, online demonstration, and hands-on activi-
ties 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 per-
sonnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guid-
ance and supervision of regular faculty member re-
sponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Professional Development and Portfolio De-
sign. (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 develop-
ment, such as career planning, continuing education, mentoring, and reflective practice; students also en-

410. Management Theory and Practice for Infor-
mation Professionals. (4) Lecture, two hours; dis-
cussion, two hours. Principles and practice of man-
agement in all types of organizations where informa-
tion professionals have a role. S/U grading.

415. Library Personnel Management. (4) Lecture, four hours. Basic principles of personnel manage-
ment. Survey of current personnel practices in librar-
ies; how basic principles apply or need to be modified to fit library settings. S/U or letter grading.

416. Interpersonal Communication Issues in Li-
brary Systems. (4) Lecture, four hours. Examination of interpersonal communication patterns in library man-
agement and staff communication, in resource sharing, and in providing information services. Emphasis on relation-
ships within organizational environment and on effect-
tive communication styles in decision making, manag-
ing conflict, and implementing change. S/U grading.

421. Special Libraries and Information Centers. (4) Lecture, four hours. Organization, administration, collections, facilities, finances, and problems of spe-

422. College, University, and Research Libraries. (4) Lecture, four hours. Administration, collections, facilities, finances, and problems of col-
lege and university libraries and their relationships within institutions of which they are part. Functions of research libraries. Examination of their staffs in serving scholars. S/U or letter grading.

423. Public Libraries. (4) Lecture, four hours. Gov-
ernment, organization, and administration of munici-
pal, county, and regional public libraries; develop-
ments in changing patterns of public library service. S/U or letter grading.

424. Storytelling. (4) Lecture, two hours; demonstra-

425. Library Services and Programs for Children. (4) Lecture, two hours; discussion, two hours. Theory and practice of service to children in public libraries. Overview and analysis of services to children aged 14 and under; provides opportunities for stu-
dents 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 serv-
ices to children which are of interest to young adults (seventh grade and above). Discussion of special problems in working with young people and psychology of teenag-
ers. S/U or letter grading.

430. Collection Development and Acquisition of Library Materials. (4) Lecture, four hours. Back-
ground and philosophy of. Library Materials and Ac-
ticulation pertinent to collection development in pub-
lic, school, academic, and special libraries. Theory and practice of collection development and manage-

431. American Archives and Manuscripts. (4) Lect-
ture, four hours. Identification, description, subject analysis, and organization of records contained in ar-
chives and manuscript collections, Administration. User requirements. Problems of acquisition, legal title, literary property, preservation, accessibility, and use. S/U or letter grading.

432. Issues and Problems in Preservation of Heri-


438A. Seminar: Advanced Issues in Archival Sci-
ence — Archival Appraisal. (4) Seminar, four hours. Requires course 431. Exploration of criteria and evaluation of contributions of key figures in development of archival appraisal theory; identification and evaluation of distinc-
tive movements in archival appraisal; identification of cultural, political, sociological, and technological movements that can have impact on appraisal meth-
odologies. Letter grading.

438B. Seminar: Advanced Issues in Archival Sci-
ence — Archival Description and Access Sys-
tem. Seminar, four hours. Requires course 431, Exploration of history of archival description and ac-
cess systems in the U.S. and their development since World War II; data collection; access tools and impli-
cations of these issues in development of online ar-
chival access systems. Letter grading.

447. Computer-Based Information Resources (On-
line Searching). (4) Lecture, four hours. Requires: course 445. Emphasis on use of reference and re-
source databases and different vendor systems. File structure and hardware requirements. Analyses of in-
formation needs and investigation of databases ad-
dressed to those needs. S/U grading.

448. Information Literacy Instruction: Theory and Technique. (4) Lecture, four hours. History, theory, methods, and materials of user education/bibliograph-
ic instruction in libraries and other information retrieval-
environments. Examination of variety of user edu-
cation/bibliographic instruction theories and method-
ologies, including overview of planning and administra-
tion. Identification of problems in user edu-
cation/bibliographic instruction. Applications of meth-
ods of teaching use of libraries and information re-
sources. S/U or letter grading.

455. Government Information. (4) Lecture, four hours. Introduction to nature and scope of govern-
ment information provided by federal government, as well as by state, municipal, international, and for-

457. Health Sciences Librarianship. (4) Lecture, four hours. Health sciences information resources and services, management of health sciences infor-
mation resources and services, health sciences envi-
ronment and policies, information systems and tech-
nology. Letter grading.

461. Descriptive Cataloging. (4) Lecture, four hours. Entry and description of library materials. Constitu-
tion, structure, and form of the library catalog. Cata-
aloging services, tools, and cataloging rules and their application. S/U or letter grading.
INSTITUTE OF THE ENVIRONMENT
Center for Interdisciplinary Instruction
College of Letters and Science

UCLA
300 La Kretz Hall
Box 951496
Los Angeles, CA 90095-1496
(310) 825-5008
fax: (310) 825-9663
e-mail: ioe@ucla.edu
http://www.ioe.ucla.edu

Thomas B. Smith, Ph.D., Acting Director

Professors
Ann E. Carlson, J.D.
Charles J. Corbett, Ph.D.
Randall D. Crane, Ph.D.
J. Nicholas Entrikin, Ph.D.
Malcolm S. Gordon, Ph.D.
Matthew E. Kahn, Ph.D.
James C. McWilliams, Ph.D.
Mary D. Nichols, J.D., in Residence
Suzanne E. Paulson, Ph.D.
Thomas B. Smith, Ph.D.
Victoria L. Sork, Ph.D.
Keith D. Stolzenbach, Ph.D.
Richard P. Turco, Ph.D.
Blaine Van Valkenburgh, Ph.D.

Professors Emeriti
William M. Hamner, Ph.D.
Richard R. Vance, Ph.D.

Assistant Professor
Rebecca F. Shipe, Ph.D.

Adjunct Assistant Professor
Wolfgang Buermann, Ph.D.

Visiting Associate Professor
Magali A. Delmas, Ph.D.

Scope and Objectives
The mission of the UCLA Institute of the Environment (IoE) is to advance cross-disciplinary research, teaching, and public service on matters of critical importance to the planet and the campus community. The environment is defined broadly to include the interrelated issues of global climate change, loss of biological diversity, sustainability, and threats to human health and well-being from the use and misuse of natural resources, applying all the tools of scientific and policy analysis as well as moral and aesthetic values to the work. Los Angeles itself is a vital asset to this mission. As an international mega-city located in one of the world’s most biologically diverse regions, Los Angeles is a magnet for scholars from around the world who are facing similar issues of pollution, access to potable water, demand for energy to support economic growth, fragmentation of habitat, and the need to restore ecological function to sprawling urban settlements. The IoE offers creative, multidisciplinary academic programs and courses that address the full complexity of current environmental problems. 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, the Environmental Science minor, provides students with disciplinary breadth in several areas important to environmental science. 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 IoE 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 topics such as the history of environmental thought, environmental policy, and the impacts of human population.

Undergraduate Study
Environmental Science B.S.
The Environmental Science B.S. program represents strong collaboration by the Institute of the Environment and the Departments of Atmospheric and Oceanic 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 eight environmental science areas, each associated with a particular department. With assistance from the Institute of the Environment staff, students must formally apply to and be accepted by the associated department to receive the minor.

Preparation for the Major
Required: Chemistry 1A, 1B, and 1B (or 20A, 20B, and 20L), Earth and Space Sciences 1 (required for the geology or geophysics and planetary physics minor) or Environment M10, Life Sciences 1, 2, Mathematics 3A and 3B (or 31A and 31B), Physics 1A and 1B (or 6A and 6B), Statistics 12 or 13.

For the atmospheric and oceanic sciences and environmental engineering minors, Mathematics 3C (or 32A) and Physics 1C (or 6C) are also required.

For the conservation biology minor, Chemistry and Biochemistry 14C (or 30A), Life Sciences 1, and 3 are also required.

For the 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, and at least two courses from Astronomy 3, Earth...
Health Sciences 100, C125, C152D, or C164.

For the geography/environmental studies minor, two courses from Chemistry and Biochemistry 14C or 30A, Life Sciences 3, Mathematics 3C or 32A, and Physics 1C or 6C, plus Geography 5 and one course from 1, 2, 3, 4, or 6 are also required. Students should take these courses before enrolling in upper division courses.

For the geology minor, Earth and Space Sciences 1, 61, Mathematics 3C or 32A, and Physics 1C or 6C are also required.

For the geophysics and planetary physics minor, Earth and Space Sciences 1, 8, 9, Mathematics 3C or 32A, and Physics 1C or 6C are also required.

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://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 132, 153, or Geography 105; (2) one climate science course from Atmospheric and Oceanic Sciences 102, Geography 102, 104, or M106; (3) one Earth science course from Earth and Space Sciences C113, 119, 135, 139, 150, Environment M127, Geography 100, or 101; (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, or Public Policy C115; (6) one pollutant sources, treatment, fate, and transport course from Atmospheric and Oceanic Sciences 104, Chemical Engineering C118, Civil and Environmental Engineering 153, 154, M166, Environmental Health Sciences 100, C125, C152D, or C164.

Social Sciences/Humanities Requirements

Required: (1) One humans and environment course from Environment M132, M133, M137, M153, Geography M128, M137, 145, 150, 156, or Philosophy 125; (2) one policy and politics course from Environment 138, M155, M161, M162, or M164.

Practicum/Colloquium Requirements


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 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, 180 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, five courses from Environment M109, M111, 121, 122, M132, M133, M134, M135, M137, 138, M153, M155, 160, M161, M164 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, 131, 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.

For the geology minor, Earth and Space Sciences 112, 119, and three courses from C107, 116, 125, C132, 133, 134, 139, 150 are required.

For the geophysics and planetary physics minor, Earth and Space Sciences 134, 135, and three courses from M140, 152, 153, 154, 155 are required.

Each course applied toward requirements for preparation for the major and the minor, except Environment 170, must be taken for a letter grade and passed with a grade of C– or better. Students must maintain an overall grade-point average of 2.0 (C) or better in all courses applied toward the major.

Environmental Systems and Society Minor

The Environmental Systems and Society minor is designed for students who wish to augment their major program of study with courses addressing the relationships between environmental science and associated social and political issues. The minor seeks to impart a deeper understanding of environmental systems related to air, land, and water resources, providing a basis for sound professional decision making.

To enter the minor, students must be in good academic standing (2.0 grade-point average) and file a petition at the Institute of the Environment, 300 La Kretz Hall, (310) 206-9193.

Required Lower Division Courses (8 units): At least two courses from Astronomy 3, Atmospheric and Oceanic Sciences 1, 2, 3, Earth and Space Sciences 1, 15, 16, 20, Ecology and Evolutionary Biology 10, 13, 25, Environment M1A, M1B, M10, 14, Geography 1, 2, 5.

Required Upper Division Courses (20 units): At least five courses from Environment M109, M111, 121, 122, M132, M133, M134, M135, M137, 138, M153, M155, 160, M161, M164.

No more than 8 units may be applied toward both this minor and any other major or minor program, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer or substitution of credit for any of the above is subject to institute approval; consult an academic adviser at the institute before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, with 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.

Environment

Lower Division Courses

M1A-M1B-M1CW. Global Environment. (5-5-5)

(Same as GE Clusters M1A-M1B-M1CW) Course M1A is enforced requisite to M1B, which is enforced requisite to M1CW. Limited to first-year freshmen. Letter grading. M1A-M1B. Multidisciplinary Perspectives I, II. Lecture, three hours; discussion, two hours. Human effects on Earth’s ecosystem and social and technological solutions to environmental pollution and overpopulation. History and ecology in lectures; laboratory exercises included in discussions. M1CW. Special Topics. Seminar; three hours. Enforced requisites: course M1B, and English Composition 3 or 3H or English as a Second Language 36. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.
Upper Division Courses

M109. Human Impact on Biophysical Environment: What Science Has Learned. (4) (Same as Geography M109.) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of history, mechanisms, and consequences of interactions between humans and environment. Emphasis on in-depth analysis of three thematic topics (depopulation, desertification, and greenhouse gas increase and ozone depletion) and four major subjects (soil, biodiversity, weather, water, and energy). 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, chemical, and biological elements. Origins and characteristics of atmosphere, oceans, and land masses. Survey of history of Earth and life on Earth, particularly in relation to evolution of physical world. Consideration of possibility of technological solutions to global environmental problems. How do we use knowledge gained during course. 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 soil leaching 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.

M121. Conservation of Biodiversity. (4) Lecture, three hours; discussion, two hours. Open to credit to students with credit for Ecology and Evolutionary Biology 116. Examination of interrelation of natural biotic and human systems. Description of distribution of biodiversity and natural processes that maintain it. Critical analysis of various levels of threats and multidimensional challenges required for mitigating threats. Letter grading.

M122. Introduction to Integrated Coastal Management. (4) Lecture, three hours. The coast is one of most complex and interesting environments because of interactions among several ecosystems. The coast is often densely populated, with high economic and population growth, therefore socioeconomic conflicts are common. Sewage and industrial pollution, overfishing, and poorly planned development often threaten health of environment. Integrated coastal management (ICM) offers framework for resolving the conflicts in manner that allows sustainable development. Focus on how ICM is being used in the U.S. and around the world to solve pressing ecological and socioeconomic problems. Letter grading.

M127. Soils and Environment. (5) (Same as Ecology and Evolutionary Biology M127 and Geography M127.) Lecture, five hours; field trips, one hour. General treatment of soils and environmental implications: soil development, morphology, and world-wide distribution of soil orders; physical, chemical, hydrologic, and biological properties; water use, erosion, and pollution management; and natural processes as related to plant growth and distribution. P/NP or letter grading.

M131SL. Gender and Sustainability: Local-Global Connections. (5) (Same as Women's Studies M131SL.) Lecture, five hours; field trips, one hour. Introduction to gender and development (GAD) theories, analytical approaches, and applied case studies in context of local-global sustainability and environmental issues, with focus on knowledge, roles, relationships, needs, practices, and strategies of women vis-à-vis men. Investigation of gender and sustainability dimensions of food system, including agribusiness, community-supported agriculture, farmers' markets and cooperatives, fair trade and certification, genetically engineered foods, food supplements, food safety, and nutrition, permaculture, and related student-advocated issues. Integration of variety of student-centered learning modes. Volunteering with community/community service organization required. P/NP or letter grading.

M132. Environmentalism: Past, Present, and Future. (4) (Same as History 115 and Urban Planning CM165.) Lecture, three hours. Exploration of history and origin of major environmental ideas, movements or countermotions they spawned, and new and emerging paradigms of 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 of rise of American conservation movements. Review of politics of American environmental thought and contemporary environmental questions as they relate to broader set of questions about nature of development, sustainability, environmental movement, and debate. Exploration of issues in broad context, including global climate change, rise of pandemics, deforestation, and environmental justice impacts of war. Letter grading.

M133. Environmental Sociology. (4) (Same as Sociology 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 M134A.) Lecture, three hours. Requisites: Economics 41 or Statistics 12 or 13, 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 and levers 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.

M137. Historical Geography of American Environment. (4) (Same as History M137.) Lecture, three hours. Designed for juniors/seniors. Study of systematic changes of natural environment in the 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.

M138. Effective Methods of Social Change. (4) (Formerly numbered 188.) Lecture, four hours. Introduction to most effective methods of social change. Examination of social movements, innovation, and visionaries. Review of traditional methods of activism and new theories of nonviolent social change. Case studies of success in restoring environment, resolving conflicts through decision-making, and addressing other problems of social injustice as well as reviewing actual strategies and methods for social change in the 21st century. Challenges that nonprofit advocates and community activists face today, including strategic planning, time management, networking, and fund-raising. P/NP or letter grading.

M153. Introduction to Sustainable Architecture and Community Planning. (Same as Architecture and Urban Design CM153.) Lecture, three hours. Relationship of built environment to natural environment through whole systems approach, with focus on sustainable design of buildings and planning of communities. Emphasis on energy efficiency, renewable energy, and appropriate use of resources, including materials, water, and land. Letter grading.

M155. Energy in Modern Economy. (4) (Same as Mathematics M152.) Lecture, four hours. Requisites: Mathematics 3A and 3B (or 31A and 31B), Physics 1A and 1B (or 6A and 6B), Statistics 12 or 13. Examination of physics of energy, history of energy development, and role that energy economics, particularly in transportation and power grid. Prospects for decreasing availability of fossil fuels and impact of global warming on energy development. Current and potential future government and social responses to energy issues. P/NP or letter grading.

160. 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 economics research approach. Invited scholars present research aimed at yielding policy-relevant results on various topics such as climate change, pollution, and transportation. P/NP or letter grading.

M161. Global Environment and World Politics. (4) (Same as Political Science M122B.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: Political Science 20. Politics and policy of major global environmental issues such as climate change, integrating law, policy, and political science perspectives. Topics include: The Kyoto Protocol; the dangers of state-level land-use policies and politics and ways in which localities plan. Environmental, social, and equity aspects of different patterns of urbanization and likely trends into future. Letter grading.

M164. Environmental Politics and Governance. (4) (Same as Urban Planning CM160.) 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 matter. Overview of how 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 M338B.) 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.

170. Environmental Science Colloquium. (1) Seminar, 90 minutes; one field trip. Limited to undergraduate students. Study of current topics in environmental science, including particular colloquium series and field trips. May be repeated for credit. P/NP grading.
Scope and Objectives

The International Development Studies major offers an 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 exposes students to the concerns of the developing countries of Asia, Eastern Europe, Africa, the Middle East, and Latin America.

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 values field experience involving travel, study, and/or work in regions of the developing world.

Undergraduate Study

International Development Studies B.A.

Preparation for the Major

Required: Economics 1 or 2; one statistics course from Economics 41, Political Science 6, 6R, Statistics 10, or 12; four social sciences courses, each from a different department, selected from Anthropology 9, Geography 3, 4, 5, 6, History 8A, 8B, 8C, 9A, 9D, 9E, M10A, 10B, 10BW, 11B, 21, 22, Political Science 20, 50, 50R, Sociology 1; and demonstrated proficiency in one modern foreign language equivalent to level 6 at UCLA. Each course must be taken for a letter grade.

After satisfying the preparation for the major requirements, students must meet with the academic counselor in 10357 Bunche Hall to declare the International Development Studies major.

Transfer Students

Transfer applicants to the International Development Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one introductory economics course, one statistics course, and four courses selected from four of the following five fields: sociocultural anthropology, cultural or economic geography, world history, comparative politics, and introductory sociology.

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 based on completion of all nonlanguage preparation courses and one modern foreign language equivalent to level 5 at UCLA; with a cumulative minimum grade-point average of 2.0. Any remaining language courses may be completed after students have been admitted to the major.

The major consists of four required parts (courses marked with an asterisk have requisites). Each course must be taken for a letter grade.


Eastern Europe and West Central Asia: Anthropology 175R, Czech 155, History 107C, 107E, 120A through 120D, 127B, 127C, Political Science 128B, 156A through 156D, Romanian 152, Russian 119, 120, 125, 126, M127, 131, Serbian/Croatian 154, Slavic 125, 126, Women's Studies M127

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). Requisites: Some beginning experience in social sciences at college level. Designed for juniors/seniors. Broad historical and theoretical introduction to liberal and Marxist traditions in development studies, with focus on state, market, culture, ideology, and politics of professional knowledge. Balance of general trends and positions with selected case studies in developing nations. Letter grading.

M100B. Introduction to Development Studies: Political Economy of Development. (4) Same as Political Science M167C. Lecture, three or four hours; discussion, one hour (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. (2) Seminar, two 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.


199. Directed Research in International Development Studies. (4) Tutorial, to be arranged. Limited to junior/senior International Development Studies majors. Supervised intensive directed research program in which students conduct interdisciplinary research under guidance of faculty mentor. Culling paper required. May be repeated toward major via petition. Not acceptable for credit. Individual contract required. Letter grading.

Latin American Studies 191, Political Science 124C, 131, 154A, 154B, Portuguese 141, Sociology M178, 186, Spanish 161, Women’s Studies M144


Honors Program

Majors who have completed International Development Studies 100A and M100B and who have a 3.5 grade-point average in all courses offered for the major are eligible to formally apply for the honors program. In addition to completing all courses required for the major, students must take courses 198A, 198B, and 198C, in which they research, write, and present an honors thesis. To receive honors at graduation, students must have at least a 3.5 GPA in courses applied toward the major (including 198A, 198B, 198C) and an overall GPA of 3.0.

Highest honors are awarded to students who complete the major (including courses 198A, 198B, 198C) with a 3.75 GPA and who produce an exceptional thesis.

INTERNATIONAL RELATIONS

College of Letters and Science

UCLA
4269A Bunche Hall
Box 951472
Los Angeles, CA 90095-1472
(310) 825-3862
fax: (310) 825-0778
http://www.polisci.ucla.edu

Scope and Objectives

The undergraduate specialization in International Relations can only be taken jointly with a major in Political Science, and all requirements for the Political Science major must be met or in addition to meeting the requirements of this program. Students completing the program receive a degree with a major in Political Science and specialization in International Relations. The program is designed to serve the needs of (1) students desiring a general education focused on international affairs and (2) students preparing for graduate work in international affairs, whether in a social science or area study.

The program is also beneficial for (1) students planning careers (in business, law, journalism, or library service) with an international emphasis and (2) those preparing to teach social sciences in the secondary schools. These students should structure their programs primarily to meet the preparation requirements of the professional school or instructional credential of their choice.

Courses in management and administration, and in oral and written communications, ordinarily increase the career options of students in this program.

Undergraduate Study

International Relations Specialization

Preparation for the Specialization

Required: Political Science 20, 50, and two courses from 10, 30, 40; Anthropology 9; Economics 1 and 2, 5, or 100; Geography 3 or 5; History 1A, 1B, and 1C, or any three courses from 8A, 8B, 8C, 9A, 9C, 9D, M10A, 10B, 11A, 11B, Sociology 1.

Upper Division Requirements

The Political Science major should be completed as follows: any four upper division political science courses in each of Fields II and IV and two additional courses both in Field I or III. Other required social sciences courses include one course from Anthropology 161, 167, 171, 173Q, 174P, 175R, 175T, 175U, 177, Sociology 179, 182, 183, 186, 187; two courses from Economics 110, 111, 112, 120, 121, 122, 180, 181A, 181B; one course from Geography 110,
Completion of the sixth quarter course (or equivalent as prescribed by the language department), with a grade of C or better, of any modern foreign language is also required. French 6, German 6, Spanish 25, and Russian 6 are most frequently offered in fulfillment of this requirement, but also refer to the offerings listed under African Languages, Asian Languages and Cultures, Germanic Languages, Italian, Near Eastern Languages and Cultures, and Portuguese. Arabic, Chinese, French, German, Japanese, Russian, and Spanish are the languages of widest career utility in international affairs.

Each course must be taken for a letter grade.

Area Focus
Students are advised but not required to concentrate their political science, geography, history, and language courses so as to achieve broad familiarity with one area, such as Africa, East Asia, Europe, Latin America, the Middle East, South Asia, or Southeast Asia.

For further information, contact the political science undergraduate counselor in the program office.

ISLAMIC STUDIES
Interdepartmental Program
College of Letters and Science
UCLA
10373 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
(310) 206-6571
fax: (310) 206-3555
e-mail: idpgrads@international.ucla.edu
http://www.international.ucla.edu/idps/
islamicstudies/

Michael G. Morony, Ph.D., Chair

Faculty Advisory Committee
Khaleed M. Abou El Fadl, J.D. (Law)
Leonard Binder, Ph.D. (Political Science)
Irene A. Bieman-McKinney, Ph.D. (Art History)
Michael D. Cooperson, Ph.D. (Near Eastern Languages and Cultures)
Osman M. Galal, M.D., Ph.D. (Community Health Sciences)
James L. Gelvin, Ph.D. (History)
Sondra Hale, Ph.D. (Anthropology, Women's Studies)
Michael G. Morony, Ph.D. (History)
Steven D. Nelson, Ph.D. (Art History)
Ismael K. Poonawala, Ph.D. (Near Eastern Languages and Cultures)
Hossein Zai, Ph.D. (Near Eastern Languages and Cultures)

Scope and Objectives
The Islamic Studies Interdepartmental Program encompasses the broadest cultural concerns in the study of Islamic civilizations. It provides opportunities for study of the major languages, literatures, history, culture, and religious traditions of the populations of regions where Islamic-influenced civilizations have had, or continue to have, the greatest impact. Linguistics, skills, historical knowledge, and cultural understanding are the foundation on which the disciplinary paradigms and methodologies of both the social sciences and humanities can be applied. Within this broad framework, students are encouraged to construct individualized curricula that will prepare them to carry out cutting-edge dissertation research leading to the Ph.D.

The Master of Arts and Ph.D. degrees in Islamic Studies are designed primarily for students desiring to prepare for an academic career. They may, however, be found useful for students desiring a special emphasis in this particular area or for those who plan to live and work in predominantly Muslim areas and whose career will be aided by a knowledge of the people, languages, and institutions.

The undergraduate major in this discipline is called Middle Eastern and North African Studies. For details, see the program by that name later 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://www.gdnet.ucla.edu/gasaas/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.) and Doctor of Philosophy (Ph.D.) degrees in Islamic Studies. A concurrent degree program (Islamic Studies M.A./Public Health M.P.H.) is also offered.

Islamic Studies
Graduate Course
200. Introduction to Islamic Studies. (4) Seminar, three hours. Introduction to various disciplines and methods employed in study of Islamic histories, cultures, and societies, with special emphasis on methodologies and current theories and how they may be used and combined by Islamic studies students. Content varies each year. Letter grading.

ITALIAN
College of Letters and Science
UCLA
212 Royce Hall
Box 951535
Los Angeles, CA 90095-1535
(310) 825-1940
fax: (310) 825-9754
http://www.italian.ucla.edu

Dominic R. Thomas, Ph.D., Chair

Professors
Michael J.B. Allen, Ph.D., D.Litt.
Luigi Ballerini, Dottore in Lettere
Franco Betti, Ph.D.
Reno Bodei, Diploma di Perfezionamento, in Residence
Massimo Ciavolella, Ph.D.
Thomas J. Harrison, Ph.D.
Lucia Re, Ph.D., Dottore in Lettere
Dominic R. Thomas, Ph.D.
Edward F. Tuttle, Ph.D.

Professor Emeriti
Marga Cottino-Jones, Ph.D., Dottore in Lettere
Lecturer S.O.E.
Elissa A. Tognozzi, Ph.D.
Lecturer
Hoang T. M. Truong, Ph.D.

Adjunct Assistant Professor
Pasquale Marino

Scope and Objectives
Italian art and letters provide an invaluable key to understanding many facets of European civilization. Examined in its own right or studied comparatively, Italian culture offers unmatched rewards. The UCLA faculty views transmitting the Italian language as inseparable from transmission of the culture, so students consider in depth virtually all aspects of Italian civilization. After their linguistic initiation, ideally 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). In addition, the department participates extensively in the interdepartmental graduate program in Romance Linguistics and Literature.

Undergraduate Study
Italian B.A.

The program of studies leading to the Bachelor of Arts in Italian consists of two distinct phases: preparation in the language and study of the literature and culture. While literature courses constitute the bulk of the program, good knowledge of the language is requisite to most upper division literature courses credited toward the major in Italian. The uniqueness of Italian is stressed at all levels of study. Detailed information on programs and specific degree requirements is available from the department.

Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46.

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: Thirteen upper division Italian courses, including 100, 103A, 103B, 113, 114A or 114B, 116A or 116B; one course from 118 or 119; one course from 120 or 121; four courses from 114A through 191; 180. One upper division elective course in a field relevant to Italian studies from outside the department may be substituted with consent of the undergraduate adviser.

Majors who select courses taught in English must do additional work from the original Italian texts in consultation with the course instructor.

Italian and Special Fields

B.A.

Students with special interests or professional goals may select this 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; Art History 50 or 51, 54, 57.

The Major

Required: Italian 100, 103A or 103B, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from Art History M102F, M102G, M102H, 105A through 105D, 105F, 106A through 106D, C109A, 109C, 110A, 110B, 110F, 127, 150D selected in consultation with the undergraduate adviser.

Art History Field

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46; Art History 50 or 51, 54, 57.

The Major

Required: Italian 100, 103A or 103B, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from Art History M102F, M102G, M102H, 105A through 105D, 105F, 106A through 106D, C109A, 109C, 110A, 110B, 110F, 127, 150D selected in consultation with the undergraduate adviser.

Linguistics Field

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46; one course from History 1A, 1B, 1C, 88.

The Major

Required: Italian 100, 103A or 103B, 180, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from History 100, 102, 117C through 119D, 121A through 123B, 128A, 128B, 131A through M133B selected in consultation with the undergraduate adviser.

History Field

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46; one course from History 1A, 1B, 1C, 88.

The Major

Required: Italian 100, 103A or 103B, 180, 195, and 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.

Philosophy Field

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46; French 1, 2, 3, 4, 5, 6, 12 or 14.

The Major

Required: Italian 100, 103A or 103B, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; one course from French 114A, 114B, 114C, and three courses from 115 through 142 selected in consultation with the undergraduate adviser.

Music History Field

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, 6, Music History 2A, 2B, 26A, 26B, 26C. Recommended: Music 20A, 20B, 20C.

The Major

Required: Italian 100, 103A or 103B, 180, 195, and two courses from 113 through 191 selected in consultation with the undergraduate adviser; Linguistics 103, 110, 120A, 120B, and one course from M146, M150, 165A, 165B, 170 selected in consultation with the undergraduate adviser.

The Major

Required: Italian 100, 103A or 103B, 180, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; five courses from Music History 126A, 126B, 126C, 135A, 135B, 135C, 191A through 191G selected in consultation with the undergraduate adviser.

Film and Television Field

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, 6, 46.

The Major

Required: Italian 100, 103A or 103B, 121, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from Film and Television 106A, 106B, 106C, 107, 108, 110A, 110C, 112 through 116, 193A selected in consultation with the undergraduate adviser.

French Field

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46; French 1, 2, 3, 4, 5, 6, 12 or 14.

The Major

Required: Italian 100, 103A or 103B, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; one course from French 114A, 114B, 114C, and three courses from 115 through 142 selected in consultation with the undergraduate adviser.
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, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from Political Science M111A through 113A, 116A through 119, 137A, 137B, 139, 153A, 155, 167A selected in consultation with the undergraduate adviser.

Portuguese Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46, 50A, 50B; Portuguese 1, 2, 3, 25, M42 or M44 or 46.

The Major
Required: Italian 100, 103A or 103B, 180, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; three courses from Portuguese 120A through 191 selected in consultation with the undergraduate adviser.

Spanish Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46, 50A, 50B; Spanish 1, 2, 3, 4, 5, 25 (or equivalent as determined by placement test), M42 or M44.

The Major
Required: Italian 100, 103A or 103B, 180, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; one course from Spanish 120A or 120B and three courses from 122 through 161 selected in consultation with the undergraduate adviser.

Theater Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46, 50A, 50B.

The Major
Required: Italian 100, 103A or 103B, 122, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; course from Theater 101A, 101B, 101C and five courses from 105, 111A, Classics 143A, English 142A, 142B, 142C, 168 selected in consultation with the undergraduate adviser.

Women’s Studies Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46; Women’s Studies 10.

The Major
Required: Italian 100, 103A or 103B, M158, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; Women’s Studies 110A or 110B, and five additional upper division courses from any of the women’s studies course lists selected in consultation with the undergraduate adviser.

Study in Italy
Students are encouraged to spend up to one year in Italy either to (1) study with an education abroad program or (2) study in an Italian university. They are also urged to take advantage of summer language workshops and study programs, including UCLA’s own programs in Italy and Los Angeles. For additional information, contact the Education Abroad Program, B300 Murphy Hall, or the Summer Sessions Office, 1147 Murphy Hall.

Honors Program
Majors with an overall grade-point average of 3.25 and a 3.5 GPA or better in Italian are eligible to participate in the honors program. Requirements: Italian 102A, 102B, 102C.

Candidates select three upper division literature courses in which additional readings are required. In the last term of the senior year, they are required to write a thesis on a subject related to one of the three above-mentioned courses. The average for the three courses may not fall below A-. Applications should be made during the last term of the junior year.

Italian Minor
To enter the Italian minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (12 units):
Italian 5, 6, and one course from 42A, 42B, 46, 50A, 50B.

Required Upper Division Courses (20 units): Italian 100 and four additional Italian courses.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Italian offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Italian.

Italian
Lower Division Courses
1. Elementary Italian — Beginning. (4) Lecture, five hours. P/NP or letter grading.

1G. Special Reading Course. (4) Readings, three hours. Open to graduate students in other fields. Preparation for Graduate Division foreign language reading requirement. S/U grading.


2G. Special Reading Course. (4) Readings, three hours. Open to graduate students in other fields. Preparation for Graduate Division foreign language reading requirement.


8A-8B-8C. Italian Conversation. (2-2-2) Seminar, three hours. Enforced requisite for course 8A: course 2; for 8B: course 3; for 8C: course 4. Each course may be repeated once for credit. P/NP or letter grading.

9. Intensive Italian. (12) Lecture, 20 hours. Intensive language program equivalent to first year of college Italian (courses 1, 2, 3) and designed to develop basic language skills. Offered in summer only. P/NP or letter grading.

42A-42B-42C. Italian through the Ages in English. (5-5-5) Lecture, four hours; discussion, one hour. P/NP or letter grading.

42A. Holy Roman Empire to the Fall of Rome. Survey of Italy’s unique contribution to Western civilization in history, politics, philosophy, arts, and popular culture from time of Charlemagne to High Renaissance. 42B. Late Renaissance to Postmodern Period. Influence and effects of baroque sculpture and architecture, Galileo, Enlightenment, unification of Italy, Fascism, terrorism, and cinema. 42C. Food and Literature in Italy. Profile of Italian history and culture through analysis of gastronomic and literary texts. Special emphasis on late Middle Ages, Renaissance, and Risorgimento.

46. Italian Cinema and Culture in English. (5) Lecture, screenings, five hours; discussion, one hour. Special topics in Italian culture as reflected and reinforced by the nation’s prime artform, stressing aesthetics and ideology of films, contemporary Italian history, and politics. Rotating topics include sex and politics, comedy, integration, family networks, and neorealism. P/NP or letter grading.

50A-50B. Masterpieces of Italian Literature in English. (5-5) Lecture, four hours; discussion, one hour. P/NP or letter grading. 50A. Middle Ages to Baroque. Leading philosophical, religious, and sociopolitical issues in Europe, examined in authors such as St. Francis, Dante, Boccaccio, Petrarch, Lorenzo de’ Medici, Machiavelli, Castiglione, Ariosto, and Tasso. 50B. Enlightenment to Postmodernity. Comparative study of major literary texts and their adaptations into different forms of public spectacle, including theater, opera, and film. Works by Goldoni, Gozzi, Mascagni, Verga, Puccini, Pirandello, Calvino, Ortese, Zavattini, de Sica, and Taviani Brothers. Emphasis on development of ideas of spectacle.

Upper Division Courses
102A-102B. Italian Cultural Experience in English. (4-4) Lecture, three hours. Study of cultural development of Italy. P/NP or letter grading. 102A. Roots of Italian society and art. Artistic achievements of communal society; Marco Polo, Dante, Boccaccio, Giotto, rise of Italian merchant class. 102B. Renaissance discovery of human genius, crucial period between Machiavelli and Galileo, leading Italy and Europe to scientific revolution. 102C. Birth of Italian nation from wars of independence to foundation of monarchy, delineation through narrative and cinema in historical context.

103A-103B-103C. Introduction to Italian Language and Literary Analysis. (4-4-4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Italian literature from 1150 to present, with emphasis on methods of interpreting literary form and meaning in poetry, drama, epic, and novel. P/NP or letter grading.

103A. Knights, Saints, and Lovers. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Beginning with generation dominated by St. Francis, love poets of court of Frederick II to three classic writers of Italian literature: Dante, Petrarch, and Boccaccio. Renaissance rediscovery of human individuality, dignity, art, and culture in works of Paolo della Mirandola and Castiglione. P/NP or letter grading.


103C. Romanticism, Politics, and Disillusionment. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Great poetry and dialogues of Giacomo Leopardi; romantic literature accompanying rise of modern Italian state; surrealism, neo-realism, and postmodernism. Authors may include Foscolo, Manzoni, Verga, Pirandello, Calcagno, and Dario Fo. P/NP or letter grading.

110. Dante in English. (4) Lecture, three hours. Close study of one of world's greatest literary geniuses, particularly of his masterpiece, Divine Comedy; the archetypal medieval journey through the afterworld. P/NP or letter grading.

113. Dante's La Divina Commedia. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Study of medieval philosophy, religion, and politics; the life and art of the great Italian poet, Dante Alighieri; his legacy of literary achievement of the age. P/NP or letter grading.

114A-114B. Middle Ages. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Italian literature from 1150 to present, with emphasis on methods of interpreting literary form and meaning in poetry, drama, epic, and novel. P/NP or letter grading.

114A. Tradition of Love from St. Francis to Dante. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Close study of one of world's greatest literary geniuses, particularly of his masterpiece, Divine Comedy; the archetypal medieval journey through the afterworld. P/NP or letter grading.


116A. Italian Ottocento. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Study of Italian literature from 1740 to 1900, with emphasis on methods of interpreting literary form and meaning in poetry, drama, epic, and novel. P/NP or letter grading.

118. Age of Enlightenment. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Study of philosophical and political prose, satiric poetry, in the second phase of modern period. Some important themes, a rebirth of modern spirit through writings of Vico, Metastasio, Parini, and Affieri. P/NP or letter grading.

119. Italian Romanticism. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Study of Italian literature from 1740 to 1900, with emphasis on methods of interpreting literary form and meaning in poetry, drama, epic, and novel. P/NP or letter grading.

120. Literature in 20th Century. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Analysis of novel, poetry, and drama of 20th century in connection with modern thought and culture. Authors may include D'Annunzio, Pirandello, Montale, Pasolini, and Calvino. P/NP or letter grading.

121. Literature and Film. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Comparative study of specific literary works and their translation into film and of different techniques in two forms of expression. Texts include literary works, screenplays, and works on literary and film theory. P/NP or letter grading.


123. Seminar: Interdisciplinary Italian Studies. (4) Seminar, three hours. Enforced requisite: course 100. Conducted in Italian. Advanced research, reading, analysis, and discussion of interdisciplinary approach that includes literature, art, history, and politics and emphasis on gender, politics, ethnicity, and postcolonial themes. P/NP or letter grading.

124. Food and Literature in Italy. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Study of Italian food and wine through four medieval texts, four Renaissance texts, four Baroque texts, four Mannerist texts, and four eighteenth-century texts. P/NP or letter grading.

125. Italian through Opera. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Introduction to traditional Italian opera as means of appreciating culture of Italy, art form of opera, and study of Italian language as adventure through reading of libretti. Six masterworks of Italian opera tradition — Il Barbiere di Siviglia, La Bohème, Pagliacci, Otello, Tosca, and Manon Lescaut — and their presentation and cultural context.


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 cultural issues. Study of how Italian novella influenced other European literatures. P/NP or letter grading.

150. Modern Fiction in Translation. (4) Lecture, three hours. Selections from 20th-century thought traced in works of international fame, with focus on concerns and styles of several prose works such as Umberto Ecco's The Name of the Rose, Pasolini's The Magician, Pirandello's The Late Mattia Pascal, and Calvino's The Clove and the Onion. P/NP or letter grading.

158. Women in Italian Culture. (4) (Same as Women's Studies M158.) Lecture, three hours; discussion, one hour. Examination of role of women in Italian culture, politics, and society. Emphasis on how Italian artists major required to read texts in Italian. P/NP or letter grading.

180. History of Italian Language. (4) Lecture, three hours. Enforced requisite: course 100. Conducted in Italian. Main features that have shaped literary and standard Italian and specific ways in which language has evolved. Tracing of its changes in relation to other European languages and survey of effects wrought by historical events, changes in taste, and altered social functions. P/NP or letter grading.

191. Variable Topics Research Seminars: Italian Studies. (4) Formerly numbered 197.) Seminar, three hours. Research seminar with focus on themes and issues outside uniquely Italian literature. Topics covered in regular departmental undergraduate courses. Reading, discussion, and development of culminating project. May be repeated once for credit. P/NP or letter grading.

195. Community or Corporate Internships in Italian. (4) Tutorial, three hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with 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.

199A. Directed Research in Italian. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199B. Directed Research in Italian and Special Fields. (2 to 4) Tutorial, to be arranged. Limited to senior Italian and Special Fields majors. Supervised individual research or investigation under guidance of faculty mentor. Tutorial in which paper (20 to 25 pages) is to be written in either Italian or English that requires students to unify and synthesize their experience of combining two discipilines of study. Individual contract required. P/NP or letter grading.

Graduate Courses


205A-205B. Studies in Criticism. (4-4) Lecture, three hours. History, theory, and practice of criticism. S/U or letter grading. 205A. Brief History of Literary Criticism. Presentation, discussion, and application of basic currents of criticism from stylistics to structuralism. S/U or letter grading. 205B. Discussion of Modern Critical Approaches. Discussion, presentation, and application of contemporary approaches from structuralism to deconstruction, new historicism, and feminist criticism.


214B. Dante's Other Works. (4) Lecture, three hours. S/U or letter grading.

214C. Petrarch's Canzoniere. (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 medieval literature, with coverage of authors such as St. Francis of Assisi or Jacopone de Todi. 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. Venetian Topics. (4) Lecture, three hours. Variable-content seminar on themes and issues of Renaissance literature, with coverage of authors such as Vasi, Leonardo, or Benvenuto. S/U or letter grading.
217. Studies in 17th-Century Literature. (4) Lecture, three hours. Topics include Galileo and birth of scientific prose, Giordano Bruno, Gian Battista Marino, and baroque poetry, S/U or letter grading.
218B. Afflery. (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. Foscolo. (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 Prandelli. 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. Assessment of turn-of-the-century narrative pattern (Gabriele D’Annunzio) and analysis of radical innovations brought about by such towering figures as Pasternak, Svevo, Bernini, Marinetti, etc. S/U or letter grading.
221D. 20th-Century Narrative since World War II. (4) Lecture, three hours. In-depth exploration of some major works that have made contemporary Italian literature famous throughout the world, with special emphasis on study of formalistic modes adopted by the neo-avant-garde. S/U or letter grading.
221E. Prandelli 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 Streiber, Ronconi, and the playwrights/authors themselves. Emphasis on ritualistic implications of the theatrical performance. S/U or letter grading.

M222A-M222B. Comparative Romance Historical Grammar. (4-4) (Same as Romance Linguistics M222A-M222B) Lecture, three hours. Each course may be taken independently for credit. S/U or letter grading. M222A. Phonology. Principal sound changes from late Latin to main Romance dialects. M222B. Morphology and Syntax. Prime morpho-syntactic changes occurring between late Latin and main Romance dialects.
223. Structures of Modern Italian. (4) Lecture, three hours. Descriptive analysis of basic features of standard Italian from synchronic, typologic vantage. Topical emphasis may vary annually, but core progression depart from phonology (e.g., syllable types, prosodic patterns, phrasal phonetics), moves through morphological constituents, passing to sentence sequences (coordination, ellipses, 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., Sardian, Ladino, Friulan, and Franco-Provencal). Consideration of present-day socioclinguistic pressures. S/U or letter grading.
226A-226B. Folk Tradition in Italian Literature. (4-4) Lecture, two hours. S/U or letter grading.
250A-250D. Seminars: Dante. (4-4 each) Seminar, three hours. S/U or letter grading.
253A-253B-253C. Seminars: Chivalric Poetry in Italy. (4-4-4) Seminar, three hours. Relationship between genre and its French medieval sources, with study of its evolution in Italy through Pulci, Boiardo, Ariosto, and Tasso. S/U or letter grading.
255A-255B. Seminars: Baroque. (4-4) Seminar, three hours. S/U or letter grading.
256A-256B. Seminars: 18th Century. (4-4) Seminar, three hours. S/U or letter grading.
257A-257B. Seminars: Romanticism. (4-4) Seminar, three hours. S/U or letter grading.
258A-258B. Seminars: Contemporary Italian Literature. (4-4) Seminar, three hours. S/U or letter grading.
260A. Alternative Perspectives in Italian Culture: Studies of Folk Tradition in Italian Literature. (4) Lecture, three hours. Open to undergraduates with consent of instructor. Conspicuous diversity animating Italian society articulated through class, gender, and ethnolinguistic groups to be studied across range of texts, some selected from literary canon, but others purely oral (tales, songs, proverbs, curses and curses, secular and ritual). 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 which represent women’s conditions in either medieval/ Renaiss ance or contemporary time. S/U or letter grading.
260C. Studies in Italian Cinema. (4) Lecture, three hours. Designed for graduate students. Italian cinema compared with other European countries’ and Hollywood’s, with a focus on its development from its origins through Fascist times to neorealism, its legacy, different genres, and contemporary scene. S/U or letter 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) May be repeated twice for credit with consent of instructor. S/U grading.

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 topical 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 Ueberrroth Building, (310) 206-0812, Lsmminor@irle.ucla.edu. Students are encouraged to meet early with the faculty adviser and minor coordinator to declare the minor and design a coherent program of coursework.

Required Courses (28 units minimum): Seven courses, with no more than two lower division courses (8 units), selected from Afro-American Studies M173, Asian American Studies 113, M116, Chicana and Chicano Studies 125, M127, M128, 129, Economics 150, 151, 152, History 141B, 146A, 146B, any labor and workplace studies course, Management 180, Political Science 116A, 142C, Psychology M137E, Public Policy 141, C142, C144, 145, Sociology M157, M163, 171, 173, Women's Studies M137E, M163. 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 or minor requirements in another department or program. No more than 8 units may be applied toward both this minor and a major or minor in another department or program.

Each minor course must be taken for a letter grade, with 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.

Labor and Workplace Studies

Lower Division Courses
M1A-M1B-M1CW. Work, Labor, and Social Justice in U.S. (Same as Chicana and Chicano Studies M24A-M24B-M24CW.) Course M1A is enforced requisite to M1B, which is enforced requisite to M1CW. Limited to first-year freshmen. Letter grading. M1A-M1B. Lecture, three hours; discussion, two hours. Exploration of ways in which work has been transformed over last century, impact of this transformation on working people, and role of labor movement as force for social justice. M1CW. Special Topics. Seminar, three hours, Enforced requisites: course M1B, and English Composition 3 or 3H or English as a Second Language 36. Topics include labor law/history, gender, race, and workplace. Satisfies Writing II requirement.

Upper Division Courses
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 and social vision, and social and political relevance to current issues. How movement participants linked struggles for change with own personal transformation and growth. P/NP or 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.

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. Specific focus on organizing of United Farm Workers and Farm Laborers Organizing Committee, and their relationship to AFL-CIO, other unions, and their influence on Chicano Movement. Letter grading.

M128. Race, Gender, and U.S. Labor. (4) (Same as Chicana and Chicano Studies M128.) Lecture, four hours. Designed for juniors/seniors. Introduction to history and organization of labor movement in U.S. and North America. Discussion of race, class, and gender issues raised within movement, and various strategies for social change and economic equity pursued through organized labor and other means. Letter grading.

160. Research Group or Internship Seminars: Labor and Workplace Studies. (5) Seminar, three hours. Enforced corequisite: course 195. Designed for undergraduate students who are part of research group or internship. Discussion of research methods and current literature in field or of research of faculty members or students. In-depth examination of experience of workers and role of labor movement in American society, historically and today. Topics include changing organization of work in the U.S. and reconfiguration of employment relations; role of labor movement to managerial initiatives; way in which organized labor has handled issues of race, ethnicity, gender, and immigration status; challenges facing workers in the 21st century and ways in which organizations (unions and community-based organizations) are responding to those challenges. 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 in unions in efforts to improve their wages and working conditions. Impact of globalization on these dynamics. P/NP or letter grading.

M166A. Immigrant Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166A and Chicana and Chicano Studies M166A.) Seminar, three hours. New immigrant rights movement, with particular 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.

M166B. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166B and Chicana and Chicano Studies M166B.) Seminar, two hours. Required: course M166A. Expansion of research conducted by students in course M166A involving oral histories, research on immigration/labor/higher education, and evaluation of legislation and legal issues impacting undocumented students.

M167. Worker Center Movement: Next Wave Organizing for Justice for Immigrant Workers. (4) Formerly numbered 167.) (Same as Asian American Studies M166C and Chicana and Chicano Studies M167C.) Seminar, three hours. Development of theoretical and practical understanding of worker center movement, with focus on historical factors that have led to emergence and growth of worker centers. Role of worker centers in promoting multicultural, anti-multiracial campaigns for workplace and economic justice. Transnational cross-border solidarity issues and rights of undocumented workers. P/NP or letter grading.

M173. Nonviolence and Civil Movements. (4) (Same as Afro-American Studies M173 and Chicana and Chicano Studies M173.) Lecture, three hours; discussion, one hour. Overview of nonviolence and its impact on social movements both historically and in its present 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.
The Latin American Studies Program offers the Bachelor of Arts and Master of Arts degrees. In the undergraduate major students develop a program combining language and methodological training with interdisciplinary studies in one of three areas: arts and humanities, social sciences, or ecology and environment. At the graduate level, students pursue more specialized coursework and interests, culminating in an interdisciplinary research study. Cooperative degree programs with the UCLA Schools of Education and Information Studies, Management, Public Health, and Public Affairs provide the opportunity to combine the M.A. in Latin American Studies with a master's degree in a professional field.

Undergraduate Study
Latin American Studies B.A.

Undergraduate studies of the Latin American region are designed to serve the needs of students (1) desiring a general education focused on the Latin American cultural region, (2) planning to enter business, government, or international agency service, (3) preparing to teach social sciences or language, and (4) preparing for advanced academic study of Latin America.

Students must complete all preparation courses with a C (2.0) in each course; the courses are applicable toward the Letters and Science lower division general education requirements.

Foreign Language Requirement
Language requirements are uniform for all students in the major regardless of core area. Proficiency in two languages equivalent to (1) Spanish 25 and Portuguese 3 or (2) Portuguese 25 and Spanish 5 is required. In lieu of Portuguese 1, 2, and 3, students may take Portuguese 102A and 102B which are designed for those with a background in Portuguese. An indigenous language of Latin America (i.e., Quechua) may be substituted for the minor language.

Transfer Students
Transfer applicants to the Latin American Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: advanced Spanish and one year of elementary Portuguese, or advanced Portuguese and intermediate Spanish, two Latin American history courses, and additional coursework in the area of concentration.

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

Course Limitations
Students may not take more than 8 units of Latin American Studies 199 for letter-grade credit nor more than 8 units in any single term. No course taken on a Pass/No Pass basis may be applied toward the B.A. degree requirements. In order to register in a 199 course, students must have advanced junior standing and an overall grade-point average of 3.0, or senior standing.

Double Majors
Through judicious use of electives, students may find it possible to obtain the B.A. degree with two majors (e.g., Latin American Studies and History). Interested students who have achieved junior standing should consult the undergraduate advisers of both departments involved, initiating the appropriate petition with the student affairs counselor in Latin American Studies.

Study in Latin America
Students are encouraged to spend up to one year in Latin America either (1) to study with an education abroad program, (2) to study in Latin American universities, (3) to conduct research, or (4) to complete an internship in an international or development agency. Full credit is granted according to the individual programs arranged in consultation with the undergraduate adviser. For information on studying in Mexico, Costa Rica, Chile, or Brazil, contact the Education Abroad Program, B300 Murphy Hall, (310) 794-9820.

Core Areas for the Major
Students select one of three core areas as the focus of their major: arts and humanities, social sciences, or ecology and environment. Requirements for each core area are listed below.

Core I: Arts and Humanities
Preparation
Required: Two courses from History 8A, 8B, 8C; Latin American Studies 97A (or 191 with department consent); Spanish and Portuguese M44; Art History 55B or Ethnomusicology 91K and World Arts and Cultures 6 or 8.

Core Area
Required: Ten upper division courses from the approved list of Latin American courses distributed as follows:

1. Core Concentration: Five courses as listed below in either the literature and folklore field or the linguistics field selected from Portuguese or Spanish, or in the fine arts field selected from art history or ethnomusicology. Only one course from the electives list within the arts and humanities core area may be applied toward the core concentration

2. Theory and Methods: One course from theory and methods within the core concentration field

3. Internal Breadth: Four additional courses from the arts and humanities core area but outside the core concentration field. No more than two of these may be electives

External Breadth
Required: From the approved list, six upper division courses outside the arts and humanities core area distributed as follows: at least two courses in social sciences (e.g., history) and two courses in ecology and environment (e.g.,
geography). The two additional courses required may be from either social sciences or ecology and environment. No more than three external breadth courses may be electives.

**Approved Undergraduate Courses**
Special courses which may be applied toward the M.A. degree requirements with advanced departmental approval are indicated with asterisks. These courses do not have any exclusive focus on Latin America but provide an opportunity for students to relate a particular perspective or phenomenon to Latin America.

(1) **Literature and Folklife Field**
History 160A, Portuguese 130A, 130B, C132, C133, C134, C135, 141, Spanish 120A through 120D, 137, 139, 140, 142, 143, 144A, 144B, 144C, 147, 149, 151B, 161, 191A, 191B, 198

**Theory and Methods**
Portuguese 197, Spanish *119A, *119B, *119C, 197, World Arts and Cultures 122

(2) **Fine Arts Field**

**Theory and Methods**
Art History *197, Ethnomusicology *180, *183, *197E, Film and Television 199, World Arts and Cultures *199

(3) **Linguistics Field**

**Theory and Methods**

(4) **Arts and Humanities Electives**
Chicana and Chicano Studies 141, 142, Ethnomusicology *CM110A, M110B, Film and Television 112, Latin American Studies 191, 199, Theater M103C, World Arts and Cultures *131

**Core II: Social Sciences**

**Preparation**
Required: Two courses from History 8A, 8B, 8C; Latin American Studies 97A (or 191 with department consent); Economics 1 and 2, or 100; Statistics 10.

**Core Area**
Required: Ten upper division courses from the approved list of Latin American courses distributed as follows:

1. **Core Concentration:** Five courses as listed below in one of the five fields (anthropology and sociology or economics or geography or history or political science). Only one course from the electives list within the social sciences core area may be applied toward the core concentration

2. **Theory and Methods:** One course from theory and methods within the core concentration field

3. **Internal Breadth:** Four additional courses from the social sciences core area but outside the core concentration field. No more than two of these may be electives

**External Breadth**
Required: From the approved list, six upper division courses outside the social sciences core area distributed as follows: at least two courses in arts and humanities (e.g., fine arts) and two courses in ecology and environment (e.g., geography). The two additional courses required may be from either arts and humanities or ecology and environment. No more than three external breadth courses may be electives.

**Approved Undergraduate Courses**
Special courses which may be applied toward the M.A. degree requirements with advanced departmental approval are indicated with asterisks. These courses do not have any exclusive focus on Latin America but provide an opportunity for students to relate a particular perspective or phenomenon to Latin America.

(1) **Anthropology and Sociology Field**
Anthropology 114P, 114Q, 114R, 173Q, 174P, 179, Sociology 186

**Theory and Methods**

(2) **Economics Field**

**Theory and Methods**

(3) **History Field**

**Theory and Methods**
History *191E, *197, Information Studies M111C

(4) **Political Science Field**

**Theory and Methods**

(5) **Geography Field**

**Theory and Methods**
Geography *M171

(6) **Social Sciences Electives**

**Core III: Ecology and Environment**

**Preparation**
Required: Two courses from History 8A, 8B, 8C; Latin American Studies 97A; Geography 5; Statistics 10.

**Core Area**
Required: Ten upper division courses from the approved list of Latin American courses distributed as follows:

1. **Core Concentration:** Five courses as listed below in geography. Only one course from the electives list within the ecology and environment core area may be applied toward the core concentration

2. **Theory and Methods:** One course from theory and methods within the core concentration field

3. **Internal Breadth:** Four additional courses from the ecology and environment core area to be selected from theory and methods core courses or electives

**External Breadth**
Required: From the approved list, six upper division courses outside the ecology and environment core area distributed as follows: at least two courses in arts and humanities (e.g., fine arts) and two courses in social sciences (e.g., history). The two additional courses required may be from either arts and humanities or social sciences. No more than three external breadth courses may be electives.

**Approved Undergraduate Courses**
Special courses which may be applied toward the M.A. degree requirements with advanced departmental approval are indicated with asterisks. These courses do not have any exclusive focus on Latin America but provide an opportunity for students to relate a particular perspective or phenomenon to Latin America.

**Ecoology and Environment**

**Theory and Methods**
Anthropology *M186, Geography *M171

**Electives**
Latin American Studies Minor

The interdisciplinary program leading to the Latin American Studies minor allows students to choose from a broad range of course offerings in various departments to develop professional and methodological skills with area expertise.

To enter the minor, students must have an overall grade-point average of 2.0 or better and have completed 45 units. For further information, contact Magda Yamamoto at (310) 206-6571.

Required Lower Division Courses (8 units):
History 8A or 8B or 8C or Latin American Studies 97A, Spanish 25 or Portuguese 25.

Required Upper Division Courses (20 units):
Five courses selected from the approved list of Latin American studies courses in at least two of the following fields: (1) arts and humanities (art history, ethnomusicology, folklore, Spanish and Portuguese), (2) ecology and environment (geography, public health), (3) social sciences (anthropology, economics, history, political science, sociology). If the social sciences field is selected, at least two courses must be taken in that field. No more than 4 units of course 199 may be applied toward the minor, and at least three upper division courses (12 units) must be taken in residence at UCLA.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaas/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 Latin American Studies Program offers the Master of Arts (M.A.) degree in Latin American Studies.


Latin American Studies Lower Division Course

97A. Introduction to Latin America, (4) Lecture, three hours. Interdisciplinary freshman/sophomore survey course designed as introduction to modern Latin America. P/NP or letter grading.

97B. Latin American Studies, (4) Seminar, four hours. Advanced interdisciplinary research seminars for seniors. Reading, discussion, and development of culminating project. May be repeated with new topic. P/NP or letter grading.

Special Courses in Latin American Studies.

4 or 8 Tutorial, to be arranged. Limited to juniors/seniors. Intensive directed research program in which students conduct interdisciplinary research, complete internship with international agency or program dealing with Latin America. Faculty sponsorship and written reports required. May be repeated for credit. P/NP or letter grading.

Graduate Courses

M200. Latin American Research Resources. (4) (Same as History M265 and Information Studies M225.) Seminar, three hours. General and specialized materials in fields concerned with Latin American studies. Library research techniques provide experience and competency required for future bibliographic research and research sophistication as basis for enhanced research results.

205. Latin Americanist Scholarship. (4) Lecture, three hours. Panoramic introduction to methodological 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 M272A.) Lecture, three hours. Survey of literature and research topics related to Indian cultures of South America. May be repeated for credit.

250B. Interdisciplinary Seminar: Latin American Studies. (4) Seminar, three hours. Problem-oriented seminar on critical areas stressed in University's cooperative programs in Latin America.

250C. Interdisciplinary Topics in Latin American Studies. (4) Reading knowledge of Spanish or Portuguese normally required. Seminar devoted to selected topics of an interdisciplinary nature.


M264. Latin America: Traditional Medicine, Shamanism, and Folk Illness. (4) (Same as Anthropology M264 and Community Health Sciences M264.) Lecture, three hours. Recommended prerequisite: 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 case examples of religion and healing practices via lecture, film, and audiotape. Letter grading.

M268A-M268B. Seminars: Recent Latin American History. (4) (Same as History M268A-M268B.) Seminar, three hours. Course M268A is requisite to M268B. Reading knowledge of Spanish and Portuguese normally required. Seminar devoted to selected topics of interdisciplinary nature. In progress (M268A) and letter (M268B) grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate 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

UCLA

1242 Law
71 Dodd Hall, Admissions
Bren Hall
Los Angeles, CA 90095-1476
(310) 825-4841
(310) 825-2080, Admissions
e-mail: admissions@law.ucla.edu
http://www.law.ucla.edu/home/

Michael H. Schill, J.D., Dean

Professors

Richard L. Abel, LL.B., Ph.D., LL.D. (Cornell Professor of Law)
Khaled Abou El Fadl, M.A., J.D. (Omar and Azmeralda Aff Endowed Professor of Islamic Law)
Iman Anabtawi, M.A., J.D.
Peter Arenella, J.D.
Stephen M. Banbridge, M.S., M.J. (William D. Warren Professor of Law)
Steven A. Bank, J.D.
Stuart Banner, J.D.
David A. Binder, LL.B.
Gary L. Blasi, M.A.
Grace Ganz Blumberg, J.D., LL.M.
Talme L. Bryant, M.A., Ph.D., J.D.
Daniel J. Bussel, J.D.
Devin Carbado, J.D.
Ann E. Carlsson, J.D.
Kimberle W. Crenshaw, J.D., LL.M.
Scott L. Cummings, J.D.
David Dolinko, J.D., Ph.D.
Sharon Dolovich, Ph.D., J.D.
John M. de Figueriedo, M.Sc., Ph.D.
Susan Fletcher-John, J.D.
Stephen Gardbaum, C.P.E., M.Sc., M.Phil., J.D., Ph.D.
Carole E. Goldberg, J.D.
Robert D. Goldstein, M.Ed., J.D.
Mark Grady, J.D.
Mark Greenberg, J.D., Ph.D.
Philip Acting
Joel F. Handler, J.D. (Richard C. Maxwell Professor of Law)
Cheryl L. Harris, J.D.
Barbara Herman, M.A., Ph.D.
Jerry Kang, J.D.
Kenneth Klee, J.D.
Russell Kornblin, J.D.
Naomi Lamoreaux, M.A., Ph.D.
Maximo Langer, LL.B., S.J.D., Acting
Gia B. Lee, M.Phil., J.D., Acting
Douglas Lichtman, J.D.
Christine A. Littleton, J.D.
Lynn M. LoPucki, J.D., LL.M. (Security Pacific Bank Professor)
Daniel H. Lowenstein, LL.B.
Timothy Malloy, J.D.
Jennifer Mnookin, J.D., Ph.D.
Albert J. Moore, J.D.
Daniel H. Lowenstein, LL.B.
Lynn M. LoPucki, J.D., LL.M.
Khaled Abou El Fadl, M.A., J.D., Ph.D.
Jennifer Mnookin, J.D., Ph.D.
Albert J. Moore, J.D.
Timothy Malloy, J.D.
Khaled Abou El Fadl, M.A., J.D., Ph.D.
Jennifer Mnookin, J.D., Ph.D.
Albert J. Moore, J.D.
Law / 401
to enroll in a wide variety of courses dealing with various legal fields.

**Professional Study**

The School of Law offers the Juris Doctor (J.D.), Doctor of Juridical Science (S.J.D.), and Master of Laws (LL.M.) degrees.


The undergraduate courses offered by the School of Law are designed for undergraduate students only. For information about the legal curriculum of the School of Law, see [http://www.law.ucla.edu/home/](http://www.law.ucla.edu/home/).

**Law, Undergraduate**

### Upper Division Courses

**156. American Political Thought Seminar.** (3) Seminar, nine hours. Examination of American political thought from founding to writings of Abraham Lincoln. Readings include Locke's Second Treatise of Government, Declaration of Independence, Federalist numbers 10 and 51, and numerous writings and speeches of Lincoln, including extensive portions of Lincoln-Douglas debates. Emphasis on class discussion. Letter grading.

**161. Consumer Bankruptcy Policy Seminar.** (3) Seminar, 13 hours. Examination of consumer bankruptcy policy with one architect of 1978 Bankruptcy Code. Discussion of debt payment in ancient Babylon where spouses and siblings could be sold into slavery for nonpayment of relative's debt. Examination of bankruptcy in U.S. history and analysis of heart of consumer bankruptcy policy, such as when debtors should be released from debts, what property debtors should keep, and how debtors can put together repayment plans. P/NP or letter grading.

**170. Race and Racism in California Legal History, 1846 to the Present.** (4) Seminar, 14 hours. Limited to freshmen/sophomores. Exploration of California legal history, with focus on issues of race and racism, beginning with mid-19th-century transition from Mexican Alta California to U.S. territory and statehood. Topics include state measures affecting California Indians in 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, 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 states. Emphasis on historical background and ideological context for particular constitutional controversies at various points in American history, with more formal analysis of particular decisions and competing methods of constitutional interpretation considered. Topics include origins of judicial review, debates over meaning of federalism in early republic, slavery and constitution. Reconstruction Amendments, laissez-faire constitutionalism, citizen- 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. Broad 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, religious freedom, right to privacy (including procreative rights) and due process of law, constitutional protection against discrimination based on race and gender, and basic criminal procedure protections. Emphasis on principal Supreme Court cases establishing scope of those rights and their limits. Letter grading.

### 180. Special Topics in Law.** (4) Lecture, four hours. Topics of special interest to undergraduate students. Specific subjects may vary each term depending on particular interest of instructors or students. May be repeated for credit. P/NP or letter grading.

**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 topics by 10 leading law and political science scholars from the 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 187A. Adjunct course limited to undergraduate students. Discussion of articles and book chapters for credit. P/NP or letter grading.

**199. Directed Research in Law.** (1 to 6) Tutorial, three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty member. Culminating scholarly paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.
LESBIAN, GAY, BISEXUAL, AND TRANSGENDER STUDIES

Interdisciplinary Minor
College of Letters and Science

UCLA
2214 Rolfe Hall
Box 951531
Los Angeles, CA 90095-1531
(310) 206-0516
fax: (310) 206-4118
e-mail: lgbts@humnet.ucla.edu
http://www.humnet.ucla.edu/humnet/lgbts/

James A. Schultz, Ph.D., Director
Sandra Harding, Ph.D., Chair
Mark A. Schuster, M.D., Ph.D., Vice Chair

Faculty Advisory Committee
Stuart Biegel, J.D. (Education, Law)
Mayle S. Blackwell, Ph.D. (Chicana and Chicano Studies)
Sue-Ellen Case, Ph.D. (Theater)
Susan D. Cochran, M.S., Ph.D. (Epidemiology)
Alícia Gaspar de Alba, Ph.D. (Chicana and Chicano Studies, English)
Sandra Harding, Ph.D. (Education)
Arthur L. Little, Ph.D. (English)
Christine A. Littledon, J.D. (Law)
Christopher J. Looby, Ph.D. (English)
Mignon R. Moore, Ph.D. (Sociology)
Mitchell B. Morris, Ph.D. (Musicology)
Steven D. Nelson, Ph.D. (Art History)
Catherine S. Opie, M.F.A. (Art)
Mark A. Schuster, M.D., Ph.D. (Health Services)
Robert Bradley Sears, J.D. (Law)

Scope and Objectives

Although lesbian, gay, bisexual, and transgender studies has only recently found a place in university curricula, the field actually represents the intersection of two traditions that have existed for thousands of years. The better known is the learned tradition, which, at least since the end of the ancient world, has been overwhelmingly hostile. Medieval theology condemned the sodomite, nineteenth-century medicine pathologized the invert, and until very recently psychiatry felt called on to "cure" the homosexual. For at least as long, however, women and men attracted to others of their own sex have kept alive another affirmative tradition, a knowledge of their past that sustained them, often in the face of overwhelming official hostility. The guests at Plato's Symposium looked back to Achilles and Patroclus; women-loving-women in early twentieth-century Paris remembered Sappho.

After the birth of the modern gay liberation movement in 1969, this underground knowledge came out of the closet and found a public voice sufficiently strong to mount a sustained challenge to the official teachings concerning minority sexualities and genders. This challenge led to a dramatic increase in research on same-sex desire and cross-gender phenomena, most of it the work of scholars without academic affiliations. Inspired by these accomplishments, students and faculty at colleges and universities eventually mustered the courage to address similar topics, thereby transforming — partly by assimilation, partly by contestation — the previously hostile learned tradition. This originally rather disparate work gradually coalesced into lesbian, gay, bisexual, and transgender studies, which, over the last 20 years, has developed into an academic discipline of remarkable breadth and vitality. The field embraces work in genetics and cultural studies, literature and anthropology, the health sciences, history, and the visual arts. It ranges from archival research to the elaboration of queer theory, from the analysis of constitutional law to questions of public health, from the study of identical twins to the study of popular culture.

Although the initial focus in lesbian, gay, bisexual, and transgender studies is usually on minority sexualities and genders, it is impossible to study them in any meaningful way without raising questions about sexuality and gender in general. And those questions cannot be responsibly answered without considering class, race, ethnicity, history, political economy, and the construction of scientific knowledge. Thus lesbian, gay, bisexual, and transgender studies, which may at first seem to concern the private practices of a small number of people, inevitably leads to the much larger study of sexuality, gender, and culture. It represents an important vantage point from which to investigate the social construction of gender and sexual identity, social control of behavior, changing definitions of the family, and the place of sexual and gender expression in the public and private spheres. Because of the kinds of questions asked, lesbian, gay, bisexual, and transgender studies is the site of some of the most exciting work being done today on the relation of culture, gender, and sexuality.

UCLA's minor in Lesbian, Gay, Bisexual, and Transgender Studies provides the opportunity to study sexuality from a variety of interdisciplinary perspectives. Interdisciplinarity is assured by requiring students to take at least one course each in the life sciences, social sciences, and humanities. In addition, seniors in the minor are expected to do an internship in a community organization, thereby acquiring a kind of knowledge not usually available in the classroom. After completing the minor, students should be familiar with the theoretical tools that different disciplines employ to study sexuality and gender. They should be acquainted with some of the many different ways sexuality and gender have been organized in the past and are organized in different cultures in the present and should have an enhanced understanding and appreciation both of the sexual and gender diversity of the world in which they live and of the complex ways in which sexuality and gender intersect with other categories of identity and practice.

Lesbian, Gay, Bisexual, and Transgender Studies

Upper Division Courses


M101C. Special Topics in Lesbian and Gay Literature. (5) (Same as English M101C and Women's Studies M101C.) Lecture, four hours. Enforced prerequisite: English Composition 3 or 3H. Variable special topics course each term. Students may petition to apply a related course not on the list toward the six-course requirement if they can show that lesbian, gay, bisexual, or transgender issues represent a significant part of the course content. Students are strongly urged to keep in close contact with advisers in the program office who can help them plan their course of study.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Upper Division Courses


M101C. Special Topics in Lesbian and Gay Literature. (5) (Same as English M101C and Women's Studies M101C.) Lecture, four hours. Enforced prerequisite: English Composition 3 or 3H. Variable special topics course each term. Students may petition to apply a related course not on the list toward the six-course requirement if they can show that lesbian, gay, bisexual, or transgender issues represent a significant part of the course content. Students are strongly urged to keep in close contact with advisers in the program office who can help them plan their course of study.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Undergraduate Study

Lesbian, Gay, Bisexual, and Transgender Studies Minor

To enter the Lesbian, Gay, Bisexual, and Transgender Studies Minor, students must have an overall grade-point average of 2.0 or better.

Required Upper Division Courses (32 units): Lesbian, Gay, Bisexual, and Transgender Studies M114, 195, and six additional courses, including at least one each in the humanities, life sciences, and social sciences, to be selected from the approved list of courses available in the program office each term. Students may petition to apply a related course not on the list toward the six-course requirement if they can show that lesbian, gay, bisexual, or transgender issues represent a significant part of the course content. Students are strongly urged to keep in close contact with advisers in the program office who can help them plan their course of study.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
M115. Topics in Study of Sexual and Gender Orientation. (4) (Same as Women's Studies M115.) Lecture/discussion, three hours. Requisite: course M114 or Women's Studies 10. Studies in arts, humanities, social sciences, and/or life sciences on aspects of sexual orientation, gender identity, and lesbian, gay, and/or bisexual issues; variable topics may include cultural representations, historical and political change, life and health experiences, and queer or transgender theories; multietnic and cross-cultural emphases. May be repeated for credit. Letter grading.


M118. Queering American History. (4) (Same as Women's Studies M118.) Lecture, four hours. History of sexual and gender minorities in the 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.

M133. Chicana Lesbian Literature. (4) (Same as Chicana and Chicano Studies M133 and Women's Studies M133.) Lecture, three hours. Exploration of intersection of radical First and Third World feminist politics, lesbian sexuality and its relationship to Chicana identity, representation of Chicana in Chicana literature, meaning of familia in Chicana lesbian lives, and impact of Chicana lesbian theory on Chicana/ Chicano studies. Letter grading.

M134. Cultural Construction of Gender and Sexuality: Homosexualities. (4) (Same as Anthropology M134 and Honors Collegium M132.) 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. Gay and Lesbian Perspectives in Pop Music. (5) (Same as Music History M137.) Lecture, four hours; discussion, one hour. Survey of English-language popular music in the 20th century, with focus on lesbians, gay men, and members of other sexual minorities as creators, performers, and audience members. Letter grading.

M147A. Psychology of Lesbian Experience. (4) (Same as Psychology M147A and Women's Studies M147A.) Lecture, two hours; discussion, one hour. Requisite: course M114 or Psychology 10 or Women's Studies 10. Designed for juniors/seniors. Review of research and theory in psychology and women's studies to examine various aspects of lesbian experience, impact of heterosexism/stigma, gender role socialization, minority status of women and lesbians, identity development within a multicultural society, changes in psychological theories about lesbians in sociohistorical context. P/NP or letter grading.

150. Speaking Out: Public Speaking on Lesbian, Gay, Bisexual, and Transgender Issues. (1) Discussion, two hours. Interdisciplinary course designed to teach leadership and public speaking skills on lesbian, gay, bisexual, and transgender issues. Sexual identity development, personal growth, and lesbian, gay, bisexual, and transgender history intersect with public speaking and leadership skills. Topics include sexual identities, family, leadership, and public speaking performance. P/NP or letter grading.

M167. Contested Sexualities. (4) (Same as Women's Studies M167.) Lecture, three hours; discussion, one hour. 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.

187. 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. Consent of instructor. Letter grading.

194. Research Group or Internship Seminars: Lesbian, Gay, Bisexual, and Transgender Studies. (2) Seminar, two hours. Preparation: completion of four courses toward minor. Requisite: course M114. Corequisite: course 195. Designed for seniors who are doing internship in lesbian, gay, bisexual, or transgender community organization. Discussion of research theoretical and political issues in context of internship and relation of those issues to ideas explored in minor courses already taken. May be repeated for credit. P/NP grading.

195. Community or Corporate Internships in Lesbian, Gay, Bisexual, and Transgender Studies. (4) Tutorial, one hour. Preparation: completion of four courses toward minor. Requisite: course M114. Corequisite: course 194. Limited to seniors. Internship in supervised setting in lesbian, gay, bisexual, or transgender community organization. Students meet on regular basis with instructor and prepare periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

197. Individual Studies in Lesbian, Gay, Bisexual, and Transgender Studies. (2 to 4) Tutorial, one hour. 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. Tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Life Sciences

College of Letters and Science

UCLA

2305 Life Sciences

Box 951606

Los Angeles, CA 90095-1606

(310) 825-6614

http://www.lsocore.ucla.edu

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 (Physiological Science Department), and Psychology (Psychology Department). This choice reflects the diversity of undergraduate instruction in life sciences at UCLA. Despite this diversity, all of these majors require a common core of introductory courses that forms the foundation for any study of life sciences and that is required for more advanced courses in each major. The common core includes courses in chemistry, physics, and mathematics, as well as introductory courses in 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.lsocore.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 Psychobiology majors may require some courses in addition to the life sciences core curriculum as part of the preparation. Consult the course requirements for both majors.

Undergraduate Study

Life Sciences Core Curriculum

Required: Life Sciences 1, 2, 3, 4; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4AL, and 4BL, or 6A, 6B, and 6C.

Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade of D or F in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

Transfer Students

Transfer applicants with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2, 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.

Undergraduate Research Consortium in Functional Genomics

The Undergraduate Research Consortium in Functional Genomics (URCFG) offers a sequence of laboratory-intensive courses de-
signed for undergraduate students committed to pursuing research. The innovative partnership between UCLA and the Howard Hughes Medical Institute (HHMI) was formed through a major award to Professor Utpal Banerjee. The HHMI Professors Program seeks to engage leading scientists in transmitting the excitement and value of scientific research to undergraduate education. The goal of the UR-CFG is to emphasize the importance for academia and industry of research in the fields of medicine and biotechnology.

Sponsored by the Life Sciences Core, the UR-CFG provides undergraduates from any UCLA major with the opportunity to learn biological research techniques early in their educational careers and within a structured institutional environment. Undergraduates devote between one and four terms to the study of biological research in genetics, bioinformatics, and functional genomics. The training emphasizes research concepts in basic science such as the model organism and in advanced research techniques such as electron microscopy.

Students participate in one structured lower division course — Life Sciences 10H — which is limited to 30 students per term and is offered every term. After satisfactorily completing course 10H and with instructor consent, students may participate in up to three terms of upper division research in genetics, bioinformatics, and genomics. The upper division courses — Life Sciences 100HA, 100HB, 100HC — do not involve preexisting laboratory experiments. Syllabi for the courses are instead based on individual research projects whose outcomes students discover through the course of their studies. It is anticipated that only about one third of the students who complete course 10H will subsequently enroll in course 100HA, and students are advised that they can benefit significantly from course 10H alone.

Each course must be taken for a letter grade. Under special circumstances, one course may be waived for students who have prior research experience in fields covered by the courses. Students who complete the required courses receive a certificate of merit indicating their completion of the consortium.

To participate, students must be accepted into the Undergraduate Research Consortium in Functional Genomics. Interested students should contact the UR-CFG coordinator in the Molecular, Cell, and Developmental Biology Student Affairs Office, 212B Life Sciences, (310) 825-7109, for information regarding admission and an application. Applications are due no later than Friday of the fourth week of the term prior to the term in which students plan to enroll in course 10H.

Life Sciences
Lower Division Courses

1. Evolution, Ecology, and Biodiversity. (5) Lecture: three hours; 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 exemplary ecosystems and physiological relationships. P/NP or letter grading.

2. Cells, Tissues, and Organs. (5) Lecture, three hours; discussion/laboratory, three hours (alternate weeks). Enforced requisite: Chemistry 14A or 20A. Introduction to basic principles of cell structure, organization of cells into tissues and organs, and principles of organ systems. Letter grading.

3. Introduction to Molecular Biology. (5) Lecture, three hours; discussion/laboratory, three hours (alternate weeks). Enforced requisite: course 2, and Chemistry 14C or 30A. Introduction to basic principles of biochemistry and molecular biology. 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 sciences majors. Topics include chemistry of life, genetics, physiology, evolution, and ecology — all explored in lecture and debates, with a writing component. P/NP or letter grading.

715SL Classroom Practices in Elementary School Science. (2) Seminar, 90 minutes; fieldwork, three hours. 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. 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.

73SL High School Science. (2) Seminar, 90 minutes; service learning fieldwork, three hours. Enforced requisite: courses 715SL. Introduction for prospective science teachers to field of secondary education and teaching and learning of science in high school classrooms. Pairs of students are placed in local high school classrooms to observe, participate, and assist mentor teachers in instruction. Discussion of learning in high school culture, cognitive development of students at this level, and best means to teach appropriate science concepts at this level. P/NP grading.

97. Variable Topics in Life Sciences. (1 to 4) Seminar, two to four hours. Current issues in research and/or development in life sciences. Consult Schedule of Classes for topics and instructors. May be repeated once for credit with consent of instructor. P/NP or letter grading.

89X. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Laboratory, three hours. Corequisite: 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. Enforced 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. Part of Undergraduate Research Consortium in Functional Genomics sponsored by Howard Hughes Medical Institute Professors Program. Letter grading.

130. Science Classroom Observation and Participation. (1) Seminar, one hour. Preparation: completion of three mathematics and/or science courses at level required of science majors. Observation, participation, and assisting in science classes at elementary, middle, and secondary schools. May be repeated for credit. P/NP grading.

187A-187B-187C. Research Experience in Life Sciences. (4-4-4) Seminar, three hours; laboratory, six hours. Enforced requisite: course 3. Course 187A is requisite to 187B, which is requisite to 187C. Students work together as research group to analyze and sequence DNA as part of microbial genome sequencing project. May not be repeated for credit. Letter grading.

192A. Undergraduate Practicum in Life Sciences. (4) Seminar, two hours. Enforced requisite: course 2 or 3. Training and supervised practicum in laboratory setting for advanced undergraduate students in courses related to life sciences. Students work on oral presentation skills and assist in preparation and presentation of materials and development of programs under guidance of faculty members. May be repeated once for credit. Letter grading.

192B. Undergraduate Practicum in Life Sciences. (4) Seminar, two hours. Enforced requisite: course 2 or 3. Limited to sophomores/juniors/seniors. Training and supervised practicum for advanced undergraduate students in courses related to life sciences. Students work on oral presentation skills and assist in preparation and presentation of materials and development of programs under guidance of faculty members. Letter grading.

199. Directed Research or Senior Project in Life Sciences. (2) Tutorial, two hours. Enforced requisite: course 3. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper/project required. May be repeated for credit. Individual contract required. P/NP or letter grading.
Graduate Course
375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

LINGUISTICS
College of Letters and Science
UCLA
3125 Campbell Hall
Box 951543
Los Angeles, CA 90095-1543
(310) 825-0634
fax: (310) 206-5743
e-mail: linguist@humnet.ucla.edu
http://www.linguistics.ucla.edu

Anoop K. Mahajan, Ph.D., Chair

Professors
Daniel Bir¨ung, Ph.D.
Susan R. Curtiss, Ph.D.
Bruce P. Hayes, Ph.D.
Nina M. Hyams, Ph.D.
Sun-Ah Jun, Ph.D.
Patricia A. Keating, Ph.D.
Edward L. Keenan, Ph.D.
Hilda J. Koopman, Ph.D.
Anoop K. Mahajan, Ph.D.
H. Craig Melchert, Ph.D. (A. Richard Diebold, Jr., Endowed Professor of Indo-European Studies)
Pamela L. Munro, Ph.D.
Terence D. Parsons, Ph.D.
Russell G. Schuh, Ph.D.
Dominique L. Sportiche, Ph.D.
Edward P. Stabler, Ph.D.
Timothy A. Stowell, Ph.D.

Professors Emeriti
Raimo A. Anttila, Ph.D.
George D. Bedell, Ph.D.
Thomas J. Hinnebusch, Ph.D.
Paul M. Schachter, Ph.D.
Robert P. Stockwell, Ph.D.

Associate Professors
Marcus A. Kracht, Ph.D.
Philippe Schlenker, Ph.D.
Carson T. Schütze, Ph.D.

Assistant Professors
Peter J. Hallman, Ph.D., in Residence
Megha Sundara, Ph.D.
Katrina D. Thompson, Ph.D., in Residence
Colin C. Wilson, Ph.D.
Kie Ross Zuraw, Ph.D.

Adjunct Assistant Professor
Michael R. Marlo, Ph.D.

Scope and Objectives
The goal of linguistics is the enrichment of knowledge about the nature, grammar, and history of human language. Linguistics is a theoretical discipline, akin to philosophy, anthropology, and cognitive psychology. It is important for prospective students to understand that studying linguistics is not a matter of learning to speak many languages. Linguistics courses draw examples from the grammars of a wide variety of languages, and the more languages linguists know about in depth (as distinct from possessing fluency in the use of them), the more likely they are to discover universal properties. It is also possible to pursue these universal aspects of human language through the intensive in-depth study of a single language. This accounts for the high proportion of examples from English and familiar European languages found in linguistics courses and research publications.

The core areas of linguistic theory are phonology (with its roots in phonetics), morphology, syntax, and semantics. A grammar is a system of rules that characterize the phonology, morphology, syntax, and semantics of a natural language. The properties of grammars are the central focus of linguistic theory.

Because language is central to all humanistic disciplines, as well as to several social sciences areas, it is studied from many points of view. Linguistics itself cannot be said to recognize a single optimal approach to the subject. Hence, the courses provide a variety of approaches that reflect the diversity of the field.

The Linguistics Department has consistently been ranked among the very best linguistics departments in the country. It offers programs leading to the Bachelor of Arts, Master of Arts, and Ph.D. degrees.

Undergraduate Study
The majors described below are of three types: (1) a major that concentrates entirely on general linguistics, (2) several majors that combine the basic courses of the general program with a language concentration or related other fields, and (3) a major that concentrates entirely on an African language area. The combined majors in conjunction with instructional certification programs are especially appropriate for students who have nonuniversity teaching careers as goals, and the African major is for students with specific African interests.

A 2.0 grade-point average in linguistics courses is required for all Linguistics Department majors.

Linguistics B.A.

The B.A. degree program is designed for students with an exceptional interest in and aptitude for the study of languages and linguistics. It enables undergraduates to gain substantial familiarity with several languages and types of linguistic structure and to become conversant with the historical study of language and formal theories of linguistics.

Preparation for the Major
Required: Linguistics 20; two of the following: Philosophy 31, Psychology 10 or 100A, one cultural anthropology course; completion of the equivalent of the sixth term of one foreign language and the third term of a second foreign language.

Students who complete an advanced language course are considered to have completed the equivalent of whatever courses are requisite to that one (e.g., if students complete French 100, they have automatically satisfied the requirement of the sixth term of work in one language). Students are required to complete at least the equivalent of the third term in a language other than those in the Romance, Slavic, or Germanic families. This requirement may be satisfied either as part of or in addition to the language requirement described in the preceding paragraph.

Transfer Students
Transfer applicants to the Linguistics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course, two courses from symbolic logic, introductory psychology or psychological statistics, or cultural anthropology, and two years of one foreign language and one year of a second foreign language (at least one year must be in a language other than those in the Romance, Slavic, or Germanic families).

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

The Major
Required: Eleven upper division or graduate courses, including Linguistics 103, 110, 120A, 120B, 130 or 132, and two courses from 125, 165A, 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 121, 122, Philosophy 127A, 127B, 172, Psychology 120A, 124E, 133C, or an upper division course in a foreign language beyond the sixth term. Nonlinguistics courses not on the list may be used as electives only in consultation with an adviser.

Linguistics 198A and 198B, or 199, are recommended for students planning to pursue graduate work in linguistics, since they provide an opportunity to engage in independent research and to write a paper that can be submitted to graduate admissions committees. To enroll in the courses, students must consult with the department'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 and two years of one foreign language and one year of a second foreign language (at least one year must be in a language other than those in the Romance, Slavic, or Germanic families). One cultural and communication course is strongly recommended.

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

Linguistics and English B.A.

Preparation for the Major

Required: Completion of the sixth term in either Chinese, Japanese, or Korean; Linguistics 20; one cultural anthropology course; either Chinese 50, Japanese 50, or Korean 50, as appropriate; completion of the equivalent of the third term of a second foreign language.

Transfer Students

Transfer applicants to the Linguistics and English Languages and Cultures major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of either Chinese, Japanese, or Korean, one introduction to linguistics course, one cultural anthropology course, one Chinese, Japanese, or Korean civilization course, and one year of a second foreign language.

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

The Major

Required: 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; for the classical Japanese track: Japanese 100A, 100B, CM122, 140A, 140B, 140C, C149; for the modern Japanese track: Japanese 100A, 100B, 100C, M120, CM122, CM123 or CM127, 130B; for the classical Chinese track: Chinese 110A, 110B, 110C; four courses from 140A through 140D, 165, 187; for the modern Chinese track: Chinese 100A, 100B, 100C, 101A, 101B, 130A, 130B; for the Korean track: Korean 100A, 100B, 100C, CM120, three courses from 101A, 101B, 101C, CM127, 130A, 130B.

Linguistics and Computer Science B.A.

Preparation for the Major

Required: Linguistics 20, Mathematics 31A, 31B, Philosophy 31, Program in Computing 10A, 10B, 10C, 30, completion of the sixth term in one foreign language or the third term in each of two foreign languages. Mathematics 61 is recommended.

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: 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 121, 122 (or Applied Linguistics and Teaching English as a Second Language C116), 140A, and three electives from 141A, 141B, 142A, 142B, 143, 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, 15, 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, one French diction 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, French 100, 101, 102, 105, 107, and one elective upper division French literature course.

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, 32, 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: Eleven upper division courses (six in linguistics and five in psychology) as follows: Linguistics 103, 120A, 120B, 130, 132, and one upper division elective in linguistics (multiple-listed courses may not be applied). Linguistics C135 or 165A or 165B (or 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor) is strongly recommended. Also required are Psychology 120A, 121, 133B, and two electives to be selected from 115, 116, M117C, 118, M119L, 124A, 124B, 124C, 124E, 130, 133C, 133E, 133F, 186A, 186B.

Linguistics and Scandinavian Languages B.A.

Preparation for the Major
Required: Linguistics 20, Scandinavian 1, 2, 3, 4, and 5, or 11, 12, 13, 14, and 15, or 21, 22, 23, 24, and 25, completion of the equivalent of the third term of a second foreign language.

Transfer Students
Transfer applicants to the Linguistics and Scandinavian Languages major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of either Swedish, Norwegian, or Danish, one introduction to linguistics course, and one year of a second foreign language.

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

The Major
Required: 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 additional upper division course in linguistics, Spanish 100A, 100B, 115 or M118A, two courses from 119A, 119B, 119C, and one additional upper division Spanish course.

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/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: A minimum of 13 upper division courses, including three courses in an African language; African Languages M187, Linguistics 103; two courses from Film and Television 106C, French 121, Theater 102E, World Arts and Cultures 134, or one or more special 4-unit African Languages 197 tutorials focusing on literature in an African language; three courses from English 114, Ethnomusicology C136A, 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 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor) and completion of the sixth term in one of the following non-African languages are strongly recommended: Afrikaans, Arabic, Dutch, French, German, Portuguese.
Honors Program
Honors in linguistics are awarded 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, 10B, 10C, 60, Linguistics C180, 185A. Students graduate with a bachelor’s degree in their major and a specialization in Computing.

Linguistics Minor
The Linguistics minor is designed for students where training in linguistic analysis could be an enhancement to their major programs and to students who are interested in language(s) but do not have time in their undergraduate programs to pursue multiquarter language sequences. In addition, the minor provides students with a way to design “custom” joint degrees with linguistics where the Linguistics Department does not have an existing joint degree program combining linguistics and another field.

To enter the minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Course (5 units): Linguistics 20.

Required Upper Division Courses (27 to 30 units): Six courses, which must include Linguistics 103, 120A, 120B, two elective courses selected from 104 through 185B, and an additional elective linguistics course, which may be upper or lower division.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Linguistics offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Linguistics.

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.

1A-2B-2C. Intermediate Swahili. (4-4-4) Lecture, four hours. Enforced requisite: course 1C. Course 2A is enforced requisite to 2B, which is enforced requisite to 2C. P/NP or letter grading.

4. Conversational Swahili. (1) Seminar, one hour. Enforced requisite: courses 1A, 1B. 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.

2A-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.

9A-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.


17. Intensive Elementary Yoruba. (12) Lecture, 20 hours (eight weeks). Intensive instruction (equivalent to courses 7A, 7B, 7C) in Zulu, most widely spoken of the Nguni languages of South Africa, mutually intelligible with other members of this group. Letter grading.

18. Intensive Intermediate Zulu. (12) Lecture, 20 hours (eight weeks). Enforced requisite: course 7C or 17. Intensive instruction (equivalent to courses 8A, 8B, 8C) in Zulu, most widely spoken of the Nguni languages of South Africa, mutually intelligible with other members of this group. Letter grading.


27. Intensive Elementary Xhosa. (12) Seminar, 20 hours. Basic communication skills and intensive instruction in Xhosa, with emphasis on listening and speaking. Use of various instructional media, including textbook, CD-ROMS, interactive Web-based materials, and videos. P/NP or letter grading.

29. Intensive Elementary Igbo. (12) Seminar, 20 hours. Basic communication skills and intensive instruction in Igbo, with emphasis on listening and speaking. Use of various instructional media, including textbook and audio/video materials. P/NP or letter grading.

31A-31B-31C. Elementary Bambara. (4-4-4) Lecture, five hours. Course 31A is enforced requisite to 31B, which is enforced requisite to 31C. Major language of Mali, also widely spoken in adjacent parts of West Africa; includes Maninka (Malinke), Dyula, and other mutually intelligible dialects. P/NP or letter grading.

32A-32B-32C. Intermediate Bambara. (4-4-4) Lecture, four hours. Enforced requisite: course 31C. Course 32A is enforced requisite to 32B, which is enforced requisite to 32C. P/NP or letter grading.


41A-41B-41C. Elementary Hausa. (4-4-4) Lecture, five hours. Course 41A is enforced requisite to 41B, which is enforced requisite to 41C. Major language of northern Nigeria and adjacent areas. P/NP or letter grading.

42A-42B-42C. Intermediate Hausa. (4-4-4) Lecture, four hours. Enforced requisite: course 41C. Course 42A is enforced requisite to 42B, which is enforced requisite to 42C. P/NP or letter grading.


51A-51B-51C. Elementary Amharic. (4-4-4) Lecture, five hours (15 hours for intensive course). Course 51A is enforced requisite to 51B, which is enforced requisite to 51C. Major language of Ethiopia. P/NP (undergraduates), S/U (graduates), or letter grading.

52A-52B-52C. Intermediate Amharic. (4-4-4) Lecture, five hours (15 hours for intensive course). Enforced requisite: course 51C. Course 52A is enforced requisite to 52B, which is enforced requisite to 52C. P/NP (undergraduates), S/U (graduates), or letter grading.


61A-61B-61C. Elementary Wolof. (4-4-4) Lecture, five hours. Course 61A is enforced requisite to 61B, which is enforced requisite to 61C. Major language of Senegambia. P/NP or letter grading.

62A-62B-62C. Intermediate Wolof. (4-4-4) Lecture, four hours. Enforced requisite: course 61C. Course 62A is enforced requisite to 62B, which is enforced requisite to 62C. P/NP or letter grading.

Upper Division Courses

103A-103B-103C. Advanced Swahili. (4-4-4) Lecture, four hours. Requisite: course 2C. Course 103A is requisite to 103B, which is requisite to 103C. Readings in Swahili literature and the contemporary press. Discussions mainly in Swahili. P/NP or letter grading.

109A-109B-109C. Advanced Zulu. (4-4-4) Lecture, five hours. Requisite: course 8C. Course 109A is requisite to 109B, which is requisite to 109C. Readings in Zulu literature and the contemporary press. Discussions mainly in Zulu. P/NP or letter grading.

123A-123B-123C. Advanced Yoruba. (4-4-4) Lecture, four hours. Requisite: 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. Requisite: course 32C. Course 133A is requisite to 133B, which is requisite to 133C. Readings in Bambara literature and the contemporary press. Discussions mainly in Bambara. P/NP or letter grading.

143A-143B-143C. Advanced Hausa. (4-4-4) Lecture, four hours. Requisite: course 42C. Course 143A is requisite to 143B, which is requisite to 143C. Readings in Hausa literature and the contemporary press. Discussions mainly in Hausa. P/NP or letter grading.

150A-150B. African Literature in English Translation. (4-4) Lecture, four hours. Narrative and didactic prose and poetry of sub-Saharan Africa and written prose and poetry of South Africa. P/NP or letter grading.

153A-153B-153C. Advanced Amharic. (4-4-4) Lecture, five hours (15 hours for intensive course). Requisite: course 52C. Course 153A is requisite to 153B, which is requisite to 153C. Readings in Amharic literature and the contemporary press. Discussions mainly in Amharic. P/NP (undergraduates), S/U (graduates), or letter grading.


171. Language in South Africa: Histories, Cultures, Politics. (4) Lecture, three hours. Recommended requisite: course 7A. Knowledge of African languages not required. Introduction to South Africa centered around language, using variety of disciplinary perspectives as lenses to examine varied landscape of South Africa’s languages. What 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 excluded 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 prerequisite: course 11A, 25, 29, or 41A. Knowledge of African languages not required. Introduction to Nigeria centered around language. How does language shape ethnic identities in Nigeria (one of Africa’s most multilingual nations) and Nigerian diaspora? Analysis of historical, cultural, political, and linguistic circum- stances to allow students to assess different arenas of language interaction such as contemporary politics, religion, literature, and popular media. To gain in- dependence of Nigeria’s diversity of languages and cultures, and focus on four major languages: Hausa, Igbo, Yoruba, and Nigerian Pidgin English. 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 supervised research, based on needs of individual students, in any language or group of languages for which appropriate facilities are available. Scheduled meetings to be arranged between faculty member and student. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

202A-202B-202C. Comparative Bantu. (4-4-4) Lecture, four hours. Requisites: Linguistics 110, 165A, 165B. Recommended: three quarter courses in one Bantu language selected from 1A through 8C. 197. Investigation of relationships among Bantu languages; extent and external relationships of Bantu. S/U or letter grading.

596. Directed Studies. (1 to 8) Tutorial, to be arranged. Directed individual study or research. Four units may be applied toward M.A. course requirements. May be repeated for credit. S/U grading.

Linguistics

Lower Division Courses

1. Introduction to Study of Language. (5) Lecture, three hours; discussion, one hour. Summary, for general undergraduates, of what is known about human language; unique nature of human language, its struc- ture, its universality, and its diversity; language in its social and cultural setting; language in relation to other aspects of human inquiry and knowledge. P/NP or letter grading.

2. Language in the U.S. (5) Lecture, four hours; discussion, one hour. Survey of languages of the U.S. (American Indian languages, oldest immigrant languages, ethnic and regional varieties of English, and newest arrival languages) and social and political aspects of American language use. P/NP or letter grading.


4. Language and Evolution. (5) Lecture, four hours; discussion, one hour. Basic concepts and tools of evolutionary theory and linguistics relevant to how or- ganisms with linguistic abilities could evolve, and how particular languages, as cultural artifacts, survive and change so rapidly. P/NP or letter grading.

5. Languages of World. (5) Lecture, four hours; dis- cussion, one hour. Introduction to linguistic diversity of world and to such core areas of linguistics as study of sound production and perception (acoustics and phono- nology), word formation (morphology), and sentence formation (syntax). Structural characteristics of world’s languages and methods of classifying lan- guages 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.

M10. Structure of English Words. (5) (Same as English M40.) Lecture, four hours; discussion, one hour. Introduction to structure of English words of classical origin, including most common base forms and rules by which alternate forms are derived. Stu- dents may expect to achieve substantial enrichment of their vocabulary while learning about etymology, semantic change, and abstract rules of English word formation. P/NP or letter grading.

20. Introduction to Linguistics. (5) Lecture, four hours; discussion, one hour. Introduction to theory and methods of linguistics: universal properties of hu- man language; phonetic, phonological, morphologi- cal, syntactic, and semantic structure and analysis; language and nature and form of grammar. P/NP or letter grading.

88A-88B. Lower Division Seminars. (4-4) Seminar, three hours. Limited to freshmen/sophomores. Vari- able topics; consult Schedule of Classes, College of Letters and Science, or department for topics to be of- fered in specific term. May be repeated for credit. P/NP or letter grading.

97. Variable Topics in Linguistics. (1 to 6) Semi- nar, three hours; fieldwork, two hours. Variable topics offered by departmental faculty members. May be re- peated 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 requi- site: course 20. Phonetics of variety of languages and phonetic phenomena that occur in languages of world. Extensive practice in perception and produc- tion of such phenomena. P/NP or letter grading.


105. Morphology. (5) Lecture, four hours; discus- sion, one hour. Enforced requisite: course 20. In- linguistics, morphology is study of word structure. Mor- phological theory seeks to answer questions such as how should words and their component parts (roots, prefixes, suffixes, vowel changes) be classified cross- linguistically? how do speakers store, produce, and process complex words (words with affixes, com- pounds)? do speakers know how to produce cor- rect word forms even when they have not previously heard them and how do speakers know that particular words are well-formed or ill-formed? is there princi- pled distinction in traditional division between inflec- tion and derivation? how can we best account for vari- ation 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. Methods and theories approp- riate to historical study of language, such as compar- ative method and method of internal reconstruc- tion. Sound change, grammatical change, semantic change. P/NP or letter grading.
111. Intonation. (4) [Formerly numbered C111.] Lecture, four hours; laboratory, two hours. Requisites: courses 20, 103, 120A or 120B. Recommended: course 110. Survey of English intonation, with emphasis on how intonational patterns are formed and influenced by sentence structure and content. P/NP or letter grading.

114. American Indian Linguistics. (5) Lecture, four hours; discussion, one hour. Strongly recommended preparation: course 20. Survey of genetic, areal, and typological classifications of American Indian languages; writing systems for American Indian languages; American Indian languages in social and historical context. One or more languages may be investigated in detail. P/NP or letter grading.


120A. Phonology I. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20, 103. Introduction to phonology and analysis. Rules, representations, and properties of construction not found in English. Concurrently scheduled with course C255. 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 child 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 differences in acquisition and effects of sociocultural backgrounding (subordination). P/NP or letter grading.

M146. Language in Culture. (5) [Same as Anthropology M146.] Lecture, three hours; discussion, one hour. Requisite: course 103. An introductory linguistics course. Critical reading and discussion of selected current research papers in syntax, semantics, and sociolinguistics. Aspects of comparative analysis of different languages. Concurrently scheduled with course C244. P/NP or letter grading.

M130. Examination of relationship between brain, language, and linguistic theory, with evidence presented from atypical language development and language disorders. Topics include methodology to investigate normal and atypical hemispheric specialization for language and children and adults with acquired and congenital language disorders. Concurrently scheduled with course C235. P/NP or letter grading.

132. Language Processing. (5) [Formerly numbered C132.] Lecture, four hours; laboratory, one hour. Requisites: 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 of sentence production, and computation of syntactic structure during production. P/NP or letter grading.

125. Semantics. (5) Lecture, four hours; discussion, one hour. Requisite: course 20. Course 120A is not requisite to 120B. Descriptive analysis of morphological and syntactic structures in natural languages; emphasis on insight into nature of such structures rather than linguistics formalization. P/NP or letter grading.

127. Syntactic Typology and Universals. (5) Lecture, four hours; discussion, one hour. Requisite: course 20. Course 120A is not requisite to 120B. Descriptive analysis of morphological and syntactic structures in natural languages; emphasis on insight into nature of such structures rather than linguistics formalization. P/NP or letter grading.

130. Language Development. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20, 120A, 120B. Survey of research and theoretical perspectives on 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 production; development of phonology, morphology, syntax, and word meaning. P/NP or letter grading.

185A. Computation Linguistics I. (5) [Formerly numbered C185A.] Lecture, four hours; laboratory, one hour. Requisites: courses 120B, C180, Program in Computing 10B. Recommended: course 165B or 206B, Program in Computing 60. Survey of recent work on natural language processing, including basic syntactic parsing strategies, with brief glimpses of semantic representation, reasoning, and response generation. P/NP or letter grading.

185B. Computational Linguistics II. (5) [Formerly numbered C185B.] Lecture, four hours; laboratory, one hour. Requisite: 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. P/NP or letter grading.

191A. Variable Topics Research Seminars: Linguistics. (2 or 4) Seminar, three hours. Requisite: course 1 or 20. Research seminar on selected topics. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

191B. Variable Topics Research Seminars: Linguistics. (2 or 4) Seminar, 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.

197. Individual Studies in Linguistics. (2 to 4) Tutorial, four hours. Requisite: course 1 or 20. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assignment of grade 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. Requisite or corequisite: course 165A (or 200A) or 165B (or 200B). Laboratory: completion of both courses 165A and 165B (or 200A and 200B) before or during term in which course 198A is taken. Limited to juniors/seniors. Development of honors thesis or comprehensive research project on linguistic topic selected by student under 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. Requisite: course 198A. Limited to juniors/seniors. Development of honors thesis or comprehensive research project begun in course 198A under direct supervision of faculty member. Consult professor in charge to enroll. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Linguistics. (4) Tutorial, to be arranged. Limited to seniors. Supervised individual research or investigation of linguistic topic selected by student under guidance of faculty mentor. Columnating paper required. Consult professor in charge to enroll. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses
200A. Phonological Theory I. (4) Preparation: graduate linguistic student or grade of A in course 120A or equivalent course in phonology. Courses 200A and 201 form two-course survey of current research in phonological theory. Interaction of phonology with morphology and syntax, syllable structure, stress.

200B. Syntactic Theory I. (4) Preparation: graduate linguistics student or grade of A in course 120B or equivalent course in syntax. In-depth introduction to selected topics from constituent structure or constituent 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. Requisite: course C180 or C208. Overview of current results and research methods in linguistic semantics. Topics include general and formal semantic entailments and semantic universals, predicate argument structures, variable binding and pronominalization, formal semantic interpretation, syntax and LF, tense, ellipsis, and focus. Letter grading.

201. Phonological Theory II. (4) Requisite: 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.


203. Phonetic Theory. (4) Requisite: 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) (Formerly numbered 204.) Lecture, three hours. Requisite: 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 sound events; computer-based speech processing, analysis, and modeling; perceptual and acoustic evaluation of synthetic speech. S/U or letter grading.

204B. Speech Production. (4) Lecture, three hours; laboratory, one hour. Requisite: course 104 or 204A. Survey of topics in speech research, especially related to phonetic and linguistic theories. 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, electroglottographic, static and electric palatography, electromagnetic articulography, and imaging techniques. S/U or letter grading.


206. Syntactic Theory II. (4) Requisite: course 200B. In-depth introduction to selected topics in theory of movement processes and topics selected from following areas: WH-movement and related rules, subcategorization and other conditions on movement; ECP and related conditions on distribution of empty categories; resumptive pronoun constructions; parametric variation in movement constructions; LF WH-movement; fusing; grade of B or better in course 153 or in elementary grammar; theory control context; null subject parameter.


210C. Mathematical Structures in Language II. (5) Formerly numbered C209A.) 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.

210B. Computational Linguistics II. (5) Formerly numbered C209B.) Lecture, four hours; laboratory, one hour. Requisite: course 210B. Extensions of linguistic processing techniques to natural language processing. Recent models of syntactic, semantic, and discourse analysis, with particular attention to their computational sophistication and psychological plausibility. S/U or letter grading.

210C. Computational Semantics. (4) Lecture, four hours. Preparation: basic knowledge of semantics. Requisite: course 185A or 209A. Study of algorithms to compute and reason with meanings of sentences and texts. Phenomena such as anaphor resolution, presupposition projection, and tracking time, objects, and space to be covered. S/U or letter grading.

210A. Field Methods I. (4) Lecture, four hours. Preparation grade of B or better in course 103 or in examination on practical phonetics. Requisites: courses 200A, 200B. Analysis of a language unknown to members of class from data elicited from a native speaker of the language. Term papers to be relatively full 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. Requisite: 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.

211. Intonation. (4) (Formerly numbered C211.) Lecture, two hours. Recommended requisite: course 204A. Survey of intonational theory for English and other language with particular reference to phonological models of intonation. Laboratory equipment used for recording and analyzing intonation, and students learn to transcribe intonational elements. Letter grading.

212. Learnability Theory. (4) Requisite: course C180 or C208. Survey of some of most significant results on capabilities of learners, given precise assumptions about their memory, time, and computational power, and precise assumptions about informa tion provided by the environment.

213A. Grammatical Development. (4) Requisites: courses 200A, 200B. Recommended: course 130 or 233. Survey of theoretical perspectives and contemporary empirical research in neurolinguistic and cognitive bases for language, language development, and language breakdown.

213B. Brain Bases for Language. (4) Requisites: courses 200A, 200B. Recommended: courses C135 or C235. Survey of theoretical perspectives and contemporary empirical research in neurocognitive and computational models of language acquisition, with emphasis on syntactic processing, ambiguity resolution, effects of memory load, and relationship between grammar and processor.

214. Survey of Current Syntactic Theories. (4) Requisite: course 206. Survey of several current syntactic theories, compared with one another and with theory discussed in course 206, from point of view of theories' relative descriptive and explanatory power.

215. Syntactic Typology. (2 or 4) Lecture, four hours. Requisite: course 200B. Current results in word-order universals; genetic classification of world languages; cross-language 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) Requisite: course 206. Selected topics on syntactic theories of anaphora and quantification from the following areas: typology of binding categories (pronouns, anaphors, etc.); theory of both conditions on parametric quantification in binding; quantifier movement; existential quantification and unselective binding; strong and weak crossover; superiority; scope interactions; complex quantifier structures.

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 lexicon, relation between perception and phonology, and universal markedness relations. Letter grading.

218. Mathematical Structures in Language II. (4) Lecture, four hours. Requisite: course C180 or C208. In-depth study of generalized quantifier theory; selected topics from distinctive feature theory, formal syntax, partial orders and lattices, formal language theory, variable binding operators. May be repeated for credit with consent of instructor. S/U or letter grading.

219. Philosophical Theory III. (4) Lecture, four hours. Requisite: course 201. Current research and issues in phonological theory. Topics include structure of phonological representations, relations between representations, architecture of grammar, and explanations for phonological theory. Letter grading.
220. Linguistic Areas. (4) Requisites: courses 120A, and 120B or 127. Recommended: courses 165A or 200A, 165B or 200B. Analysis and classification of languages spoken in a particular area (e.g., Africa, the Balkans, South Asia, Southeast Asia, Australia, Aboriginal North America, Aboriginal South America, Far East, etc.). May be repeated for credit with topic change. S/U or letter grading.

225. Linguistic Structures. (4) Lecture, four hours. Requisites: courses 120A, and 120B or 127. Recommended: courses 165A or 200A, 165B or 200B. Phonological 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.

CM228A-CM228B. Romance Syntax: French. (4-4) (Same as Romance Linguistics M204A-M204B) Lecture, four hours. Preparation: some knowledge of French (or a Romance language). Requisite: course 120B. Course CM228A is requisite to CM228B. Aspects of structure of French language, with emphasis on properties of construction not found in English. Concurrently scheduled with courses C128A-C128B. S/U or letter grading.

230. History of Linguistics. (4) Requisites: courses 100A, 100B. 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) (Formerly numbered C232.) Lecture, four hours; laboratory, one hour. Central issues in language comprehension and production, including 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 of sentence production, and computation of syntactic structure during production. S/U or letter grading.


C235. Neurolinguistics. (5) Lecture, four hours; discussion, one hour. Requisites: courses 1 or 20, and 130. Exploration of how theories in language, linguistics, and linguistic theory, with evidence presented from neurolinguistic and social aspects of bilingualism. Concurrently scheduled with course C140. Graduate students expected to read more advanced literature, do in-class presentations, and submit graduate-level term paper. S/U or letter grading.

M246C. Topics in Linguistic Anthropology. (4) (Same as Anthropology M241.) Problems in relations of language, culture, and society. May be repeated for credit. Letter grading.

251A. Topics in Phonetics and Phonology. (4) Lecture, four hours. Requisite: course 200A. Course 201, 203, or 204 may be required. Specialized topics in phonetics and phonology. Meets with course 251B. May be repeated for credit.

251B. Topics in Phonetics and Phonology. (2) Lecture, four hours. Requisite: course 200A. Course 201, 203, or 204 may be required. Specialized topics in phonetics and phonology. Meets with course 251A. May be repeated for credit. S/U grading.

252A. Topics in Syntax and Semantics. (2) Lecture, four hours. Requisite: course 200B. Course 206, 207, 214, 215, or 216 may be required. Specialized topics in syntax and semantics. Meets with course 252B. May be repeated for credit.

252B. Topics in Syntax and Semantics. (2) Lecture, four hours. Requisite: course 200B. Course 206, 207, 214, 215, or 216 may be required. Specialized topics in syntax and semantics. May not be applied toward M.A. or Ph.D. degree requirements. Meets with course 252A. May be repeated for credit. S/U grading.

253A. Topics in Language Variation. (4) Requisite: course 110. Course 202 may be required. Specialized topics in language variation. Meets with course 253B. May be repeated for credit.

253B. Topics in Language Variation. (2) Requisite: course 110. Course 202 may be required. Specialized topics in language variation. May not be applied toward M.A. or Ph.D. 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, 204, 205, 206, 207, 208, 209A, 209B, 212, 213A, 213C, 214, 215, 216, or 218 may be required. Individual proseminars on topics such as child language, sociolinguistics, neurolinguistics, computational linguistics, psychology, etc. May be repeated once for credit. Meets with course 254A. In Progress grading (credit to be given only on completion of course 259B).

259B. Topics in Linguistics II: Proseminar. (2) Seminar, two hours. Requisite: course 259A. Individual prosemminars on topics such as child language, sociolinguistics, history of linguistic theory, neurolinguistics, languages of world, psycholinguistics, etc. May be repeated once for credit. Letter grading.

260A-260B-260C. Seminars: Phonetics. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit or applied toward M.A. or Ph.D. degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

261A-261B-261C. Seminars: Phonology. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit or applied toward 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 Semantics. (2 or 4 each) Seminar, four hours. Each course may be taken independently for credit. May not be applied toward M.A. or Ph.D. degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

263A-263B-263C. Seminars: Language Variation. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit. May not be applied toward M.A. or Ph.D. degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

264A-264B-264C. Seminars: Special Topics in Linguistic Theory. (2 or 4 each) Seminar, three hours. Special topics may include child language, neurolinguistics, psychology, psycholinguistics, etc. Each course may be taken independently for credit. May not be applied toward M.A. or Ph.D. degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

265A-265B-265C. American Indian Linguistics Seminar. (1 or 4 each) Seminar, two hours; fieldwork, four hours. Presentation of research on American Indian languages. Each course may be taken independently for credit or 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: completion of M.A. requirements. Varied linguistic topics, general presentations. Required of all graduate students, 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 colloquium. S/U grading.
Preparation: advancement to Ph.D. candidacy. May be repeated for credit. S/U grading.

191. Variable Topics Research Seminars: Indigenous Languages. (2 or 4) Seminar, three hours. Repeated for credit. May be repeated for credit with topic change. P/NP or letter grading.

Graduate Course 596. Directed Studies in Quechua. (1 to 8) (Formerly numbered Indigenous Languages of the Americas 119A-119B-119C.) Tutorial, to be arranged. Requisites: courses 119A, 119B, 119C. Directed individual study or research. May be repeated toward M.A. or Ph.D. degree requirements. S/U grading.

Managing Faculty

John E. Anderson  Graduation School of Management

UCLA

110 Westwood Plaza, Suite F407

Box 351481

Los Angeles, CA 90095-1481

(310) 825-7982

fax: (310) 206-9830

http://www.anderson.ucla.edu

Antonio E. Bernardo, Ph.D., Chair

Professors

David Abody, Ph.D.
Reza H. Afhami, Ph.D.
Shlomo Benartzi, Ph.D.
Antonio E. Bernardo, Ph.D.
Sushil Bikhchandani, Ph.D.
Bart J. Bronnenberg, Ph.D.
Randolph E. Bucklin, Ph.D. (Peter W. Mullin Professor of Management)
Bhagwan Chowdhry, Ph.D.
Charles J. Corbett, Ph.D.
Samuel A. Culbert, Ph.D.
Michael R. Darby, Ph.D. (Warren C. Cordner Professor of Emeritus of Money and Financial Markets)
Sebastian Edwards, Ph.D. (Henry Ford II Professor of International Management)
Christopher L. Erickson, Ph.D.
Eric G. Flamholtz, Ph.D.
Stuart A. Gabriel, Ph.D. (Arden Realty Professor at the Ziman Real Estate Center)
Arthur M. Geoffrion, Ph.D.
Martin Greenberger, Ph.D. (IBM Professor of Computers and Information Systems)
Mark S. Grinblatt, Ph.D. (UCLA Endowed Professor of Management)
Dominique M. Hanssens, Ph.D. (Bud Knapp Professor)
Carla Hayn, Ph.D.
John S. Hughes, Ph.D. (Ernst and Young Professor of Accounting)

Sanford M. Jacoby, Ph.D. (Howard Noble Professor of Management)
Usdy S. Karmarkar, Ph.D. (Los Angeles Times Professor of Management Strategy and Policy)
Barbara S. Lawrence, Ph.D.
Edward E. Leamer, Ph.D. (Chauncey J. Medberry Professor of Management)
David Lewin, Ph.D. (Neil Jacoby Professor of Management)
Marvin B. Lieberman, Ph.D.
Bennett P. Lintz, Ph.D.
Steven A. Lippman, Ph.D. (George Robbins Professor of Management)
Francis A. Longstaff, Ph.D. (Allstate Professor of Insurance and Finance)
John W. Mamer, Ph.D.
Kevin F. McCardle, Ph.D.
John J. McDonough, D.B.A.
Bill McKeelvey, Ph.D.
Bruce L. Miller, Ph.D.
Daniel J.B. Mitchell, Ph.D. (Ho-Su Wu Professor of Management)
Donald G. Morrison, Ph.D. (William E. Leonard Professor of Management)
Judy D. Olian, Ph.D. (John E. Anderson Professor of Management)
William G. Ouchi, Ph.D. (Sanford and Betty Sigoloff Professor of Corporate Renewal)
Anthony P. Raia, Ph.D.
Richard W. Roll, Ph.D. (Japan Alumni Professor of International Finance)
Richard P. Rumelt, D.B.A. (Harry and Elisa Kunin Professor of Business and Society)
Rakesh K. Sarin, Ph.D. (Paine Professor of Management)
Hans Schollhammer, D.B.A.
Eduardo S. Schwartz, Ph.D. (California Professor of Real Estate and Land Economics)
Carol A. Scott, Ph.D.
Avanidhar Subrahmanyam, Ph.D. (Goldyne and Irwin Hearsh Professor of Money and Banking)
E. Burton Swanson, Ph.D.
Christopher S. Tang, Ph.D. (Edward W. Carter Professor of Business Administration)
Walter N. Torous, Ph.D. (Lee and Seymour Graff Endowed Professor)
Brett M. Truem, Ph.D.
J. Fred Weston, Ph.D. (Warren C. Cordner Professor of Emeritus of Money and Financial Markets)
Harold M. Williams, J.D.
Bruce G. Willisson, M.B.A.

Professors Emeriti

Theodore A. Andersen, Ph.D.
Robert B. Andrews, Ph.D.
Michael J. Brennan, Ph.D. (Goldyne and Irwin Hearsh Professor Emeritus of Money and Banking)
William F. Brown, Ph.D.
John W. Buckley, Ph.D.
Lee G. Cooper, Ph.D.
Bradford Cornell, Ph.D.
José de la Torre, D.B.A.
David K. Eiteman, Ph.D.
Donald Erikenkotter, Ph.D.
Glenn W. Graves, Ph.D.
Alfred E. Hofflander, Ph.D.
James R. Jackson, Ph.D.
Harold H. Kassarjian, Ph.D.
Larry J. Kimbell, Ph.D.
Archie Kleingartner, Ph.D.
J. Clayburn La Force, Jr., Ph.D.
James B. MacQueen, Ph.D.
Fred Massarik, Ph.D.
Frank G. Mittelbach, M.A.
Rosser T. Nelson, Ph.D.
Allfred Nicollos, Ph.D.
William P. Pieralka, Ph.D.
John P. Sloan, Ph.D.
R. Clay Sprows, Ph.D.
George A. Steiner, Ph.D., LL.D.
James G. Wilson, Ph.D. (James A. Collins Professor Emeritus of Management)

Associate Professors

Andrew S. Ausilie, Ph.D.
Anand V. Bodapati, Ph.D.

Quechua

Lower Division Courses

17. Intensive Elementary Quechua. (12) (Formerly numbered Indigenous Languages of the Americas 17.) Lecture, 15 hours; laboratory, five hours. Intensive course equivalent to courses 18A, 18B, 18C. Language of Incas and its present-day dialects, as spoken in Andean South America. Offered in summer only. Letter grading.

18A-18B-18C. Elementary Quechua. (4-4-4) (Formerly numbered Indigenous Languages of the Americas 18A-18B-18C.) Lecture, five hours. Course 18A is enforced requisite to 18B, which is enforced requisite to 18C. Language of Incas and present-day Quechua language, as spoken in Andean South America. P/NP or letter grading.

Upper Division Courses

596. Directed Studies in Quechua. (1 to 8) (Formerly numbered Indigenous Languages of the Americas 596.) Tutorial, to be arranged. Requisites: courses 119A, 119B, 119C. Directed individual study or research. May be repeated toward M.A. course requirements. May be repeated for credit. S/U grading.
The John E. Anderson Graduate School of Management offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Management, the Master of Business Administration (M.B.A.) degree, and the Master of Financial Engineering (M.F.E.) degree. The school also offers the Executive M.B.A. Program (EMBA) and the M.B.A. for the Fully Employed (FEMBA).


Management

Lower Division Courses

1A-1B. Principles of Accounting. (4-4) Lecture, three hours; discussion, one hour. Not open to freshmen. P/NP or letter grading. 1A. Introduction to financial accounting principles, including preparation and analysis of financial transactions and financial statements. Valuation and recording of assets and related transactions, including cash, receivables, marketable securities, inventories, and long-lived assets. Current liabilities. 1B. Require: course 1A. Completion of balance sheet with emphasis on debt and equity, including in-depth introduction to time value of money concepts. Introduction to partnership and individual income tax accounting.

88. Lower Division Seminar: Special Topics in Management. (1 to 4) Seminar, three hours; outside study, nine hours. Require: satisfaction of Entry-Level Writing requirement. Special topics seminar that examines specific issues or problems and ways that professionals in management approach study of them. Students define, prepare, and present their own research projects with guidance of professional school faculty member. Letter grading.

Upper Division Courses

107. Business Communications. (4) Process and discipline of effective spoken presentations. Examination and application of classical and contemporary thinking on substance, structure, and delivery of messages. Elements of graphic presentation of data and presentation technology. Students design and deliver informative and persuasive presentations on key management issues. Critique of all efforts; certain efforts to be videotaped for review. P/NP or letter grading.


M118A. Foundations of New (Bottom-Up) Social Science: Applications of Complexity Science and Agent-Based Models. (4) (Formerly numbered 118A.) (Same as Complex Systems M130.) Lecture, four hours. Limited to juniors/seniors. Introduction to (1) complexity science as applied to social behavior, (2) agent-based computational modeling, and (3) philosophy of science; complex systems science to bridge old and new conceptions of social science. Newtonian science, neoclassical economics, and old-style approaches to social science all build on assumptions that all basic agents comprising phenomena (atomic particles, atoms, molecules, organisms, people, groups, firms) are homogeneous and go forward in time under equilibrium conditions interspersed with occasional disequilibrium periods. Letter grading.


122. Management Accounting. (4) Lecture, three hours. Requisite: course 100 or former course 1B, one statistics course. Nature, objectives, and procedures of cost accounting and control; job costing and process costing; accounting for manufacturing overhead; cost budgets; 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. Use of "Strategic Management," a computer program that simulates experience on a senior management team. Under real and sometimes adverse economic conditions, teams must make strategic and tactical decisions, analyze performance results, and compete for key resources, market share, and business opportunities. Emphasis on theories of return on equity, product life cycles, production line margin analysis, issuing debt versus equity, and other topics that allow students to apply accounting principles learned in previous courses. P/NP or letter grading.

126. Financial Statement Analysis. (4) Lecture, four hours. Requisite: course 120B. Comprehensive study of concepts and procedures used to interpret and analyze balance sheets, income statements, and statements of cash flows. Calculation and interpretation of financial ratios and credit analysis. Valuation theory using both discounted cash flows and residual income model. P/NP or letter grading.

127A. Tax Principles and Policy. (4) Lecture, three hours. Requisite: course 100 or former course 1B. Study of fundamentals of tax system: administration by individuals and other entities in analyzing business, investment, employment, and personal decisions. Special emphasis on role of tax rules in capital transactions and decision making. P/NP or letter grading.

127B. Corporate and Partnership Taxation. (4) Lecture, three hours. Requisite: course 100 or former course 1B. Recommended: course 127A. Study of tax issues arising in formation, operation, and termination of corporations and partnerships. Special emphasis on closely held enterprises, including S corporations. P/NP or letter grading.

127C. International Taxation. (4) Lecture, three hours. Recommended requisite: course 127A. Study of two principle areas of international taxation from U.S. regulatory perspective: taxation of American citizens and companies conducting business in international arena (outbound transactions) and taxation of foreign nationals and companies who invest or conduct business in the U.S. (inbound transactions). P/NP or letter grading.


130A. Basic Managerial Finance. (4) Lecture, three hours. Requisites: course 100 (or former course 1B). One statistics course. Study of financial decision making by business firms, with emphasis on applications of economic and accounting principles in financial analysis, planning, and control. Extensive use of problems and cases to illustrate various analytical techniques employed in decision making. P/NP or letter grading.


133. Investment Principles and Policies. (4) Lecture, three hours. Requisites: course 100 or former course 1B. Special topics course. Study of investment 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.


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.

175. Elements of Real Estate and Urban Land Economics. (4) Examination of business decision making related to real estate, including controlling cities and influencing real estate market functions and land uses. Emphasis on decision making as it relates to appraising, building, financing, managing, marketing, and using urban property.

CM176. Frontiers in Biotechnology. (4) (Same as Microbiology CM133.) Lecture, three hours; enforced office time, one hour (to provide specialized training for undergraduate students in project research and written presentation). Requisites: Chemistry 153A and 153B, or Life Sciences 3 and 4, with grades of B or better. Integration of science and business in biotechnology. Conjunction with pharmaceutical, agricultural, and other key industries, therapeutics, crop improvement, devices, and other industry sectors. Academic research leading to formation and founding of companies that turn research breakthroughs into marketable products. Stages of product discovery and development. Staged financing and growth: private offerings, public offerings, deals, collaborations, outsourcing. Intellectual property, regulation, pricing, profits, risks, public perception. Building value, exit strategies, mergers and acquisitions. Concurrently scheduled with course CM276. Letter grading.

180. Special Topics in Management. (4) (Formerly numbered 188.) Lecture, four hours. Topics of special interest to undergraduate students. Specific subjects may vary each term depending on particular interest of instructor or student. May be repeated for credit. P/NP or letter grading.

182. Leadership Principles and Practice. (4) Knowledge and skills leading to effectiveness in interpersonal relations. Understanding oneself as a leader and other as individuals or members of working groups. Understanding of group process, including group leadership. Lectures and "sensitivity training" laboratory.

190. Community or Corporate Internships in Management. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with 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 Management. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation of selected research topic under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


201A. Business Forecasting: Turning Numbers into Knowledge. (4) Discussion, three hours. Preparation: 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 (growth, inflation, unemployment, interest rates, and exchange rates), industry data, and firm data. Letter grading.

201B. Econometrics and Business Forecasting. (4) Lecture, three hours. Emphasis on standard topics in applied econometric modeling. Emphasis on assumptions underlying classical normal linear regression model, special problems in application, and interpretation of results. Practical applications extensively developed in student projects.


209. Comparative Market Structure and Compe- tition. (4) Lecture, three hours. Comparative study of public policies toward competition, market structures, and competitive practices in key industries in selected countries.


207. Resource Administration of Nonmarket Ac- tivities. (4) Seminar, four hours. Requisites: 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) Requisites: courses 405, 406. Sources and uses of federal, state, and local revenues and their impact on public and private resource allocation. Examination of proper roles of government and private sector in financing and provision of public goods and services.

M209. Elements of Economic Organization. (2 to 6) (Same as Management Studies 209.) Lecture, three hours. Preparation: 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: familiarity with basic vocabulary and concepts, including principles underlying consolidation, contracts, property rights, product marketing, and performance evaluation. S/U or letter grading.

210A. Mathematical Programming. (4) Discussion, three hours. Preparation: linear algebra. Comprehensive development of theory and computational methods of linear programming, with applications to a variety of actual problems.

210B. Applied Stochastic Processes. (4) Discussion, three hours. Preparation: probability theory at level of Electrical Engineering 131A or Mathematics 170A or 171A. Topics include Poisson processes, renewal theory, Markov chains, and Markov decision processes, with emphasis on problem formulation, decision making, and characterization of optimal policies. Applications include traditional operations research topics (inventory, queueing, maintenance, reliability), as well as several in microeconomics (search and research and development). S/U or letter grading.

210C. Network Flows and Integer Programming. (4) Discussion, three hours. Preparation: linear programming. Surveys a course to (1) foundations for more advanced study of graphs, network flow models, and integer programming models and their applications, (2) establish connections between these technical foundations and real problems drawn from many areas, and (3) provide professional skills needed to apply these tools. S/U or letter grading.

211A. Nonlinear Mathematical Programming. (4) Discussion, three hours. Requisite: course 210A. Theory, methods, and applications of optimization for situations where models must be nonlinear, with special emphasis on case of convexity. Topics include classical approaches to optimization, theory of optimality and duality, main computational approaches, and survey of currently available computer software. S/U or letter grading.

211B. Large-Scale Mathematical Programming. (4) Discussion, three hours. Requisite: course 210A. Theory, methods, and applications of optimization for situations where models are large and have special structure, as is often the case in real applications. Focus on ways of exploiting special structures with combination of methods for good performance in multidimensional problems, and for the pursuit of computational tractability. S/U or letter grading.

212A. Decision Sciences Models I. (4) Lecture, four hours. Requisites: courses 407, Mathematics 31B. Theory and structure of decision models of decision sciences, including solution methods and applications management. Solution methods include linear programming, network optimization, integer programming, nonlinear programming. Applications include corporate planning, finance, marketing, production and operations management, distribution, and project management. S/U or letter grading.

212B. Decision Sciences Models II. (4) Lecture, four hours. Requisites: courses 402, 407. Broad survey of mathematical models of decision sciences, including solution methods and applications management. Solution methods include linear programming, network optimization, integer programming, nonlinear programming. Applications include corporate planning, finance, marketing, production and operations management, distribution, and project management. S/U or letter grading.

213A. Intermediate Probability and Statistics. (4) Discussion, three hours. Preparation: working knowledge of differential and integral calculus of several variables, basic probability theory, and univariate mathematical statistics. Introduction to probability theory and hypothesis testing as applied to management. SAS programs used in this course and its sequels. S/U or letter grading.

213B. Statistical Methods in Management. (4) Discussion, three hours. Prequisite: course 202A. Introduction to parameter and interval estimation, simple and multiple linear regression and correlation, fixed, random, and mixed models effects analysis of variance models, all as they apply to management studies. S/U or letter grading.

213C. Introduction to Multivariate Analysis. (4) Discussion, three hours. Preparation: working knowledge of differential and integral calculus of several variables, basic probability theory, and univariate mathematical statistics. Introduction to use of multivariate models in management research to organize and represent 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 analysis, multivariate analysis of variance, canonical correlation, and confirmatory factor models). S/U or letter grading.


216A. Simulation of Modeling and Analysis. (4) Discussion, three hours. Preparation: probability theory, mathematical statistics, analytical modeling. Development of computer simulation models for managerial decision making under uncertainty using computer dynamic, 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.

217A. Decision Analysis. (4) Lecture, three hours. Requisite: course 402. Managerial decision making occurs in presence of uncertainty which can be about events over which no individual has any control or can be about what other individuals will do. Framework provided for structuring and analyzing such decisions, with application of framework to such scenarios as product development, litigation, business of transactions, and bidding. S/U or letter grading.

217B. Game Theory. (4) Discussion, three hours. Requisites: courses 402, 405. Theory of games plays increasingly important role as source of clear language and concepts for analysis of policy problems in every area. Game theory provides analysis of interaction and application of ideas to variety of practical issues in management and policy, and in practical questions of ethics, fairness, and bargaining. S/U or letter grading.

218A. Selected Topics in Decisions, Operations, and Technology Management. (1 to 4) Discussion, three hours. Newly developing topics of interest to Ph.D. students. Topics include reliability and maintainability, optimal maintenance theory, large-scale distribution/inventory systems, and Markovian decision processes under uncertainty. May be repeated for credit. S/U or letter grading.


224. Topics in Business Law. (4) Lecture, three hours. Requisite: course 403. Topics-oriented course covering wide range of current legal issues that confront entrepreneurs and corporate managers. Topics include venture capital, business formation and integration, contracts, property rights, product marketing, employment, creditor claims, and bankruptcy. S/U or letter grading.


229A. Special Topics in Accounting. (4) Lecture, three hours. Designed for Ph.D. students. Examination in depth of problems or issues of current concern in accounting, such as application of information economics and principal-agent model to accounting. Designed for Ph.D. students. Introduction to empirical accounting literature, focusing on role that accounting information plays in formation of capital market prices.

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. Requisite: course 408. Primary focus on valuation of corporate 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. 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 when market valuation cannot be used as criterion, and sources of funds for nonprofit organizations. Use of computer grading.

231C. Corporate Valuation. (4) Lecture, three hours. Requisites: courses 408, 430. Lectures, discussions, and student presentations. Issues and analytical tools relevant for valuing projects, divisions, and corporations. Theories of cash flow valuation (DCF) and relative valuation using market multiples. Theories of practice to value different projects, including IPOs, mergers and acquisitions, divestitures, and private firms. Exploration of how real options affect investment decisions and how they can be identified and valued. Letter grading.

231D. Takeovers, Restructuring, and Corporate Governance. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Addresses the impact of corporate control transactions on variety of outcomes for controlling and controlled shareholders and the role of managerial, institutional, and regulatory responses to control transactions and to defensive measures by management. Focus on interaction of strategic planning, firm value maximization, and investment decisions in the 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), 408. Designed for second-year graduate students. Emphasis on financial control, investment issues, and investment environment of rapidly growing companies in entrepreneurial settings. Consideration and selection of financing vehicles that may be appropriate to securing organizations' money requirements. S/U or letter grading.


232B. Fixed-Income Markets. (4) Lecture, three hours. Requisite: course 230 (or 430), 408. Introduction to fixed-income markets: institutional arrangements in primary and secondary markets; description and analysis of various types of fixed-income instruments; valuation; fixed-income portfolio management; use of derivative instruments and dynamic investment strategies; asset securitization. S/U or letter grading.

232D. Market and Credit Risk Management. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Regulation of 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 fundamentals of hedging and spreading 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. Requisite: courses 408, 430, 230. Discussion of regulatory environment for both market and credit risk management, data necessary to manage those risks, tools used for risk management, types of securities and techniques for hedging market and credit risks, 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 of stock price movements that are rooted in studies from psychology and explanation of trading activities in equity markets. Introduction to some psychological biases that researchers suspect are inherent to investors. Employment of some results from psychology literature to explain irrationalities encountered in finance literature. Presentation of latest evidence on why individual investors trade and how institutional and investor firms form their portfolios. Letter grading.


234A. International Financial Markets. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Conceptual understanding of foreign exchange market, Eurocurrency market, international bond market, and equity markets in various countries. Emphasis on underlying economic principles, although where relevant, institutional features helpful in understanding structure and operations of markets to be dealt with in detail. S/U or 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; international perspective, political risk, working capital management, 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 entrepreneurial finance 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 and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to new partnerships, S/U or letter grading.

237A. Fundamentals of Corporate Finance and Accounting. (4) Lecture, three hours. Limited to Master of Financial Engineering Program students. Examination of financial statements and tax liabilities of firms. Introduction to key issues facing corporate financial decision makers, including capital budgeting and investment decisions, designing capital structure of firms, minimizing agency costs and costs of financial distress, role of financial innovation, capital markets, and valuation of real options embedded in investment projects such as option to expand, contract, and shut down operations temporarily. S/U or letter grading.

238. Special Topics in Finance. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Select topics in finance theory, empirical studies, and financial policy. May be repeated for credit with instructor change. S/U or letter grading.

239A. Theory of Exchanges under Uncertainty. (4) Lecture, three hours. Primarily designed for Ph.D. students, but well-prepared master's students may find course useful in their 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 theories. 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-239Z. Finance Workshops. (1-1-2) Discussion, 90 minutes. Designed for Ph.D. students. Intended to develop ability to critically evaluate finance research. Papers presented in colorum format by leading scholars in finance. Active participation and intellectual interchange encouraged through discussion of papers in sessions prior to workshop, as well as during colloquium. May be repeated for credit. S/U grading.

240D. Operations Strategy: Theory and Practice. (4) Discussion, three hours. Requisite: course 410. Definition and scope of operations strategy. Integrated frameworks for assessing the role of operations management in between operational strategies and corporation's strategic positioning. Cases used to illustrate strategic issues in both manufacturing and nonmanufacturing situations. Objectives of applied-strategy aspect of course, to provide students with skill in identifying operationally appropriate business processes and metrics required to implement enterprise's strategic position. S/U or letter grading.

240E. Managing Entrepreneurial Operations. (4) Lecture, three hours. Requisite: course 410. Designed for second-year graduate students. Exploration of operating issues involved in managing entrepreneurial enterprises. Integrative course, building on methodologies, principles, and concepts provided in requisite and functional and strategic core courses. Use of extensive readings and case studies to develop skills in philosophical basis for applying managerial concepts to entrepreneurial operations. S/U or letter grading.

240F. Supply Chain Management. (4) Lecture. Three hours. Requisite: course 410. Business environment today is characterized by globalization, operational intensity, rapid technological change, and short product life cycles. Consequently, firms can no longer afford to operate in isolation. In many industries competition comes from firm level 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. Requisites: courses 410, 411A, 411B. Management of high-technology firm, including acquisition, creation, and utilization of technology and knowledge assets. Research and product development, product and process technologies, technology regimes, high-technology markets, competition, and technology strategies. Case examples from sectors such as computing, telecommunications, e-business, medical devices, nanotechnology, advanced transportation systems, and telecommunications. S/U or letter grading.


242A. Models for Operations Planning, Scheduling, and Control. (4) Discussion, three hours. Designed for Ph.D. students with some knowledge of mathematical programming and stochastic processes. Foundations of operations planning, scheduling, and control, with emphasis on formal models and their applications. Aggregate planning, work force scheduling, inventory management, and detailed operations scheduling and control. S/U or letter grading.

242B. Models for Operations Systems Design. (4) Discussion, three hours. Requisite: course 210C. Design for Ph.D. students. Survey of research literature on models for design of manufacturing and service systems, including long-range forecasting, operational economies, capacity, location, facilities, processes/technology, work, and work structures. S/U or letter grading.


244X-244Y-244Z. Research in Decisions, Operations, and Technology Management. (1-1-2) Lecture, three hours. Designed for first- and second-year Ph.D. students in decisions, operations, and technology management. Survey of research literature in operations and technology management. Seminar reports dealing with special topics. May be repeated for credit with topic change. S/U or letter grading.

245. Special Topics in Decisions, Operations, and Technology Management. (4) Lecture, three hours. Discussion of latest research on major issues in decisions, operations, and technology management. Emphasis on recent developments and application of specialized knowledge. Topics vary each term and have included strategy for information intensive industries, empirical research in operations management, analytical methods of evaluation of organizational change, and signalization 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, relevant on business aspects. Specific topics vary from year to year, but course details what every manager should know about environmental issues in business. S/U or letter grading.

246C. Management in Public and Private Nonprofit Sectors. (4) Designed for graduate students. Examination of roles and management systems of the three sectors of U.S. society: unique aspects and managerial issues of public and private nonprofit organizations and public and technical environments. Financial, marketing, and operational considerations and evaluation, control, and ethical issues of service delivery systems.

247A. Environment and the 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 value systems of arts organizations.

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 company management in the entertainment industry. Cases and topics include organizational behavior and decision making in creative companies; trends in industry structure, marketing, accounting issues; institutional and private motion in pictures; theatrical distribution, international and ancillary markets (pay TV, video cassettes, syndication).

249A. 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.

250A. 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 market on labor relations. S/U or letter grading.

250B. Human Resource Management: Process and Law. (4) Requisite: course M250A. Systematic exposure to theoretical and empirical literature 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, designed for managers as well as personnel specialists. Organized at three related but distinct levels of analysis: (1) day-to-day utilization of people as organizational resources to achieve optimal productivity; satisfaction, retention, 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 for human resources, 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, worker ownership, profit sharing.

253. International Political Economy. (4) Lecture, three hours. Examination of political, legal, and social institutions to demonstrate varieties of modern capitalist and noncapitalist systems of state and society, economic environment of the arts, and national economic and social environments. Financial analysis of international and transnational corporations, nation states, and non-governmental organizations. Analysis of major domestic policy options that nations are pursuing in response to economic globalization and introduction to international coalitions being formed as result of globalization, including 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 in performance management and in entrepreneurial and public organizations; fringe benefits; executive compensation; and international and comparative compensation/reward practices. S/U or 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 influence, systems, and business strategies in human resource management. S/U or letter grading.

258. Selected Topics in Industrial Relations. (1 to 4) Designed for Ph.D. students. Examination in depth of problems or issues of current concern in industrial relations. Examinations of 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.

259A. Individuals and Groups in Human Systems. (4) Lecture, three hours. Designed for graduate students. Doctoral-level survey of research literature dealing with interpersonal dynamics, groups, and aspects of culture in work organizations, with emphasis on theory and research. Current research in psychology, anthropology, and small group studies. Variety of methods represented, including clinical and cross-cultural approaches. S/U or letter grading.

259B. Advanced Studies in Human Resource Management. (4) Lecture, three hours. Designed for graduate students. Doctoral-level survey of research literature assessing how organizations utilize human resources to enhance individual, group, and organizational effectiveness. Current theory and research in psychology, anthropology, organization behavior, and economics, including topics such as careers, participation, negotiations, and technology/work systems. S/U or letter grading.

259C. Labor Markets and Public Policy. (4) (Same as Public Policy CM230.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Survey of major topics in economic analysis of labor markets and public policies toward labor market. Topics include labor force trends and measurement, compensation determination, productivity, internal labor markets, human capital, union wage effects, unemployment, and minority and female labor-market experience. S/U or letter grading.


261B. Global Marketing Management. (4) Lecture, three hours. Requisites: courses 411A, 411B. Analysis of opportunities in global markets, 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 methods. Letter grading.


263A. Consumer Behavior. (4) Lecture, three hours. Requisites: courses 411A, 411B. Study of nature and determinants of consumer behavior. Emphasis on influence of sociopsychological factors such as personality, social groups, demographic variables, social class, and culture on formation of consumers' attitudes, consumption, and purchasing behavior. S/U or letter grading.

264A. Market Research. (4) Lecture, three hours. Requisites: courses 411A, 411B. Designed for prospective users of research results rather than for specialists in research. Marketing research is aid to management decision making. Development of problem analysis skills, providing knowledge of concepts and methods of marketing research, with increased sensitivity to limitations of marketing data. Letter grading.

264B. Marketing Models and Market Response Analysis. (4) Lecture, three hours. Requisites: courses 411A, 411B. Advanced topics in marketing research, with emphasis on quantitative tools to aid marketing decision making. Topics include demand and market share forecasting, conjoint analysis, market segmentation and cluster analysis, brand positioning and competitive market structures, and assessing market response to price, advertising, promotion, distribution, and sales force. Letter grading.

265. Brand Management. (4) (Formerly numbered 265A.) Lecture, three hours. Requisites: courses 411A, 411B. Introduction to considerations in development, implementation, and management of brands. Discussion of challenges to creating and maintaining strong brands. Topics include building brand knowledge and identity, marketing mix and brands, brand architectures, and brand equity. Letter grading.

266A. New Product Development. (4) Lecture, three hours. Requisites: courses 411A, 411B. Examination of new product development (NPD) process with objective of learning key tools and methods and applying them to case studies, exercises, and course project. Product development involves three primary lenses: quantifiable rational attributes, appeal due to emotional characteristics, and cost/technology/competitive tradeoffs. NPD process also investigated through five key phases: ideation, concept generation and selection, detailed design, prototyping and testing, and ramp-up and product launch. Coverage of mass customization, parallel prototyping, cost reduction, and creativity. Letter grading.


267. One-to-One Marketing. (4) Lecture, three hours. Requisites: courses 402, 411A, 411B. Use of new techniques for one-to-one marketing in 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 customer life cycle: (1) customer acquisition, (2) customer retention and promotion 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. Requisites: courses 411A, 411B. Study of selected areas of marketing knowledge and thought. Specific subjects vary each term depending on particular interests of instructor and students. Individual projects and reports. May be repeated for credit. S/U or letter grading.

269A. Theory in Marketing. (4) Serves as mechanism to introduce students to development of marketing thought. Issues pertaining to general topic of theory development and testing. Prepares students for conducting theoretically grounded research in marketing.

269B. Research in Marketing Management. (4) Discussion, three hours. Designed for Ph.D. students. Study of research issues in contemporary marketing management decisions. Recent research in areas of strategic marketing, marketing segmentation, new product development and introduction, pricing strategies, channel policy, promotion, and sales force management examined critically. Review of both quantitative and behavioral approaches to studying these issues.

269C. Quantitative Research in Marketing. (4) Discussion, three hours. Designed for Ph.D. students in management and related fields. Students are assumed to have good background in marketing principles and to be familiar with probability, statistics, mathematical programming, and econometrics. Review of a range of quantitative models as applied in marketing research. S/U or letter grading.

269D. Behavioral Research in Marketing. (4) Designed for Ph.D. students who are conducting research in consumer behavior or related areas. Empirical research in consumer behavior surveyed and critically evaluated from theoretical as well as practical perspectives.

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.


270C. Application Frontiers in Information Systems. (4) Lecture, three hours. Requisite: course 404. Exploration of new state-of-the-art applications in information systems, such as in electronic commerce. Assessment of industrial opportunities and impacts. Topics vary from term to term. May be repeated for credit. S/U or letter grading.


271C. Emergent Technologies in Information Systems. (4) Discussion, three hours. Requisite: course 404. Special topics in new and emergent technologies such as multimedia, digital imaging, object-oriented software, heterogeneous databases, and parallel processing. Assessment of industrial opportunities and impacts. Topics vary from term to term. May be repeated for credit. S/U or letter grading.


272B. Enterprise Real Estate Development. (4) Lecture, three hours. Requisites: courses 408, 430. Development of understanding of principal issues involved with real estate investment and finance. Topics include real estate financial analysis and valuation in variety of contexts (single-family residential, commercial, industrial, shopping centers, and hotel properties), real estate taxation, real estate law, development process, securitization, REITs, and leasing and workout of troubled properties. S/U or letter grading.

273A. Information Systems Management. (4) Discussion, three hours. Designed primarily for Ph.D. students. Examination in depth of problems or issues of current concern in information systems theory and practice. Topics vary from term to term. May be repeated for credit. S/U or letter grading.

273B. Urban Real Estate Financing and Investing. (4) Lecture, three hours. Requisites: courses 408, 430. Investor-oriented course in which real estate and business trends are evaluated to determine alternative real estate investment opportunities. Use of current financial, economic, and investment theories and techniques to real estate investment opportunities in case studies and short case problems to illustrate development of investment strategies. S/U or letter grading.

277A. Urban Real Estate Financing and Investing. (4) Lecture, three hours. Requisites: courses 408, 430. Investigator-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 techniques to real estate investment opportunities in case studies and short case problems to illustrate development of investment strategies. S/U or letter grading.

278A. Digital Imaging. (4) Lecture, three hours. Designed for Ph.D. students. Introduction to various aspects of digital image acquisition, processing, and display. Applications include medical, scientific, and industrial imaging. S/U or letter grading.

278B. Digital Imaging. (4) Lecture, three hours. Designed for Ph.D. students. Introduction to various aspects of digital image acquisition, processing, and display. Applications include medical, scientific, and industrial imaging. S/U or letter grading.

279A. Cases in Real Estate Investments. (4) Lecture, three hours. Requisites: courses 408, 430. Development of understanding of principal issues involved with real estate investment and finance. Topics include real estate financial analysis and valuation in variety of contexts (single-family residential, commercial, industrial, shopping centers, and hotel properties), real estate taxation, real estate law, development process, securitization, REITs, and leasing and workout of troubled properties. S/U or letter grading.

280A. Studies, Research Philosophies, and Methodology in Human Systems. (4) Discussion, three hours. Designed for Ph.D. students. Survey of seminal studies of human systems, including individual, group, and intergroup behavior, and organization behavior. Consideration of objective and subjectivist philosophies of science and their implications for related methodologies, including experimentation, field studies, case approaches, and a range of analytic and descriptive procedures in data collection. Emphasis on existing literature, philosophy of science, and concepts. May be repeated for credit. S/U or letter grading.

280B. Personal and Professional Development. (4) Discussion, three hours. Designed for Ph.D. students. Provides setting where students may explore their own professional values and approaches in process of testing and learning values and standards in applied behavioral sciences and human systems development. S/U or letter grading.

280C. Research Design in Human Systems Studies. (4) Discussion, three hours. Process of designing studies of human systems, including choice of research topics. Actively involves students in preparation of research proposals for research participation. May be repeated for credit. S/U or letter grading.

281A. Sociotechnical Systems. (4) Designed for graduate students. Introduction to systems concepts and theories of working organizations. Sociotechnical systems open to forces from the surrounding environment. Focus on developing sociotechnical systems analytic approach and understanding advantages of this approach for designing and managing organizations.

281B. People in Organizations. (4) Designed for graduate students. Introduction to different philosophical perspectives for understanding human behavior. Theories and concepts important for understanding human behavior in organizations, as well as management implications of individual, group, and social behavior. Special attention to knowledge about satisfaction, motivation, and productivity in organizations.

282A. Task Groups Process. (4) Lecture, three hours. Requisite: course 281A or 281B. Structures, processes, and interrelationships of work groups in sociotechnical systems. Emphasis on understanding how group activities interrelate with physical/technical environment. Imparts practical knowledge of task group functioning through class exercises and field observations. Consideration of team concepts and project group design. S/U or letter grading.

284A. Organization Design. (4) Lecture, three hours. Requisite: course 281A or 281B. Survey of organizational design theories and methods, including bureaucratic, participative, and cognitive models. Development of specific microdesign of jobs to macrodesign of total organizational systems. Special emphasis on sociotechnical and differentiation/integration models. S/U or letter grading.

284B. Organization Development. (4) Lecture, three hours. Designed for graduate students. Analysis of effects of organizational and managerial practices on individual self-fulfillment and systems effectiveness. Theories of organization change and action/research methods in organization development. Theory merged with practice through seminar discussions of field observations. S/U or letter grading.

284C. Managing Entrepreneurial Organizations. (4) Lecture, three hours. Issues involved in developing and managing entrepreneurial organizations. Topics include organizational growth, managerial tools, strategic planning, organizational design, management development, control systems, leadership, and cultural management. Examination of transitions that individuals must make as organizations grow. S/U or letter grading.

285A. Leadership, Motivation, and Power. (4) Discussion, three hours. Designed for graduate students. Theoretical and practical approaches to influencing and motivating people. Relative effectiveness of various leadership styles, different motivation theories, and leader behavior from organizational, social, and personal point of view. Use of experience-based learning methods to aid diagnostic and understanding of one’s own influence styles. S/U or letter grading.

285B. Managerial Interpersonal Communication. (4) Discussion, three hours. Designed for graduate students. Interpersonal and personality factors affecting managerial communications. Styles and modes of communication in one-to-one, group, and large-systems settings. Opportunities offered to deepen understanding of one’s own communication styles and skills, considering verbal, nonverbal perception, and cross-cultural aspects. S/U or letter grading.

286. Negotiations Behavior. (4) Discussion, three hours. Presentation of theoretical principles and concepts from psychology, sociology, and economics through lectures and readings, with focus primarily on integrative, distributive, and other negotiator roles; role of power and powerlessness; role of emotion; role of expertise; role of identity and image; role of commitment; role of negotiators; role of negotiators in relation to each other; role of negotiators in relation to the world; role of negotiators in relation to the self. S/U or letter grading.
287. Groups and Their Facilitation. (4) Discussion, three hours. Development of cognitive and experiential understanding of dynamics of small group training and its facilitation. Includes "sensitivity"/basic group counseling, self-help groups, small groups, and committees in managerial decision making. Analysis of relevant theory, research findings, and case studies. S/U or letter grading.

288A. Selected Topics in Behavioral Science. (4) Discussion, three hours. Designed for graduate students. Theories of human behavior fundamental to study of individual, group, organizational, and cultural behavior. Exploration in depth of selected theoretical positions, extending and consolidating behavioral science knowledge and application. May be repeated for credit. S/U or letter grading.

288B. Current Issues in Sociotechnical Systems and Organization Design. (4) Discussion, three hours. Designed for graduate students. Current topics in analysis and design of organizations as sociotechnical systems engaged with various technologies and environments, emphasizing design approaches emulating primarily from Europe, the Orient, and the U.S. In-depth comparisons of selected job and organizational designs. May be repeated for credit. S/U or letter grading.

288C. Selected Topics in Human Systems Studies and Organizational Behavior. (4) Discussion, three hours. Designed for graduate students. Psychological and sociotechnical aspects of human behavior and performance in organizations. Theoretical models, empirical findings, and applications of such topics as attitudes and values, cognitive and perceptual processes, behavioral conflict, and individual change processes. May be repeated for credit. S/U or letter grading.

288D. Current Issues in Human Systems Change and Development through Consulting. (4) Discussion, three hours. Current topics in philosophy, art, and technology of improving organizations and increasing managerial effectiveness through consulting interventions. In-depth treatment of consultant entry and exit, diagnosing, process consultation, consciousness raising, team building, and values. Relevant to development of effective M.B.A. field-study teams. S/U or letter grading.

288E. Proseminar: Behavioral and Organizational Sciences Colloquium. (4) Discussion, three hours. Designed for graduate students. Series of presentations by scholars and practitioners in behavioral and organizational sciences, with focus on integrative themes or specific field, designed to provide dialogue among students and faculty on significant topics, controversies, and leading-edge ideas. May be offered in one or successive terms and may be repeated for credit. S/U or letter grading.


M292A. Research and Development Policy. (4) [Same as Public Policy M280A] Lecture, three hours. Examination of research and development as process and as element of goal-oriented organization. Factors affecting invention and innovation; transfer of technology; organizational and behavioral considerations; coupling of science, technology, and organizational goals; assessing of and forecasting technological future. S/U or letter grading.

M292B. Growth, Science, and Technology. (4) [Same as Public Policy M280B] Lecture, three hours. Economic growth and innovation. 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 to transform nature of and population of firms in existing industries. S/U or letter grading.

292C. Comprehensive Planning in Public Sector. (4) Evolving modes of planning under complexity, with particular emphasis on public sector. Development of policy through standard setting, bargaining, and regulating governing relationships; reality and value judgments; social and technical dimensions of alternatives; and social and technological forecasting.

293A. Political Environment of American Business. (4) Lecture, three hours. Evaluation of certain criticisms made by business of the American political system. Designed to provide clearer understanding of principles and practices, especially as they influence business enterprise.

293C. Ethical Considerations in Business. (4) Lecture, three hours. Examination of a range of ethical considerations in business decisions involving the individual, corporation, society, and international business. Analysis of cases for classroom presentation and discussion.


295B. Small Business Management. (4) Exploration of special small business enterprises. Emphasis on identification and analysis of characteristic operating problems of small firms and application of appropriate methods or techniques for their analysis.

295C. Corporate Entrepreneurship. (4) Inquiry into nature of entrepreneurial and effective implementation of entrepreneurial strategies in large industrial enterprises. Emphasis primarily on managerial effects aimed at identification, development, and exploitation of technical and organizational innovations, management of new product or process developments, and effective new venture management in a corporate context.


296A. International Business Management. (4) Discussion, three hours. Identification, analysis, and resolution of managerial issues of policy and action within context of a multinational corporation, with emphasis on problems of adaptation to different sociocultural, legal, political, and economic environmental characteristics of organizational relationships, 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 comparative 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 295A, 295B, Legal environments in which international business operates; overseas business relationships and organizations; antitrust, taxation, transfer of capital, and technology regulations; patents, trademarks, and copyright safeguards; arbitration of international business disputes; expropriation of foreign investments; international business and government relations.

297D. International Business Negotiations. (4) Requisites: course 295A. Exploration of international business negotiations of new international enterprises with government agencies and foreign-based firms on a wide range of issues, such as establishment/disolution of joint ventures, extent of foreign ownership/management control, terms/conditions for technology transfer, investment incentives.

297E. Business and Economics in Emerging Markets. (4) Lecture, three hours. Requisite: course 205A or 405. Analysis of changing economic, political, demographic, and sociocultural conditions in developing countries as they affect the business environment. Process of economic growth, market-oriented reforms, and creation of domestic capital markets. Inflation and stabilization programs, identification of business risks and opportunities, as well as tools needed to manage firms under these conditions. S/U or letter grading.

298A. Special Topics in Management Theory. (4) Designed for Ph.D. students. Examination in depth of problems or issues of current 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 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.

M298E. Seminar: Neuroeconomics. (4) [Same as Psychology M267.] Seminar, three hours. Limited to graduate students. Analysis and discussion of research on cognitive and neural bases of decision making. S/U or letter grading.

298X-298Y/298Z. Management Strategy and Policy Workshops. (1-2) Discussion, three hours. Designed for Ph.D. students. Emphasis on developing ability to critically evaluate research in fields relevant to study of management strategy and policy. Papers presented in colloquium format by leading scholars in management strategy and policy. 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 or letter grading.


299R. Research Methods in Management. (4) Discussion, three hours. Designed for Ph.D. students. Provides feedback and evaluation of papers prepared for research requirement. Quarterly meetings to discuss expectations of research committee and Doctoral Office. Students must enroll the term in which they are submitting their research paper. May be repeated for credit. S/U grading.

422 / Management
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. Mathematics for Management. (4)
Lecture, three hours. Limited to graduate students. General mathematics review for M.B.A. students. Fundamental mathematics, including topics from algebra, differential calculus, logarithmic and exponential functions, probability, and statistics; applications, including economic theory, finance, time value of money, inventory management, linear programming, and mathematical models. S/U grading.

401A-401B. Managerial Problem Solving. (3-3)
Discussion, three hours. Use of international business simulation and series of complex multifaceted cases to learn to apply M.B.A. core disciplines in real-world globally focused business problems. In Progress (401A) and letter (401B) grading.

402. Data and Decisions. (4)
Lecture, three hours. Topics include probabilities, random variables (expectation, variance, covariance, normal random variables), decision analysis, hypothesis testing, and multiple regression models. Emphasis on actual business problems and data. Letter grading.

403. Financial Accounting. (4)
Lecture, three hours. Designed for graduate students. Introduction to fundamental financial accounting methods and procedures, with emphasis on financial statements. Provides basis for firm understanding of "language of business"—accounting. Letter grading.

404. Information Systems. (4)
Lecture, three hours. Designed for graduate students. Introduction to information systems in organizations from perspective of general manager. Managerial and strategic uses of information systems, information technology that underlies these systems, and ways such systems are developed and managed. S/U or letter grading.

405. Managerial Economics. (4)
Lecture, three hours. Designed for graduate students. Analysis of consumer, producer, and market behavior. Market structure, pricing, and resource allocation. Applications to managerial strategy and public policy, with emphasis on competition, market power, and externalities. Letter grading.

406. Global Economy. (4)
Requisites: courses 402, 403, 405. Provides analytical framework required for understanding the way changing macroeconomic conditions affect economic growth, inflation, interest rates, exchange rate determination, global competitiveness, unemployment, and the trade account. Provides skills to enable students to assess impacts of globalization policies on worldwide economy and their potential effects on industrial countries.

407. Managerial Model Building. (4)
Lecture, three hours. Requisite: course 402. Instruction to uses of analytical methods for making strategic, tactical, and operational decisions arising from accounting, finance, marketing, and production, with focus on three key areas in problem solving: formal problem definition, computer model formulation, and alternatives evaluation. Letter grading.

408. Financial Markets. (4)
Lecture, three hours. Provides foundation for all fundamental concepts in investments. Topics include discounting and present value, required returns, risk, normal distributions, constructing optimal portfolios, asset pricing models, and introduction to options and futures markets. Letter grading.

409. Managing and Leading Organizations. (4)
Lecture, three hours. Introduction to human resource management function and management of human behavior in organizations. Emphasis on relationships among individuals, groups, and organizational units as they influence the development and implementation of prospective general managers. Letter grading.

410. Operations Technology Management. (4)
Lecture, three hours. Requisites: courses 402, 403. Principles and decision analysis related to effective utilization of factors of production in manufacturing and nonmanufacturing activities for both intermittent and continuous systems. Production organizations, analytical models and methods, facilities design, and design of control systems for production operations. Letter grading.

411A. Marketing Management I. (4)
Lecture, three hours. Principles of market-driven managerial decision making: competition, market analysis, market segmentation, definition of target markets, and product positioning. Management of marketing function; product and pricing decisions, channels of distribution, marketing communications. Letter grading.

411B. Marketing Management II. (4)
Lecture, three hours. Requisite: course 411A. Examination of analytical tools to gauge market attractiveness and to allocate resources to elements of marketing mix. Topics include market sizing based on diffusion of innovation and trial-and-repeat processes, customer preference measurement and market segmentation techniques, and optimal market design in the context of competition across products and customers. Letter grading.

412. Management of Organizations. (4)
Lecture, three hours. Preparation: completion of first-year core program. Integrative approach to theory and practice of management in complex organizations, emphasizing managerial roles in designing organizational structures, creating/maintaining planning, controlling, information, incentive systems, different patterns of human interaction such structures and systems tend to produce. Letter grading.

413A. Personal Computing for Managers. (4)
Lecture, three hours. Designed for graduate students. Personal computing in support of strategic analysis, decision making, and management communication. Use of personal productivity tools and network resources. Accessing publicly available information. Emphasis on hands-on exercises. S/U or letter grading.

413B. Advanced Topics in Managerial Computing. (4)
Lecture, three hours. Designed for graduate students. Advanced information technology for personal computing by managers. In-depth study of a specific new technology. Extensive hands-on assignments. S/U or letter grading.

420. Business Strategy. (4)

421A. Management Communications I. (1)
Lecture, 30 minutes; laboratory, one hour. Strategies and techniques for more effective individually written managerial communications such as memos, reports, decision recommendations, etc. Emphasis on analytical-based persuasive writing. S/U grading.

421B. Management Communications II. (1)
Lecture, 30 minutes; laboratory, one hour. Strategies and techniques for more effective preparation of group writing assignments in managerial contexts where multiple audiences are important. Issues include achieving a single voice, establishing appropriate tone, incorporation of multiple points of view, etc. S/U grading.

422. Analysis and Communications. (4)
Discussion, three hours. Designed for graduate students. Study and practice of oral and written management communications, including audience analysis, persuasion, representation of technical information, and uses of computer technology. Organized around writing and speaking exercises. Personal attention to students' written communications and oral presentations.

430. Corporate Finance. (4)

444A-444B. Applied Management Research: Two-Quarter Plan. (4-4)
Fieldwork, four hours. Must be taken in second year (or its equivalent for part-time 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. In Progress (444A) and S/U or letter (444B) 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 team or a consulting group, in intergroup, total organization, and interorganizational settings. S/U or letter grading.

452. Fieldwork in Technical Assistance for Minority Business Enterprise. (1 to 4)
Preparation: completion 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 transmitting 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 two terms of M.B.A. program. Supervised, nonpaid practical experience or fieldwork in an organization as an intern or fellow. Execution of assignment(s) pursuant to a defined program of study which may include formal coursework. May not be repeated for credit. S/U grading.

455E. International Exchange Program. (2 to 16)
Lecture, three hours; discussion, 10 hours. Students attend up to four M.B.A.-level courses at institutions with exchange agreements with Anderson School. Some courses may be taught in local language. In addition to learning subject matter of courses, intent is to provide opportunity for students to enhance their knowledge of region while exchanging ideas and views with their peers at that institution. S/U or letter grading.

457. Fieldwork in Investment Management. (4)
Discussion, three hours. Use of academic theories learned in a practical experience by managing a portfolio started with donated funds. Mirrors situations experienced by typical money management firms and includes investment strategy, asset allocation, security analysis, and organizational issues. S/U or letter grading.

461A. Leadership Foundations I. (2)
Formerly numbered 461L) Lecture, two hours. Limited to Executive M.B.A. Program students. Focus on individual problem-solving and decision-making skills. Alternative conceptual frameworks presented for augmenting diagnostic and decision-making skills of individuals. Use of readings, cases, decision simulations, and discussions to explore areas of charting job and career progress, working with others, and shaping work culture. S/U or letter grading.
460A. Financial Policy for Managers. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Examination of role of corporate management in making under uncertainty for corporate financial management, investment decisions, financial institutions, and international financial management. Focus on learning sound theoretical tools and applying them in casework. S/U or letter grading.


461. Leadership Foundations II. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 461D. Further exploration of leadership strengths and weaknesses, with emphasis on individual leadership and organizational change. Readings, case studies, decision simulations, peer coaching, and discussions. S/U grading.


465. Management of Human Resources. (4) Limited to Executive M.B.A. Program students. Instruction to major areas of human resource management — personnel management, labor economics, labor law, and labor relations — accomplished by examining major concepts, theories, and research related to each of these topics, as well as some practical problems for managers posed by each.

470A. Introduction to Field Study. (2) Lecture, two hours. Limited to Executive M.B.A. Program students. Methods of organizational and strategic analysis to determine relationship of organization with its environment. In Progress grading (credit to be given only on completion of course 470C).

470B. Field Study. (2) Fieldwork, two hours. Limited to Executive M.B.A. Program students. Preparation of strategic overview of selected company entailing collection and analysis of primary and secondary data, including but not limited to: corporate executive, corporate financial and marketing data, industrial reports, and customer and competitor interviews and/or surveys. In Progress grading (credit to be given only on completion of course 470C).

470C. Field Study. (2) Lecture, two hours. Limited to Executive M.B.A. Program students. Further research and analysis of one strategic issue facing selected company and identified in course 470B. Presentation of final reports and evaluation of student efforts by corporate personnel. S/U or letter grading.

470D. Seminar: Policy Analysis. (2) Seminar, two hours. Limited to Executive M.B.A. Program students. Site visits to selected company, presentation of final reports, and evaluation of student efforts by corporate personnel. S/U or letter grading.

471A-471B. Management Practicum. (2-2) Lecture, three hours. 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) Formerly numbered 472. Lecture, four hours. Limited to Executive M.B.A. Program students. Strategic marketing decisions, including development of marketing objectives and strategies and implementation of these strategies through pricing, channel, promotion, and new product decisions. S/U or letter grading.

472B. Product Innovation and Marketing. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Exploration of new product development 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 mergers, acquisitions, deregulation, and functioning of organizations, and relationships of organizations to their environment. S/U or letter grading.

473B. Customer Information Strategy. (2) Lecture, four hours every other week for 13 weeks. Limited to Executive M.B.A. Program students. Development of a customer orientation as a necessity for success in the highly competitive global marketplace, including principles of customer orientation, information as a strategic asset, customer equity, market forecasting, measuring effects of marketing investments, and customer response-based strategy. S/U or letter grading.

474. Operations and Technology Management: Systems and Strategies. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Analysis of strategic and operating policies and decisions that control process of innovation and goods distribution. Examination of role of comprehensive planning, inventories, scheduling of resources, distribution systems, and system location. Comprehensive operating problems.


477. The Manager and Business/Society Relationships. (4) Limited to Executive M.B.A. Program students. Manager to an organization. To what extent do managers choose their immediate environments, there are broad environmental factors and trends that affect most, if not all, organizations. Examination of emerging trends in key areas of government regulation, labor relations, international trade, basic economic structure, and social responsibility.

478. Selected Topics in Management. (2 to 4) Seminar, 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.

480. Corporate Governance. (4) Lecture, three hours. Foundations for members of corporate boards of directors to understand their responsibilities, hone their skills, and learn to improve their practices. Topics include legal and moral duties as directors, risk management, managing top management team of corporation, letter grading.

482. Negotiations Behavior. (4) Lecture, three hours. Presentation of theoretical principles and concepts from psychology, sociology, and economics through lectures and readings, with focus primarily on improving practical negotiating skills through experiential learning (i.e., negotiations simulations). Participants learn not only to enhance their individual abilities in dyadic and group situations but also to analyze contexts for most effective application of these skills. Letter grading.

483. Management of Technology and Innovation. (4) Lecture, three hours. Problems of managing technological innovation in Asia. Topics include incorporation of technological consideration into strategy, adoption of technological innovation, promoting innovation through organizational design and leadership, e-business, and m-business. Letter grading.

484. Asian Business Environment. (4) Lecture, three hours. Theoretical issues related to analysis of countries' economic, political, and social conditions. Topics include political risk analysis, demographics, urbanization. Application to scenario planning in Asia-Pacific region/countries. Letter grading.

485. Corporate Entrepreneurship. (4) Lecture, three hours. Managerial efforts aimed at identification, development, and exploitation of technical and organizational innovations, management of new 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 organizational environment that is supportive of entrepreneurial endeavors, and insight concerning effective implementation of technological and organizational innovations in corporate setting. Letter grading.

486. Strategic Leadership and Strategic Implementation. (4) Lecture, three hours. Designed to address several fundamental aspects of leading complex organizations, with emphasis on important tasks of developing well-aligned, high-performance organizations and on challenges of leading change in organizations. Enables students to develop organized point of view on strategic leadership and to increase their awareness of themselves as leaders. 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.


Mark S. Goorsky, Ph.D., Chair
Vidvuds Ozolins, Ph.D., Vice Chair
Jenn-Ming Yang, Ph.D., Vice Chair

Professors
Russell E. Callis, Ph.D.
Bruce S. Dunn, Ph.D. (Nippon Sheet Glass Company Professor of Materials Science)
Nasr M. Ghorbani, Ph.D.
Mark S. Goorsky, Ph.D.
Vijay Gupta, Ph.D.
H. Thomas Hahn, Ph.D. (Raytheon Company Professor of Manufacturing Engineering)
Richard B. Kaner, Ph.D.
Qibing Pei, Ph.D.
King-Ning Tu, Ph.D.
Ya-Hong Xie, Ph.D.
Jenn-Ming Yang, Ph.D.
Yang Yang, Ph.D.

Professors Emeriti
Alan J. Ardell, Ph.D.
David L. Douglass, Ph.D.
William Klement, Jr., Ph.D.
John D. Mackenzie, Ph.D. (Nippon Sheet Glass Company Professor Emeritus of Materials Science)
Kanjir Cho, Ph.D.
Aly H. Shabaik, Ph.D.
George H. Sines, Ph.D.
Christian N.J. Wagner, Dr.rer.nat.
Alfred S. Yue, Ph.D.

Associate Professors
Vidvuds Ozolins, Ph.D.
Benjamin M. Wu, D.D.S., Ph.D.

Assistant Professors
Yu Huang, Ph.D.
Ioanna Kakoulou, D.Phil.
Suneel Kodambaka, Ph.D.

Adjunct Professors
Eric P. Bescher, Ph.D.
Harry Patton Gillis, Ph.D.
John J. Gilman, Ph.D.
Marek A. Przytula, Ph.D.

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 (electronic) and atomic 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.

Department Mission
The Department of Materials Science and Engineering faculty members, students, and alumni foster a collegial atmosphere to produce (1) highly qualified students through an educational program that cultivates excellence, (2) novel and highly innovative research that advances basic and applied knowledge in materials, and (3) effective interactions with the external community through educational outreach, industrial collaborations, and service activities.

Undergraduate Program Objectives
The Materials Engineering major at UCLA prepares undergraduate students for employment or advanced studies with industry, the national laboratories, state and federal agencies, and academia. To meet the needs of these constituencies, the objectives of the undergraduate program are to produce graduates who (1) possess a solid foundation in materials science and engineering, with emphasis on the fundamental scientific and engineering principles that govern the microstructure, properties, processing, and performance of all classes of engineering materials, (2) understand materials processes and the application of general natural science and engineering principles to the analysis and design of materials systems of current and/or future importance to society, (3) have strong skills in independent learning, analysis, and problem solving, with special emphasis on design of engineering materials and processes, communication, and an ability to work in teams, and (4) understand and are aware of the broad issues relevant to materials, including professional and ethical responsibilities, impact of materials engineering on society and environment, contemporary issues, and need for lifelong learning.

Undergraduate Study
Materials Engineering B.S.

The ABET-accredited materials engineering program is designed for students who wish to pursue a professional career in the materials field and desire a broad understanding of the relationship between microstructure and properties of materials. Metals, ceramics, and polymers, as well as the design, fabrication, and testing of metallic and other materials such as...
Materials Engineering Option

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L; Computer Science 31 (or another programming course approved by the Faculty Executive Committee); Materials Science and Engineering 10, 90L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C (or Electrical Engineering 1).

The Major

Required: Chemical Engineering 102A (or Mechanical and Aerospace Engineering 105A), Civil and Environmental Engineering 101 (or Mechanical and Aerospace Engineering 101), 108, Electrical Engineering 100, Materials Science and Engineering 104, 110, 110L, 120, 130, 131, 131L, 132, 140, 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; and three major field elective courses (12 units) from Chemical Engineering C114, Civil and Environmental Engineering 130, 135A, Electrical Engineering 2, 123A, 123B, 124, Materials Science and Engineering 111, 112, 122, 151, 161, 162, Mechanical and Aerospace Engineering 156A, 166C, plus at least one elective course (4 units) from Chemistry and Biochemistry 30A, 30AL, Electrical Engineering 131A, Materials Science and Engineering 170, 171, Mathematics 170A, or Statistics 100A.

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

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 (or Electrical Engineering 1).

The Major

Required: Chemical Engineering 102A (or Mechanical and Aerospace Engineering 105A), Electrical Engineering 101, 121B, Materials Science and Engineering 104, 110, 110L, 120 (or Electrical Engineering 2), 121, 121L, 122, 130, 131, 131L, 140, Mechanical and Aerospace Engineering 101, and 181A or 182A; four courses (16 units) from Electrical Engineering 123A, 123B, Materials Science and Engineering 132, 150, 160; 4 laboratory units from Electrical Engineering 172L, 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; and one major field elective course (4 units) from Electrical Engineering 110, 124, 131A, 172, Materials Science and Engineering 111, 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://www.gdsnet.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 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 or former course 14. 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.

90L. Physical Measurement in Materials Engineering. (2) Laboratory, four hours; outside study, two hours. Various physical measurement methods used in materials science and engineering. Mechanical, thermal, electrical, magnetic, and optical techniques. Letter grading.

Upper Division Courses

104. Science of Engineering Materials. (4) Formerly numbered 14.) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 20A, 20B, 20L, Physics 1A, 1B. General introduction to different types of materials used in engineering designs: metals, ceramics, plastics, and composites, relationship between structure (crystals and microstructure) and properties of technological materials. Illustration of their fundamental differences and applications in engineering.

M105. Principles of Nanoscience and Nanotechnology. (4) (Same as Engineering 101.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistry 20, and Electrical Engineering 1 or Physics 1C. Introduction to underlying science encompassing structure, properties, and fabrication of technologically important nanoscale 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.

110. Introduction to Materials Characterization A (Crystal Structure, Nanostructures, and X-Ray Scattering). (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 104. Modern methods of materials characterization; fundamentals of crystallography, properties of X rays, X-ray scattering; powder method, Laue method; determination of crystal structures; phase diagram determination; high-resolution X-ray diffraction methods; X-ray spectroscopy; design of materials characterization procedures. Letter grading.

110L. Introduction to Materials Characterization A Laboratory. (2) Laboratory, four hours; outside study, two hours. Requisite: course 104. Experimental techniques and analysis of materials through X-ray scattering, powder method, crystal structure determination, high-resolution X-ray diffraction methods, and special projects. Letter grading.

111. Introduction to Materials Characterization B (Electron Microscopy). (4) Lecture, three hours; laboratory, two hours; outside study, seven hours. Requisites: courses 104, 110. Characterization of microstructure and microchemistry of materials; transmission electron microscopy; reciprocal lattice, electron diffraction, stereographic projection, defect observation of defects in crystals, replicas; scanning electron microscopy; emissive and reflective modes; chemical analysis; electron optics of both instruments. Letter grading.

C112. Introduction to Archaeological Materials Science: Scientific Methodologies, Techniques, and Interpretation. (4) Lecture, three hours; laboratory, two hours. Recommended requisite: course 110. Several basic scientific techniques employed for examination of archaeological and cultural artifacts to answer questions of anthropological significance and their state of preservation. Theoretical and hands-on instruction to provide fundamentals of imaging and analytical techniques, examination and analysis protocols, sample preparation techniques, and methods of scientific analysis and interpretation for study of organic, inorganic, and biologic materials, including electronic, optical, and ion-beam techniques. Heterostructures, band-gap engineering, development of new materials for optoelectronic applications. Letter grading.

121. Materials Science of Semiconductors. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 104, 110 (or Chemistry 113A). Introduction to electrical, optical, and magnetic properties of solids. Free electron model, introduction to band theory and Schrödinger wave equation. Crystal bonding and lattice vibrations. Mechanics and characterization of electrical conductivity, optical absorption, magnetic behavior, dielectric properties, and p-n junctions. 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 biaxial modulus and CTE. Letter grading.

122. Principles of Electronic Materials Processing. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 120. 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, and glass formation. Letter grading.

131. Diffusion and Diffusion-Controlled Reactions. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130. Diffusion in metals and ionic solids, nucleation, growth theory; precipitation from solid solution, eutectoid decomposition, design of heat treatment processes of alloys, growth of intermediate phases, gas-solid reactions, design of oxidation-resistant alloys, recrystallization, and grain growth. Letter grading.

131L. Diffusion and Diffusion-Controlled Reactions Laboratory. (2) Laboratory, two hours; outside study, four hours. Corequisite: course 131. Design of heat-treating cycles and performing experiments to study interdiffusion, growth of intermediate phases, recrystallization, and grain growth in metals. Analysis of data. Comparison of results with theory. Letter grading.


C133. Ancient and Historic Metals: Technology, Microstructure, and Properties. (4) Lecture, four 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 metallic artifacts. Concurrently scheduled with course CM233. Letter grading.

140. Materials Selection and Engineering Design. (4) (Formerly numbered 190.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 132, 150, 160. Explicit guidance among numerous factors that affect selection of metals for engineering. Properties and applications of steels, nonferrous alloys, polymeric, ceramic, and composite materials, coatings. Materials selection, treatment, and serviceability emphasized as part of successful design. Project design. Letter grading.

141L. Computer Methods and Instrumentation in Materials Science. (2) (Formerly numbered 191L.) Laboratory, four hours. Preparation: knowledge of BA-SIC or C or assembly language. Limited to junior/senior Materials Science and Engineering majors. Interface and control techniques, real-time data acquisition and processing, computer-aided testing. Letter grading.

143A. Mechanical Behavior of Materials. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 104, Mechanical and Aerospace Engineering 101. Plastic flow of metals under simple and combined loading, strain rate and temperature effects, dislocations, fracture, microstructural effects, mechanical and thermal treatment of steel for engineering applications. Letter grading.

143L. Mechanical Behavior Laboratory. (2) Laboratory, five hours. Requisites: courses 132L, 143A (may be taken concurrently). Methods of characterizing mechanical behavior of various materials; elastic and plastic deformation, fracture toughness, fatigue, and creep. Letter grading.

150. Introduction to Polymers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Polymerization mechanisms, molecular weight and distribution, chemical structure and bonding, structure crystallinity, and morphology and their effects on physical properties. Glassy polymers, springy polymers, elastomers, adhesives. Fiber forming polymers, polymer processing technology, plastication. Letter grading.


160. Introduction to Ceramics and Glasses. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 104, 130. Introduction to ceramics and glasses being used as important materials of engineering, processing techniques, and unique properties. Examples of design and construction of problems specific to applications in engineering. Letter grading.

161. Processing of Ceramics and Glasses. (4) Lecture, four hours; discussion, one hour. Requisite: course 160. Study of processes used in fabrication of ceramics and glasses for structural applications, optics, and electronics. Processing operations, including modern techniques of powder synthesis, greenware forming, sintering, glass melting, Microstructure properties, relationships among structure, morphology, and performance of ceramics. Fracture analysis and design with ceramics. Letter grading.


162. Electronic Ceramics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 104, Electrical Engineering 1 (or Physics 1C). Utilization of ceramics in microelectronics; thick film and thin film resistors, capacitors, and substrates, design and processing of electronic ceramics and packaging; magnetic materials, used in and electro-optic devices; optical wave guide applications and design. Letter grading.

170. Engaging Elements of Communication: Oral Communication. (2) Lecture, one hour; discussion, one hour; outside study, four hours. Comprehensive oral presentation and communication skills provided by building on strengths of individual personal styles in creation of positive interpersonal relations. Skill set prepares students for different types of academic and professional presentations for wide range of audiences. Learning environment is highly supportive and interactive as it helps students creatively develop and greatly expand effectiveness of their communication and presentation skills. Letter grading.

171. Engaging Elements of Communication: Writing for Technical Community. (2) Lecture, one hour; discussion, one hour; outside study, four hours. Comprehensive technical writing skills on subjects specific to field of materials science and engineering. Students write review term paper in selected subject field of materials science and engineering from given set of journal publications. Instruction leads students through several crucial steps, including brainstorming, choosing title, coming up with outline, concise writing of abstract, conclusion, and final polishing. Other subjects include writing style, word choices, and grammar. Letter grading.

CM180. Introduction to Biomaterials. (4) (Same as Biomedical Engineering CM180.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: course 104, or Chemistry 20A, 20B, and 20L. Engineering materials used in medicine and dentistry for repair and/or restoration of damaged natural tissues. Topics include relationships between material properties, suitability to task, surface chemistry, processing and treatment methods, and biocompatibility. Concurrently scheduled with course CM280. Letter grading.

188. Special Courses in Materials Science and Engineering. (4) Seminar, four hours; outside study, eight hours. Special topics in materials science and engineering for undergraduate students that are taught 10-12 times per year. Enrollment petitions available in Office of Academic and Engineering. Limitation to 15 students. May be repeated for credit. Letter grading.

194. Research Group Seminars: Materials Science and Engineering. (4) Seminar, four hours; outside study, eight hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field of research for faculty members or students. May be repeated for credit. Letter grading.

199. Directed Research in Materials Science and Engineering. (2 to 8) Tutorial, to be arranged. Limited to junior/seniors. Supervised individual research or investigation under guidance of faculty mentor. Cummulating paper or project required. Occasional field trips may be arranged. 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


211. Electron Microscopy. (4) (Formerly numbered 244.) Lecture, four hours; outside study, eight hours. Requisite: course 111. Essentials of electron microscopy, geometry of electron diffraction, kinematical and dynamical theories of electron diffraction, including anomalous absorption, applications of theory to defects in crystals. Moiré fringes, direct lattice resolutions, Lorentz microscopy, laboratory applications of contrast theory. Letter grading.

226. Si-CMOS Technology: Selected Topics in Materials Science and Engineering. (4) Lecture, four hours; outside study, eight hours. Recommended preparation: Electrical Engineering 221B. Requisites: courses 130, 131, 200, 221, 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, source/drain engineering 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 Conservation M216.) Lecture, two hours; laboratory, 90 minutes. Topics include alloy design and material science principles affecting properties and performance of ancient and historic metals. Study of techniques and materials used for rock art and ancient wall paintings. Hands-on experience in replicating ancient paintings and pigment preparation (synthesis) based on scientific data and ancient treatments. Letter grading.

CM216. Science of Conservation Materials and Methods I. (4) (Same as Conservation M216.) Seminar, one hour; laboratory, three hours. Recommended requisite: course 200. Introduction to physical, chemical, and mechanical properties of conservation materials (employed for preservation of archaeological and cultural materials) and their aging characteristics. Study of techniques and materials used for rock art and ancient wall paintings. Hands-on experience in replicating ancient paintings and pigment preparation (synthesis) based on scientific data and ancient treatments. Letter grading.

CM215. Materials and Techniques of Archaeological Wall Painting and Art, and Architecture. (4) (Same as Art History M203F and Conservation M250.) Seminar, two hours; laboratory, three hours. Designed for graduate conservation and art history students. Study of techniques and materials used for rock art and ancient wall paintings. Hands-on experience in replicating ancient paintings and pigment preparation (synthesis) based on scientific data and ancient treatments. Letter grading.

CM213. Deterioration and Conservation of in Situ Archaeological and Cultural Materials. (4) (Same as Conservation M236.) Seminar, two hours; laboratory, three hours. Designed for graduate conservation students. Causes and effects of deterioration of archaeological sites and archaeological mosaics and mosaics. Examination of degradation processes of porous materials, causes and sources of deterioration of buildings and archaeological sites, methodologies for environmental monitoring and preventive measures, and appropriate conservation materials for remedial treatments. Letter grading.

CM212. Introduction to Archaeological Materials Science: Scientific Methodologies, Techniques, and Interpretation. (4) (Same as Conservation M236.) Lecture, four hours; laboratory, two hours. Recommended requisite: course 110. Several basic scientific techniques employed for examination of archeological and cultural artifacts to answer questions of antiquity, provenance and their state of preservation. Theoretical and hands-on instruction to provide fundamentals of imaging and analytical techniques, experimental protocols, sample preparation techniques, and methods of scientific analysis and interpretation for study of organic and inorganic materials. Concurrently scheduled with course C112. 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 epitaxial), heteroepitaxy, ion implantation, oxidation. Letter grading.

223. Materials Science of Thin Films. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 120, 130, 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, three hours; outside study, nine hours. Designed for graduate engineering students. Deposition methods used in high-technology applications. Theory and experimental details of physical vapor deposition (PVD), chemical vapor deposition (CVD), plasma-assisted vapor deposition processes, plasma spray, electrodeposition. Applications in semiconductors, chemical, optical, mechanical, and metalurgical industries. Letter grading.


270. Computer Simulations of Materials. (4) Lecture, four hours; outside study, eight hours. Introduction to modern methods of computational modeling in materials science. Topics include basic statistical mechanics, classical molecular dynamics, and Monte Carlo methods, with emphasis on understanding basic principles and ideas, and how to analyze computer simulations of materials. Use of examples from current literature to show how these methods can be used to study interesting phenomena in materials science. Hands-on computer experiments. Letter grading.


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 basic principles that distinguish nanomaterials (with feature size below 100 nm) from more common microstructured materials. Explanation of new phenomena that emerge only in very small systems, using simple concepts from quantum mechanics and thermodynamics. Topics include structure and electronic properties of quantum dots, wires, nanotubes, and multilayers, self-assembly on surfaces and in liquid solutions, mechanical properties of nanostructured materials, and electronic devices. Letter grading.

CM280. Introduction to Biomaterials. (4) (Same as Biomedical Engineering CM280.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: course 104, or Chemistry 20A, 20B, and 20L. Engineering materials used in medicine and dentistry for repair and/or restoration of damaged natural tissues. Topics include relationships between material properties, suitability to task, surface chemistry, processing and treatment methods, and biocompatibility. Concurrently scheduled with course CM180. Letter grading.
### Mathematics

**UCLA College of Letters and Science**

**MATHEMATICS**

#### Scope and Objectives

Gauss has called mathematics the “Queen of the Sciences.” It has provided powerful intellectual tools that have made possible tremendous advances in modern science and technology. The Department of Mathematics provides courses of study that introduce students to the fundamentals of mathematics and allow them to master the most important parts of the subject, both pure and applied. It leads doctoral students to the frontiers of mathematical research, where they can begin to push back those frontiers.

#### Undergraduate Study

**Admission**

Students entering UCLA directly from high school who declare one of the five mathematics majors offered by the department at the time they apply for admission are automatically admitted to that major.

UCLA students who wish to enter one of the mathematics majors must have a minimum grade of C– in each preparation for the major course completed and a combined grade-point average of at least 2.0 in those courses. Grades in any completed major courses must also average at least 2.0. Students with 60 or more units of credit must have completed at
least 12 units of calculus to enter any of the mathematics majors.

Transfer students must have a minimum grade of C in the equivalent of each preparation for the major course completed. Those transferring with 60 or more quarter units of credit must have completed at least 12 quarter units of calculus to enter any of the Mathematics Department majors.

**Preliminary Examination in Mathematics**

If students wish to enroll in Mathematics 1, 3A, or 31A, they must pass the Mathematics Diagnostic Test.

The examination may be taken at any one of several times, including all sessions of the summer Orientation Program. It is also given several times during the academic year. For specific dates and test locations, refer to the Schedule of Classes or the departmental website at http://www.math.ucla.edu/ugrad/diagnostic.shtml, or contact the Mathematics Student Services Office, 6356 Math Sciences.

**Advanced Placement in Calculus**

Students who have taken the Advanced Placement (AP) Calculus AB Test and obtained a score of 5 receive 4 units of credit and Mathematics 31A equivalency; those with a score of 4 receive 4 units of calculus and analytic geometry credit. They may petition for 31A equivalency, or they may take course 31A at UCLA, although they must still satisfy the course requisites (Mathematics Diagnostic Test). Students who take the BC Test and obtain a score of 5 receive 8 units of calculus and Mathematics 31A, 31B equivalency; those with a score of 4 receive 4 units of credit and Mathematics 31A equivalency. They may petition for 31A, 31B equivalency, 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) 3C, 32A; (4) 110A, 117.

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) Statistics 110A, 110B.

Mathematics 170A and Statistics 100A are not open for credit to students with credit for Electrical Engineering 131A.

Mathematics 2 and Statistics 10 are 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 and 151B are not open for credit to students with credit for Electrical Engineering 103.

Students may not take or repeat a mathematics course for credit if it is a prerequisite 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 Mathematics 31B, they must do so before completing course 32A).

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, 164, and 180 are offered each term. The remaining upper division courses are usually offered once or twice each year. The tentative class schedule for the forthcoming academic year is posted in the Student Services Office in February.

**Program in Computing Courses**

Program in Computing 1 is designed for students who wish a broad, general introduction to the topic of computers and computation, but who have no prior experience in computing.

Courses 10A, 10B, and 10C provide an extensive introduction to programming, using the C++ language. Courses 15, 20A, 20B, 20C, 30, 40A, 40B, and 60 are of interest to Letters and Science majors who are completing a specialization in Computing or who are planning to take upper division coursework in computer science. These students should seek the advice of their major department.

**Undergraduate Majors**

The department offers five majors: Mathematics, Applied Mathematics, Mathematics of Computation, Mathematics/Applied Science, and Mathematics for Teaching. The department also participates in the Mathematics/Economics Interdepartmental Program, which offers a Mathematics/Economics major, and in the Mathematics/Atmospheric and Oceanic Sciences Interdepartmental Program, which offers a Mathematics/Atmospheric and Oceanic Sciences major.

The Mathematics major is designed for students whose basic interest is mathematics; the Applied Mathematics major for those interested in the classical relationship between mathematics, the physical sciences, and engineering; the Mathematics of Computation major for individuals interested in the mathematical theory and the applications of computing; the Mathematics/Applied Science major for those with substantial interest in the applications of mathematics to a particular outside field of interest; and the Mathematics for Teaching major for students planning to teach mathematics at the high school level. As part of the Mathematics/Applied Science major, the department offers programs for students interested in the fields of actuarial science, management/accounting, mathematics/history of science, and medical and life sciences.

Each course taken to fulfill any of the requirements for any of the mathematics majors must be taken for a letter grade.

**Mathematics B.S.**

**Preparation for the Major**

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, Program in Computing 10A, and two courses from Chemistry and Biochemistry 20A, 20B, Economics 11, Life Sciences 1, Philosophy 31, 32, Physics 1B, 1C, 6B, 6C. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

**Transfer Students**

Transfer applicants to the Mathematics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, one calculus-based physics (mechanics) course, one C++ programming course, and two courses from general chemistry for majors, economics, symbolic logic, and calculus-based physics.

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

**The Major**

Required: Mathematics 110A, 110B, 115A, 120A, 131A, 131B, 132, and at least five elective courses from 106 through 199 and Statistics 100A through 102C. The 12 courses must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0.

**Applied Mathematics B.S.**

**Preparation for the Major**

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, 1B, Program in Computing 10A, and one course from Chemistry and Biochemistry 20A, 20B, Physics 1C. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

**Transfer Students**

Transfer applicants to the Applied Mathematics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, two calculus-based physics courses, one C++ programming course, and one course from general chemistry for majors or calculus-based physics.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/
Mathematics / 431

adm_tr.htm for up-to-date information regarding transfer selection for admission.

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, or 110A and 110B, differential equations — courses 134 and 135; four courses from 106 through 199 and Statistics 100A through 102C (appropriate courses from other departments may be substituted for some of the additional courses provided departmental consent is given before such courses are taken). The 12 courses must be passed with a minimum overall grade-point average of 2.0.

Mathematics of Computation B.S.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Physics 1A, 1B, Program in Computing 10A, 10B, 10C, and one course from Chemistry and Biochemistry 20A, 20B, Physics 1C. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

Transfer Students

Transfer applicants to the Mathematics of Computation major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, one discrete structures course, two calculus-based physics courses, three programming courses, and one course from general chemistry for majors or calculus-based physics.

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

The Major

Required: Eleven Mathematics Department courses, including Mathematics 115A, 131A, 131B or 132, 151A, 151B, and six courses from 106 through 199 and Statistics 100A through 101C; three upper division computer science courses (12 units). The 14 courses must be passed with a minimum overall grade-point average of 2.0.

Mathematics/Applied Science B.S.

The Mathematics/Applied Science major is designed for students with a substantial interest in mathematics and its applications to a particular field. It is an individual major in that students, in consultation with a faculty adviser, design their own program. They may also select one of the established programs: actuarial plan, management/accounting plan, mathematics/history of science plan, or medical and life sciences plan. In the past, Mathematics/Applied Science majors have combined the study of mathematics with fields such as atmospheric and oceanic sciences, biochemistry, biology, chemistry, economics, geography, physics, psychology, and statistics.

Students interested in designing an individual program should meet with the undergraduate adviser, 6356 Math Sciences, during their sophomore year. A proposed program is drawn up, then forwarded to the mathematics/applied science curriculum committee for approval. All programs must include the following preparation for the major and major courses.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses. Additional preparation, varying with the individual program, may be required.

Transfer Students

Transfer applicants to the Mathematics/Applied Science major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors and one C++ programming course. Additional courses are required for each concentration plan.

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

The Major

Required: Fourteen courses, seven in the Mathematics Department selected from Mathematics 106 through 199 and seven upper division courses in a related field selected from one or two other departments. The seven Mathematics Department courses must be passed with an overall grade-point average of 2.0, as must the seven courses outside mathematics.

At least five of the courses from the related discipline must be taken after the program has been approved. Students are not admitted to the major if they have 135 or more units by the end of the term in which they plan to enter the program.

Actuarial Plan

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Economics 1, 2, 11, Management 1A, 1B, Program in Computing 10A.

The Major

Required: Seven mathematics courses, including Mathematics 115A, 131A, 170A, 170B, 172A, 172B, and one course from 134, 135, 164, 171, or 174; seven outside courses, including Economics 101, 102, Statistics 100B, 100C, 170, and two courses from Economics 141A through 148.

Management/Accounting Plan

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Management 1A, 1B, Program in Computing 10A.

The Major

Required: Seven mathematics courses, including Mathematics 115A, 131A, 164, 170A or Statistics 100A or 110A, Mathematics 170B or Statistics 100B or 110B, and two courses from Mathematics 106 through 199 and Statistics 100C; seven management courses, including Management 120A, 120B, 122, 140, 212A, 212B, and one additional course from 108 through 182.

Mathematics/History of Science Plan

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A, and three courses from History 2B, 2D, 3A through 3D.

The Major

Required: Eight mathematics courses, including Mathematics 106, 115A, 131A, 135A, 170A, and three courses from 110A through 199; six outside courses to be selected from History 179A through 180C, Philosophy 124, Physiological Science M168, and any upper division Honors Collegium course with history of science/medicine content.

Medical and Life Sciences Plan

Preparation for the Major


The Major

Required: Seven mathematics courses, including Mathematics 115A, 134, 135A, 170A, 170B, and two courses from 110A through 199 and Statistics 100B through 120B; six outside courses, including Neuroscience M101A, M101B, and M101C, and three courses from Biomathematics 110, 160, Biostatistics 100A, Chemistry and Biochemistry CM160A, Computer Science CM186B, Ecology and Evolutionary Biology C119, 133, 135, Physiological Science 100, 135, and any additional upper division course from these fields with consent of the administering department and the Mathematics Department.

Mathematics for Teaching B.S.

The Mathematics for Teaching major is designed primarily for students planning to teach mathematics at the high school level. It provides exposure to a broad range of mathematical topics, especially those appropriate for the
prospective teacher. Students planning to pursue graduate studies in mathematics or related fields are encouraged to enter the Mathematics, Applied Mathematics, or Mathematics of Computation major.

Preparation for the Major
Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Physics 1A or 6A, Program in Computing 10A, and two courses from Chemistry and Biochemistry 20A, 20B, Physics 1B, 1C, 6B, 6C, Program in Computing 10B through 97. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

Transfer Students
Transfer applicants to the General 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 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/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: Mathematics 105A, 105B, 105C, 106, 110A or 117, 115A, 120A or 123, 131A, 170A or Statistics 100A, Statistics 100B, one course from Mathematics 110B through 191H or Statistics 100C, one course from Mathematics 131B through 136, one course from 142 through 167.

Honors
Honors Courses
The department offers a lower division honors sequence in calculus and upper division honors sequences in algebra and analysis. The sequences are intended for students (not necessarily mathematics majors) who desire a broad, comprehensive introduction to these topics.

Honors Program
Students majoring in Mathematics, Applied Mathematics, and Mathematics of Computation who wish to graduate with departmental honors should apply for admission to the honors program in the Student Services Office. They may apply any time after completing four courses from the calculus sequence or from upper division mathematics courses with an overall grade-point average of 3.6 or better. The program entails taking a specified sequence of courses as part of the major requirements, completing an approved seminar offered by the Mathematics Department or submitting an original research project, and earning an overall GPA of at least 3.6 in approved upper division and graduate mathematics courses.

Students completing the program are awarded honors at graduation; if they demonstrate exceptional achievement (i.e., at least a 3.8 GPA in upper division mathematics courses taken for the major), they are awarded highest honors. Consult the department for further information.

Computing Specialization
Majors in Mathematics, Applied Mathematics, Mathematics/Applied Science, or Mathematics for Teaching may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the specified major and (2) completing Mathematics 61 or 113, Program in Computing 10A, 10B, two courses from 10C, 15, 20A, 20B, 30, 40A, 60, and at least two courses from Mathematics 149 through 159, with a minimum grade of C– in each course and a combined grade-point average of at least 2.0. Students must petition for admission to this program and are advised to do so after they complete Program in Computing 10B (petitions should be filed in the Student Services Office). Students graduate with a bachelor’s degree in their major and a specialization in Computing.

Subject Matter Preparation Program for Single Subject Credential in Mathematics
Students interested in obtaining a single subject secondary school credential in mathematics should consult with a departmental counselor regarding the requirements for a waiver from the Mathematics California Subject Examination for Teachers (CSET), which is required by the California Commission on Teacher Credentialing. Students should meet with a departmental counselor as early in their undergraduate careers as possible because the program does require additional courses beyond the major requirements. For additional information on teaching credential requirements, consult the Department of Education at (310) 825-8328.

Mathematics Minor
The Mathematics minor is designed to provide students with the opportunity to widen their background and general comprehension of the role of mathematics in various disciplines.

To enter the minor, students must have an overall grade-point average of 2.0 or better and meet with the undergraduate mathematics advisor in the Student Services Office, 6356 Math Sciences.

Required Lower Division Courses (12 units): Mathematics 32A, 33A, 33B.

Required Upper Division Courses (20 units): At least five courses (20 units) selected from Mathematics 106 through 199.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Mathematics offers the Masters of Arts in Teaching (M.A.T.) degree and Master of Arts (M.A.) 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.


3A. Calculus for Life Sciences Students, (4) Lecture, three hours; discussion, one hour. Preparation: three and one-half years of high school mathematics (including trigonometry). Requisite: successful completion of Mathematics Diagnostic Test (score of 36 or better) or course 1 with a grade of C– or better. Not open for credit to students with credit in another calculus sequence. Techniques and applications of differential calculus. P/NP or letter grading.

3B. Calculus for Life Sciences Students, (4) Lecture, three hours; discussion, one hour. Requisite: course 3A with a grade of C– or better. Techniques and applications of integral calculus, introduction to differential equations and multivariable differential calculus. P/NP or letter grading.

3C. Probability for Life Sciences Students, (4) Lecture, three hours; discussion, one hour. Requisite: course 3B with grade of C– or better. Elementary probability, probability distributions, random variables, and limit theorems. P/NP or letter grading.

31A. Differential and Integral Calculus, (4) Lecture, three hours; discussion, one hour. Preparation: 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 a grade of C– or better. Differential calculus and applications; introduction to integration. P/NP or letter grading.

31AX. Workshop in Differential Calculus, (1) Discussion, one hour. Corequisite: course 31A. Supplementary techniques and applications for solving problems in differential calculus. Limits of investigation set by individual instructor. P/NP grading.

31B. Integration and Infinite Series, (4) Lecture, three hours; discussion, one hour. Requisite: course 31A with a grade of C– or better. Transcendental functions; methods and applications of integration; sequences and series. P/NP or letter grading.

31BH. Integration and Infinite Series (Honors), (4) Lecture, three hours; discussion, one hour. Honors course parallel to course 31B. P/NP or letter grading.
72SL. Classroom Practices in Middle School Mathematics. (2) Seminar, three hours; fieldwork, three hours. Introduces prospective mathematics teachers to field of secondary education and teaching and learning of mathematics in middle school classrooms. Pairs of students are placed in local middle school classrooms to observe, participate, and assist mentor teachers in instruction. 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.

Algebra, Number Theory, and Logic

110A-110B. Algebra. (4-4) Lecture, three hours; discussion, one hour. P/NP or letter grading. 110A. Requisite: course 115A. Not open for credit to students with credit for course 117. Ring of integers, integral domains, fields, polynomial domains, unique factorization. 110B. Requisite: course 110A or 117. Groups, structure of finite groups.

110AH-110BH. Algebra (Honors). (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, selected topics in theory of primes, algebraic number theory, Diophantine equations.

114C. Computability Theory. (4) Formerly numbered 114A.) Lecture, three hours; discussion, one hour. Requisite: course 110A or 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) Formerly numbered 114B.) Lecture, three hours; discussion, one hour. Requisite: course 110A or 131A or Philosophy 135. Introduction to mathematical logic, aiming primarily at completeness and incompleteness theorems of Gödel. Propositional and predicate logic; syntax and semantics; formal deduction; completeness, compactness, and Lowenheim/Skolem theorems. Formal number theory: nonstandard models; Gödel incompleteness theorem. P/NP or letter grading.

M114S. Introduction to Set Theory. (4) (Formerly numbered M112.) (Same as Philosophy M134.) Lecture, three hours; discussion, one hour. Requisite: course 110A or 131A or Philosophy 135. Axiomatic set theory as framework for mathematical 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 31A. Techniques of proof, abstract vector spaces, linear transformations, and matrices; determinants; inner product spaces; eigenvalues and eigenvectors. 115B. Lecture, three hours; discussion, one hour. Requisite: course 115A. Linear transformations, conjugate spaces, duality; theory of a single linear transformation, Jordan normal form; bilinear forms, quadratic forms; Euclidean and unitary spaces, symmetric skew and orthogonal linear transformations, polar decomposition.

115AH. Linear Algebra (Honors). (5) Lecture, three hours; discussion, two hours. Requisite: course 33A. Honors course parallel to course 115A. P/NP or letter grading.

115X-115BX. Workshops in Linear Algebra. (1-1) Discussion, one hour. Corequisite for course 115AX; course 115A; for course 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. Topics include symmetric and public-key cryptosystems, one-way functions, signatures, key exchange, groups, primes, pseudoprimes, primality tests, quadratic reciprocity, factoring, rho method, RSA, discrete logs. P/NP or letter grading.

117. Algebra for Applications. (4) Lecture, three hours; discussion, one hour. Requisite: course 115A. Not open for credit to students with credit for course 110A. Integers, congruences; fields, applications of finite fields; polynomials; permutations, introduction to groups.

Geometry and Topology

120A-120B. Differential Geometry. (4-4) Lecture, three hours; discussion, one hour. Requisites: courses 32B, 33B, 115A, 131A. 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; letter grade, enrollments by permission of instructor.

121. Introduction to Topology. (4) Requisite: course 131A. Metric and topological spaces, completeness, compactness, connectedness, functions, continuity, homeomorphisms, topological properties.

123. Foundations of Geometry. (4) Lecture, three hours; discussion, one hour. Requisite: course 115A. Axioms and models, Euclidean geometry, Hilbert axioms, neutral (absolute) geometry, hyperbolic geometry, Poincaré model, independence of parallel postulate.

Analysis

131A-131B. Analysis. (4-4) Lecture, three hours; discussion, one hour. 131A. Requisites: courses 32B, 33B. Rigorous introduction to foundations of real analysis; real numbers, point set topology in Euclidean space, functions, continuity. 131B. Requisites: courses 32B, 33B, 115A, 131A. Derivatives, Riemann integral, sequences and series of functions, power series, Fourier series.

131AH-131BH. Analysis (Honors). (4-4) Lecture, three hours; discussion, one hour. Honors sequence parallel to courses 131A, 131B.

131AX. Analysis Techniques. (1) Lecture, one hour. Requisite: course 131A. Review of elementary techniques of mathematics and their applications to topics in analysis, such as geometric and algebraic constructions, least upper bound axiom, etc. P/NP grading.

131C. Topics in Analysis. (4) Lecture, three hours; discussion, one hour. Requisites: courses 131A, 131B. Advanced topics in analysis, such as Lebesgue integral, integration on manifolds, harmonic analysis. Content varies from year to year. May be repeated for credit by petition.

132. Complex Analysis for Applications. (4) Lecture, three hours; discussion, one hour. Requisites: courses 32B, 33B. Introduction to basic formulas and calculation procedures of complex analysis of one variable relevant to applications. Topics include Cauchy/Riemann equations, Cauchy integral formula, power series expansion, contour integrals, residue calculus.


136. Partial Differential Equations. (4) Lecture, three hours; discussion, one hour. Requisites: courses 33A, 33B. Linear partial differential equations, boundary and initial value problems; wave equation, heat equation, and Laplace equation; separation of variables, eigenfunctions, selected topics, as method of characteristics for nonlinear equations.

Applied Mathematics

142. Mathematical Modeling. (4) Lecture, three hours; discussion, one hour. Requisites: courses 32B, 33B. Introduction to fundamental principles and spirit of applied mathematics. Emphasis on manner in which mathematical models are constructed for physical problems. Illustrations from many fields of endeavor, such as physical sciences, biology, economics, and traffic dynamics.

143. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 32B, 33B. Foundations of Newtonian mechanics, kinematics and dynamics of a rigid body, variational principles and Lagrange equations; calculus of variations, variational 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 in either Pascal or C language. Study of homogeneous coordinates, projective transformations, interpolating and approximating curves, representation of surfaces, and other mathematical topics useful for computer graphics.


167. Mathematical Game Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 115A. Quantitative modeling of strategic interaction. Topics include extensive and normal form games, background probability, lotteries, mixed strategies, pure and mixed Nash equilibria and refinements, bargaining; emphasis on economic examples. Optional topics include repeated games and evolutionary game theory. P/NP or letter grading.

Probability

170A. Probability Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 32B. Not open for credit to students with credit for Electrical Engineering 131A or Statistics 100A. Probability distributions, random variables and vectors, expectation. P/NP or letter grading.

170B. Probability Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 170A or Statistics 100A. Convergence of random variables, laws of large numbers, Poisson processes, random walks. P/NP or letter grading.


Discrete Mathematics

180. Combinatorics. (4) (Formerly numbered 113.) Lecture, three hours; discussion, one hour. Enforced requisites: courses 32B, 33B. 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 theory. P/NP or letter grading.

184. Topics in Combinatorics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 61 (or 180), 115A. Introduction to combinatorics, including several independent topics selected to illustrate various techniques to obtain combinatorial results. Gems of modern combinatorics to be showcased. May be repeated for credit. P/NP or letter grading.

Special Studies

191. Variable Topics Research Seminars: Mathematics. (4) Seminar, three hours. Variable topics research course in mathematics that covers material not covered in regular mathematics upper division 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. (4) Seminar, three hours. Participating seminar on advanced topics in mathematics. Content varies from year to year. May be repeated for credit by petition. P/NP or letter grading.

195. Community Internships in Mathematics Education. (4) Tutorial, to be arranged. Limited to juniors/seniors. Internship to be supervised by Center for Community Learning and Mathematics Department. Students meet on regular basis with instructor, provide periodic reports of their experience, have assigned readings on mathematics education, and complete final paper. May not be repeated and may not be applied toward major requirements. Individual contract with supervising faculty member required. P/NP grading.

197. Individual Studies in Mathematics. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. At discretion of chair and subject to availability of staff, individual intensive study of topics suitable for undergraduate course credit but not specifically offered as separate courses. Scheduled meetings to be arranged between faculty member and student. 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 to 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 mathe- matics. 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.


Number Theory

205A-205B-205C. Number Theory. (4-4-4) Lecture, three hours. Requisites: courses 210A, 246A. Algebraic number theory, including ideal theory, valuations, local fields, cyclotomic fields. Introduction to class-field theory, analytic number theory, L-functions and class number formulas, and modular forms. S/U or letter grading.


207A-207B-207C. Topics in Number Theory. (4-4-4) Lecture, three hours. Adelic analysis on GL(1) and GL(2) especially Tate's thesis and ideles. Automorphic representations. Special values of L-functions and p-adic L-functions, arithmetic theory of modular forms, advanced topics in analytic number theory. Algebraic geometry, especially of modular curves. S/U or letter grading.


2M09A. Cryptography. (4) (Same as Computer Science M282A.) 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, trapdoor functions, pseudorandom generators, pseudorandom functions and pseudorandom permutations, semantic security, public-key and private-key encryption, secret-sharing, message authentication, digital signatures, structure theorems, zero-knowledge proofs, collision-resistant hash functions, commitment protocols, key-agreement, contract signing, and two-party secure computation with static security. Letter grading.

2M09B. Cryptographic Protocols. (4) (Same as Computer Science M282B.) Lecture, four hours. Requi- sites: course 2M09A. Consideration of advanced cryptographic protocol design and analysis. Topics include noninteractive zero-knowledge proofs; zero-knowledge arguments; concurrent and non-black-box zero-knowledge; IP=PSPACE proof, stronger notions of security for public-key encryption, including chosen-ciphertext security; secure multiparty computation; dealing with dynamic adversaries; nonmalleability and composability of security protocols; software protection; threshold cryptography; identity-based cryptography; private-key preserving protection against man-in-the-middle attacks; voting protocols; iden- tification 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 210A and/or 110C. Group theory: including the theorems of Sylow and Jordan/Holder/Schreier; rings and ideals, factorization theory in inte- gral domains, modules over principal ideal rings, Ga- lois theory of fields, multilinear algebra, structure of algebras.

211. Structure of Rings. (4) Requisite: course 210A. Radical, irreducible modules and primitive rings, and algebras with minimum condition.

212. Homological Algebra. (4) Requisite: course 210A. Modules over a ring, tensor products of modules, functors and derived func- tors, homological dimension of rings and modules.

213A-213B. Theory of Groups. (4-4) Requisite: course 210A. Topics include representation theory, transfer theory, infinite Abelian groups, free products and presentations of groups, solvable and nilpotent groups, classical groups, algebraic groups.

214A-214B. Introduction to Algebraic Geometry. (4-4) Requisite: course 210A. Algebraic varieties and their 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, and projective construction to the- ory of Riemann surfaces, as time permits.


216. Further Topics in Algebraic Geometry. (4-4) Requisites: courses 214A, 214B. Closer examination of areas of current research in algebraic geometry. Variable content may include algebraic surfaces, Ab- elian varieties, invariant theory, Hodge theory, or geom- etry over finite fields. May be repeated for credit by petition.

2M17. Geometry and Physics. (4) (Same as Phys- ics M236.) Lecture, three hours. Interdisciplinary course on topics at interface between physics quan- tum fields and superstrings and mathematics of differ- ential and algebraic geometry. Topics include super- symmetry, Seiberg/Witten theory, conformal field the- ory, Calabi/Yau manifolds, mirror symmetry and duality, integrable systems. S/U grading.


Logic and Foundations

220A-220B-220C. Mathematical Logic and Set Theory. (4-4-4) Lecture, three hours. Requisite: course M112. Model theory: compactness theorem; Löwenheim/Skolem theorems; definability; ultraproducts; preservation theorems and other theorems. Recursion function theory: thesis of Church; recur- sively enumerable sets; hierarchies; degrees. Formal proof: completeness theorems, incompleteness theorems; decidable and undecidable theories; quantifier elimi- nation. Set theory: Zermelo/Fraenkel and von Neu- mann/Gödel axioms; cardinal and ordinal numbers; continuum hypothesis, constructible sets; indepen- dence results and forcing. S/U or letter grading.
222A-222B. Lattice Theory and Algebraic Systems. (4-4) Lecture, three hours. Requires: course 210A. Partially ordered sets, lattices, distributivity, modularity; completeness, interaction with combinatorics, topology, and logic; algebraic systems, congruence lattices, subdirect decomposition, congruence laws, equational bases, applications to lattices.

223C. Topics in Computability Theory. (4) Lecture, three hours. Requires: courses 220A, 220B. Classical and effective results on Borel and projective sets; infinite games of perfect information and principle of determinacy; consequences of determinacy, including periodicity, structure theory of pointclasses, and partition properties. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.


223A. Partial Differential Equations on Manifolds. (4) Lecture, three hours. Requires: courses 220A, 220B. Topics may include Laplacian operator on a Riemannian manifold, eigenvalues, Atiyah/Singer index theorem, isoperimetric inequalities, elliptic estimates, harmonic function theory on manifolds, Green's function, heat equation, minimal hypersurfaces, prescribed curvature equations, harmonic maps, Yang/Mills equation, Monge/Ampere equations.

234. Topics in Differential Geometry. (4) Lecture, three hours. Requires: courses 226A, 226B. Complex and Kahler geometry. Hodge theory, homogeneouse manifolds and symmetric spaces, finiteness and convergence theorems for Riemannian manifolds, almost flat manifolds, closed geodesics, manifolds of positive scalar curvature, manifolds of constant curvature. Topics vary from year to year. May be repeated for credit by petition.

235. Topics in Manifolds Theory. (4) Lecture, three hours. Topics may include hyperbolic geometry, cohomology, and K"ahler geometry. Topics vary from year to year. May be repeated for credit by petition.

236. Topics in Geometric Topology. (4) Lecture, three hours. Requires: courses 225A, 225B, 225C. Topics may include cohomology (singular, cellular, or sheaf), characteristic classes, generalized homology and cohomology theories. Topics vary from year to year. May be repeated for credit by petition.

237. Topics in Algebraic Topology. (4) Lecture, three hours. Requires: courses 227A, 227B. Fixed-point theory, fiber spaces and classifying spaces, characteristic classes, generalization homology and cohomology theories. Topics vary from year to year. May be repeated for credit by petition.

238A-238B. Dynamical Systems. (4-4) Lecture, three hours. Requires: course 225A. Elements of dynamical systems. Applications to geometric topology, Morse theory, and other related areas. Topics vary from year to year. May be repeated for credit by petition.


245A-245B. Classical Fourier Analysis. (4-4) Lecture, three hours. Requires: courses 227A, 227B. Fourier transform and Plancherel on R^n and T^n. Topics vary from year to year. May be repeated for credit by petition.

246A. Introductory Partial Differential Equations. (4) Lecture, three hours. Topics may include qualitative theory of differential equations, bifurcation theory, and Hamiltonian systems. Topics vary from year to year. May be repeated for credit by petition.


250C. Advanced Topics in Ordinary Differential Equations. (4) Requires: courses 250A, 250B. Selected topics, such as spectral theory or ordinary differential operators, nonlinear boundary value problems, celestial mechanics, approximation of solutions, and Volterra equations.

251A. Introductory Partial Differential Equations. (4) Requires: courses 250A, 250B. Selected topics, such as spectral theory or ordinary differential operators, nonlinear boundary value problems, celestial mechanics, approximation of solutions, and Volterra equations.

251B-251C. Topics in Partial Differential Equations. (4-4) In-depth introduction to topics of current interest in partial differential equations or their applications.


254A-254B. Topics in Real Analysis. (4-4) Requires: courses 245A, 245B, 245C, 246A, 246B, 246C. Selected topics in analysis and its applications to geometry and differential equations. Topics vary from year to year. May be repeated for credit by petition.


255B-255C. Topics in Functional Analysis. (4) Requires: course 255A. Topics include Banach algebras, operators on Banach spaces and Hilbert space, semigroups of operators, linear topological vector spaces, and other related areas.


M261. Game Theory. (4) (Same as Economics M214B and Political Science M208A.) Lecture, three hours. Designed for graduate economics, mathematicians, and political science students. Bargaining theory, the core, the value, other solution concepts, applications to oligopoly, general exchange and production economies, and allocation of joint costs. S/U or letter grading.


265A-265B. Real Analysis for Applications. (4-4) Requisites: courses 131A, 131B. Not open for credit to students with credit for courses 245A, 245B, 245C. Lebesgue measure and integration on real line, absolutely continuous functions, functions of bounded variation, $L^p$ and $L^q$ spaces, Fourier series, general measure and integrals, Fubini and Radon-Nikodym theorems, representation of functionals, Fourier integrals.


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.


271A. Tensor Analysis. (4) Requisite: course 131A. Algebra and calculus of tensors on $n$-dimensional manifolds. Curvature, parallel transportation, and coordinate-free methods. Covariant differentiation. Green/Stokes theorem for differential forms. Applications to topics such as continuum and particle mechanics.


274B-274C. Perturbation Methods. (4-4) Lecture, three hours. Requisite: course 266A. Boundary layer theory, matched asymptotic expansions, WKBJ theory. Problems with several time scales; Poincaré method, averaging techniques, multiple-scale analysis. Application to eigenvalue problems, nonlinear oscillations, wave propagation, and bifurcation problems. Examples from various fields of science and engineering.

Probability and Statistics

275A-275B. Probability Theory. (4-4) Requisite: course 245A or 265A. Connection between probability theory and real analysis. Weak and strong laws of large numbers, central limit theorem, conditioning, ergodic theory, martingale theory.


277B. Stochastic Particle Systems. (4) Lecture, three hours. Requisite: course 275C. Interacting particle systems, including contact process, stochastic lising model, and exclusion processes; percolation theory. S/U or letter grading.

Special Studies

285A-285L. Seminars. (4 each) Seminar, three hours. No more than two 285 courses may be applied toward M.A. degree requirements except by prior consent of graduate vice chair. Topics in various branches of mathematics and their applications by means of lectures and informal conferences with staff members. S/U or letter grading.

285A. History and Development of Mathematics.

285B. Number Theory.

285C. Algebra.

285D. Logic.

285E. Geometry.

285F. Topology.

285G. Analysis.

285H. Differential Equations.

285I. Functional Analysis.


285K. Probability.

285L. Dynamical Systems.
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.

1.1. Introduction to Programming. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Recommended requisite for students with no prior computing experience: course 1. No prior programming experience assumed. Basic principles of programming, using C++; procedural problem solving; program design and development; basic data types, control structures and functions; functional arrays and pointers; introduction to classes for programmer-defined data types. P/NP or letter grading.

10B. Intermediate Programming. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Basic data types and their implementation using the C++ class mechanism; dynamic data structures, including linked lists, stacks, queues, trees, and hash tables; applications; recursion; algorithms for sorting and searching. P/NP or letter grading.


20A. Principles of Java Language with Applications. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Introduction to Java computer language. Class and interface hierarchies; graphics components and graphical user interfaces; streams; multitreading; event and exception handling. Issues in design and implementation of interactive Web pages. P/NP or letter grading.

20B. 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, graphical components, exception handling, multi-threading, and multimedia. Additional topics may include networking, servers, database connectivity, and Java Beans. P/NP or letter grading.

20C. 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 applications. Use of Java in conjunction with XML. Individual or group projects and presentations. P/NP or letter grading.


40A. 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, Common Gateway Interface, XML. P/NP or letter grading.

40B. Advanced Topics in Programming for Internet. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 40A. Study of advanced topics in Web programming, with focus on server-side technologies. P/NP or letter grading.


97. Special Topics in Programming. (1 to 4) Lecture, one to three hours; discussion, zero to one hour. Enforced requisite: 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. Requisite: 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 algorithm behavior; distributed computing. Selected advanced topics.

130. Cryptography. (4) Lecture, three hours; discussion, one hour; laboratory, three hours. Requisites: course 10B, Mathematics 115A. Design and analysis of cryptosystems for confidentiality and authentication. Classical cryptosystems and their security, modern 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) 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.

Mathematics/Economics

Interdepartmental Program
College of Letters and Science

UCLA
7127 Math Sciences
Box 951565
Los Angeles, CA 90095-1565
(310) 825-1217
fax: (310) 206-5219
e-mail: deptinfo@atmos.ucla.edu
http://www.atmos.ucla.edu/idp/

Robert G. Fovell, Ph.D., Co-Chair
Ronald J. Miech, Ph.D., Co-Chair

Faculty Advisory Committee
Robert G. Fovell, Ph.D. (Atmospheric and Oceanic Sciences)
Nathaniel Grossman, Ph.D. (Mathematics)
Ronald J. Miech, Ph.D. (Mathematics)
J. David Neelin, Ph.D. (Atmospheric and Oceanic Sciences)

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.

Graduates of the program are employed by private and public weather products firms, consulting companies, public utilities, and as science teachers at the elementary and secondary levels.

Undergraduate Study

Mathematics/Atmospheric and Oceanic Sciences B.S.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, 1B, 1C, Program in Computing 10A, and two courses selected from Atmospheric and Oceanic Sciences 1, 2, 3, 5. Physics 4AL and 4BL are recommended but not required. Chemistry and Biochemistry 14A and 14B (or 20A and 20B) may also be required, depending on atmospheric and oceanic sciences upper division course selection. Each course must be taken for a letter grade and must be passed with a grade of C– or better, and students must have a minimum overall grade-point average of 2.0 for the courses.

Transfer Students

Transfer applicants to the Mathematics/Atmospheric and Oceanic Sciences major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, 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, CM185.

One senior projects/thesis course, Atmospheric and Oceanic Sciences 199, taken for a minimum of 2 units, is also required. An individual project or thesis to be selected with the assistance of the program advisers and a faculty mentor must be completed.

No more than one course may be applied toward both this major and a major or minor in another department or program.

Mathematics/Economics

Interdepartmental Program
College of Letters and Science

UCLA
6363 Math Sciences
Box 951555
Los Angeles, CA 90095-1555
(310) 206-1286
fax: (310) 206-6673
e-mail: ugrad@math.ucla.edu
http://www.math.ucla.edu/ugrad/mathecon.shtml

Don M. Blasius, Ph.D., Chair

Faculty Advisory Committee
Don M. Blasius, Ph.D. (Mathematics)
Robert F. Brown, Ph.D. (Mathematics)
Russel E. Caflisch, Ph.D. (Mathematics)
Bryan C. Eliickson, Ph.D. (Economics)
Ekaterini Kyriazidou, Ph.D. (Economics)
Peter Petersen, Ph.D. (Mathematics)
William R. Zame, Ph.D. (Economics)

Scope and Objectives

In recent years economics has become increasingly dependent on mathematical methods, and the mathematical tools it employs have become more sophisticated. Mathematically competent economists, with bachelor's degrees and with advanced degrees, are needed in industry and government. Graduate programs in economics and finance programs in graduate schools of management require strong undergraduate preparation in mathematics for admission.

The Mathematics/Economics 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.

Undergraduate Study

Mathematics/Economics B.S.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Economics 1, 2, 11, Program in Computing 10A. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

Transfer Students

Transfer applicants to the Mathematics/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, two principles of economics courses, one microeconomic theory course, and one C++ programming course.

Henry Samueli School of Engineering and Applied Science

UCLA
48-121 Engineering IV
Box 951597
Los Angeles, CA 90095-1597
(310) 825-7793
fax: (310) 206-4830
http://www.mae.ucla.edu

Adrienne G. Lavine, Ph.D., Chair
Robert T. M‘Closkey, Ph.D., Vice Chair
Xiaolin Zhong, Ph.D., Vice Chair

Professors
Mohamed A. Abdou, Ph.D.
Oddvar O. Bendiksen, Ph.D.
Gregory P. Carman, Ph.D.
Albert Barnesale, Ph.D.
Ivan Catton, Ph.D.
Jin-Shyan Chen, Ph.D.
Yong Chen, Ph.D.
Vijay K. Dhir, Ph.D., Dean
Rajat Gadh, Ph.D.
Nasir M. Ghoniem, Ph.D.
James S. Gibson, Ph.D.
Vijay Gupta, Ph.D.
H. Thomas Hahn, Ph.D. (Raytheon Company Professor of Manufacturing Engineering)
Chii-Ming Ho, Ph.D. (Ben Rich Lockheed Martin Professor of Aeronautics)
Yongho Sungtaek Ju, Ph.D.
Ann R. Karagozian, Ph.D.
Chang-Jin (C-J) Kim, Ph.D.
J. John Kim, Ph.D. (Rockwell International Professor of Engineering)
Adrienne G. Lavine, Ph.D.
Kuo-Nan Liou, Ph.D.
Christopher S. Lynch, Ph.D.
Ajl K. Mal, Ph.D.
Robert T. M‘Closkey, Ph.D.
Anthony F. Mills, Ph.D.
Owen T. Smith, Ph.D.
Jason Speyer, Ph.D.
Tsu-Chin Tsao, Ph.D.
Daniel C.H. Yang, Ph.D.
Xiaolin Zhong, Ph.D.

Professors Emeriti
Andrew F. Charrwat, Ph.D.
Pereutz P. Friedmann, Sc.D.
Walter C. Hurty, M.S.
Robert E. Kelly, Sc.D.
Cornelius T. Leondes, Ph.D.
Michel A. Melkanoff, Ph.D.
D. Lewis Mingori, Ph.D.
Peter A. Monkewitz, Ph.D.
Philip F. O’Brien, M.S.
David Ovrent, Ph.D.
Lucien A. Schmit, Jr., M.S.
Richard E. Stern, Ph.D.
Russell A. Westmann, Ph.D.

Assistant Professors
Pei-Hu Chiu, Ph.D.
Jeff D. Eldridge, Ph.D.
H. Pirouz Kavehpour, Ph.D.
William S. Klug, Ph.D.
Laurent Pilon, Ph.D.

Lecturers
Ravneesh C. Amar, Ph.D.
C.H. Chang, M.S., Emeritus
Amiya K. Chatterjee, Ph.D.
Carl F. Ruoff, Ph.D.
Alexander Samson, Ph.D., Emeritus

Adjunct Professors
Emilio Frazzoli, Ph.D.
Leslie M. Lackman, Ph.D.
Wilbur J. Marner, Ph.D.
Neil B. Morley, Ph.D.
Robert S. Shafer, Ph.D.
Jeff S. Shamma, Ph.D.

S C O P E  A N D  O B J E C T I V E S

The Department of Mechanical and Aerospace Engineering offers curricula in aerospace engineering and mechanical engineering at both the undergraduate and graduate levels. The scope of the departmental research and teaching program is broad, encompassing dynamics, fluid mechanics, heat and mass transfer, manufacturing and design, nanoelectromechanical and microelectromechanical systems, structural and solid mechanics, and systems and control. The applications of mechanical and aerospace engineering are quite diverse, including aircraft, spacecraft, automobiles, energy and propulsion systems, robotics, machinery, manufacturing and materials processing, microelectronics, biological systems, and more.

At the undergraduate level, the department offers accredited programs leading to B.S. degrees in Aerospace Engineering and in Mechanical Engineering. At the graduate level, the department offers programs leading to M.S. and Ph.D. degrees in Mechanical Engineering and in Aerospace Engineering. An M.S. in Manufacturing Engineering is also offered.

D E P A R T M E N T  M I S S I O N

The mission of the Mechanical and Aerospace Engineering Department is to educate the nation’s future leaders in the science and art of mechanical and aerospace engineering. Further, the department seeks to expand the frontiers of engineering science and to encourage technological innovation while fostering academic excellence and scholarly learning in a collegial environment.


In consultation with its constituents, the Mechanical and Aerospace Engineering Department has set its educational objectives as follows: (1) to teach students how to apply their rigorous undergraduate education to creatively solve technical problems facing society and (2) to prepare them for successful and productive careers or graduate studies in mechanical or aerospace or other engineering fields and/or further studies in other fields such as medicine, business, and law.

U N D E R G R A D U A T E  S T U D Y

Aerospace Engineering B.S.

The ABET-accredited aerospace engineering program is concerned with the design and construction of various types of fixed-wing and rotary-wing (helicopters) aircraft used for air transportation and national defense. It is also concerned with the design and construction of
spacecraft, the exploration and utilization of space, and related technological fields.

Aerospace engineering is characterized by a very high level of technology. The aerospace engineer is likely to operate at the forefront of scientific discoveries, often stimulating these discoveries and providing the inspiration for the creation of new scientific concepts. Meeting these demands requires the imaginative use of many disciplines, including fluid mechanics and aerodynamics, structural mechanics, materials and aeroelasticity, dynamics, control and guidance, propulsion, and energy conversion.

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L; Computer Science 31; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.

The Major

Required: Mechanical and Aerospace Engineering 101, 102, 103, 105A, 105D, 107, 107L, 131A or 133A, 156A, 157, 162A, 162B, 162M, 171A, 182A, 183; two departmental breadth courses (Electrical Engineering 100 and Materials Science and Engineering 104 — if one or both of these courses are taken as part of the technical breadth requirement, students must select a replacement upper division course or courses that may be any technical course from within the school — except for Mechanical and Aerospace Engineering 156A — or, by petition, from outside the school); three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and two major field elective courses (8 units) from Mechanical and Aerospace Engineering 131AL, C132A, 133AL, 134, 135, 136, CM140, 150A, 150B, 150C, 150P, 150R, 153A, 155, 157A, 161A, 161B, 162C, 163A, 166C, M168, 169A, 171B, 172, 174, CM180, CM180L, 181A, 182B, 182C, 184, 185, 186.

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

Graduate Study

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

10. Introduction to Mechanical and Aerospace Engineering

(2) Lecture, two hours. Overview of fluid mechanics, heat and mass transfer, manufacturing and design, microelectromechanical systems, structural and solid mechanics, systems dynamics and control. Required course. P/NP grading.

15. Technical Communication for Engineers


20. Programming with Numerical Methods Applications

(4) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Mathematics 31A, 31B, 31C. Introduction to programming with MATLAB. Applications to numerical methods used in engineering. 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


102. Dynamics of Particles and Rigid Bodies

(4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 101; Mathematics 33A, Physics 1A. Fundamental concepts of Newtonian mechanics. Kinematics and kinetics of particles and rigid bodies in two and three dimensions. Impulse-momentum and work-energy relationships. Applications. Letter grading.

103. Elementary Fluid Mechanics

(4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Mathematics 32B, 33A, Physics 1B. Introductory course dealing with application of principles of mechanics to flow of compressible and incompressible fluids. Letter grading.

105A. Introduction to Engineering Thermodynamics

(4) Formerly numbered M105A.) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Chemistry 20B, Mathematics 32B. Phenomenological 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 radiation. Engineering applications in thermal and environmental control. Letter grading.

107. Introduction to Modeling and Analysis of Dynamic Systems

(3) Lecture, three hours; discussion, one hour; outside study, four hours. Requisites: course 102, Computer Science 31. Corequisite: course 107L. Introduction to modeling of physical systems, including mechanical, fluid, thermal, and electrical systems. Linear differential equations. Description of these systems with coverage of superposition, convolution, frequency response, first- and second-order system transient response analysis, and numerical solution. Nonlinear differential equation descriptions with discussion of equilibrium, small signal linearization, large signal response, and numerical solution. Block diagram representation and response of interconnections of systems. Letter grading.
134. Design and Operation of Thermal Hydraulic Power Systems. (4) Lecture, three hours; laboratory, three hours; outside study, six hours. Requisites: courses 133A, 133AL. Thermal hydraulic design, maintenance, and operation of power systems, gas turbines, steam turbines, centrifugal refrigeration units, absorption refrigeration units, compressors, valves and piping systems, and instrumentation and control systems. Letter grading.

135. Fundamentals of Nuclear Science and Engineering. (4) Lecture, four hours; outside study, eight hours. Requisites: Chemistry 20A, Mathematics 33B. Review of nuclear physics, radioactivity and decay, and radiation interaction with matter. Nuclear fission and fusion processes and mass defect, chain reactions, criticality, neutron diffusion and multiplication, heat transfer issues, and applications. Introduction to nuclear power plants for commercial electricity production, space power, spacecraft propulsion, nuclear fusion, and nuclear science for medical uses. Letter grading.

136. Energy and Environment. (4) Lecture, four hours; outside study, eight hours. Requisites: course 105D. Recommended: course 114A, 133A. Global energy use and supply, electrical power generation, fossil fuel and nuclear power plants, renewable energy such as hydropower, biomass, geothermal, solar, wind, and ocean, fuel cells, transportation, energy consumption, air and water pollution, global warming. Letter grading.

CM140. Introduction to Biomechanics. (4) (Same as Biomedical Engineering CM140.) Lecture, four hours; discussion, one hour; 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. Heat and mass transfer. Power generation. Laboratory simulations and tests. Concurrently scheduled with course CM240. Letter grading.


150B. Advanced Fluid Mechanics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 103, 150A. Advanced aspects of potential flow theory. Incompressible flow around thin airfoils (lift and moment coefficients) and wings (induced drag). Gas dynamics: oblique shocks, Prandtl/Meyer expansion. Linearized subsonic and supersonic flow around thin airfoils and wings. Wave drag. Theory for nuclear reactor 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; rheology of blood; transport in microcirculation; role of fluid dynamics in arterial diseases. Letter grading.

150P. Aircraft Propulsion Systems. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 103, 105A. Thermodynamic properties of gases; flight performance analysis and component performance, component matching, advanced aircraft engine topics. Letter grading.

150R. Rocket Propulsion Systems. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 103, 105A. Rocket propulsion concepts, including chemical rockets (liquid, gas, and solid propellants); hybrid rocket engines, electric (ion, plasma) rockets, nuclear rockets, and solar-powered vehicles. Current issues in launch vehicle technologies. 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 measurements. Estimation of jet and blade noise with design aspects. Letter grading.

154A. Preliminary Design of Aircraft. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 154S. Critical preliminary design of aircraft, including weight estimation, performance and stability considerations. Term assignment consists of preliminary design of low-speed aircraft. Letter grading.


154S. Flight Mechanics, Stability, and Control of Aircraft. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 150A, 150B. Aircraft performance, flight mechanics, stability, and control; some basic ingredients needed for design of aircraft. Effects of airplane flexibility on stability derivatives. 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. Euler equations, motion of rotating bodies, oscillatory motion, normal coordinates, orthogonality relations. Letter grading.

155A. Advanced Strength of Materials. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 101, 182A. Not open to students with credit for course 166A. Concepts of stress and strain, plane and hollow stressed 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, Curved beams. Composites. Strength of materials: strength of deformation, fatigue, elastic instability. Letter grading.

157. Basic Mechanical Engineering Laboratory. (4) Laboratory, four hours; outside study, eight hours. Requisites: courses 150A, 150B, 150D, Electrical Engineering 100. 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 processing, and data analysis. Letter grading.

157A. Fluid Mechanics and Aerodynamics Laboratory. (4) Laboratory, eight hours. Requisites: courses 150A, 150B, 150D, Electrical Engineering 100. Measurement of basic quantities in fluid mechanics, aerodynamics, as well as hands-on experience with design of experimental programs and use of modern experimental techniques and tools in field. Letter grading.

157S. Basic Aerospace Engineering Laboratory. (4) Laboratory, eight hours; outside study, four hours. Requisites: courses 101, 102, 103, M105A. Electrical Engineering 100. Recommended: course 150C. Measurement of basic physical quantities in fluid mechanics, aerodynamics, and structures. Operation of primary transducers, computer-aided data acquisition, signal processing, and data analysis. Performance of experiments to enhance understanding of basic physical principles and characteristics of structures/systems of relevance to aerospace engineering. Letter grading.

161A. Introduction to Astronautics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 102. Recommended: course 182A. Space environment and exploration, orbits and rendezvous, propulsive transfer and rendezvous, orbital transfer and rendezvous, problem of three bodies, elementary perturbation theory, influence of Earth's atmosphere. Letter grading.

161C. Spacecraft Design. (4) Lecture; four hours; outside study, eight hours. Requisite: course 161B. Coverage of preliminary design, by students, of 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 whole. Letter grading.

161D. Space Technology Hardware Design. (4) Lecture, two hours; laboratory, three hours; outside study, seven hours. Recommended requisite or corequisite of 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.


162B. Mechanical Product Design. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Requisites: courses 94, 156A, 162A, 183. Analysis of mechanisms and machinery design (design) course involving modern design theory and methodology for development of mechanical products. Economics, marketing, manufacturability, and quality attributes and considerations taught and applied to hands-on design project. Letter grading.

162C. Electromechanical System Design Laboratory. (4) Lecture, one hour; laboratory, eight hours; outside study, three hours. Requisite: course 162B. Laboratory and design course consisting of design, development, construction, and testing of complex mechanical and electromechanical systems. Assembled at the beginning of the course, equipment is monitored and controlled for operational characteristics. Letter grading.

162M. Senior Mechanical Engineering Design. (4) Lecture, one hour; laboratory, six hours; outside study, five hours. Requisites: courses 107, 107L, 131A or 133A, 162B, 171A. Must be taken in last two academic terms of students' programs. Analytical course of large engineering system. Design factors include functionality, efficiency, economy, safety, reliability, aesthetics, and social impact. Final report of engineering specifications and drawings to be presented by design teams. Letter grading.

163A. Introduction to Computer-Controlled Machines. (4) Lecture, four hours; discussion, one hour; outside study, three hours. Requisite or corequisite: course 171A. Modeling of computer-controlled machines, including electrical and electronic elements, mechanical elements, actuators, sensors, and overall electromechanical systems. Motion and command generation, servo-controller design, and computer/machine interfacing. 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 156A. Introduction to two-dimensional elasticity, stress-strain laws, yield and fatigue; bending of beams; torsion of beams; warping; torsion of thin-walled cross sections: shear flow, shear-lag; combined bending torsion of thin-walled, stiffened structures used in aerospace vehicles; elements of plate theory; buckling of columns; Letter grading.

166C. Design of Composite Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 156A or 166A. History of composites, stress-strain equations for composite materials, bending and extension of symmetric laminates, failure analysis, design examples and design studies, buckling of composite components, nonsymmetric laminate, and mechanics of composites. Letter grading.

M168. Introduction to Finite Element Methods. (4) (Formerly numbered 168.) (Same as Civil Engineer ing M168.) Lecture, four hours; outside study, seven hours. Requisite: course 156A or 166A or Civil Engineering 130. Introduction to basic concepts of finite element methods (FEM) and applications to structural and solid mechanics and heat transfer problems; as well as coupled fluid-heat flow and elasticity; numerical integration. Practical use of FEM software; geometric and analytical modeling; preprocessing and postprocessing techniques; term projects with computers. Letter grading.


171A. Introduction to Feedback and Control Systems: Dynamic Systems Control I. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 94, 156A, 162A. Introduction to feedback principles, control system design, and system stability. Modeling of physical systems in engineering and other fields; transform methods; solution of linear differential equations; state variables. Letter grading.


172. Control System Design Laboratory. (4) Laboratory, eight hours; outside study, four hours. Requisite: course 172A. Simulation of physical systems. Algebraic design techniques for control of mechanical systems. Successful controller design requires students to formulate performance measures for control problem, design and analyze control systems, develop uncertainty descriptions for design models, explore of issues concerning model uncertainty and sensor/actuator placement. Students implement control designs on flexible structures, rate gyro, and inverted pendulum. Detailed reports required. Letter grading.

174. Probability and Its Applications to Risk, Reliability, and Quality Control. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Introduction to probability theory; random variables, distributions, functions of random variables, models of failure of components, reliability, redundancy, complex systems reliability, statistical methods, stress-strength modeling, safety factor. Letter grading.

CM180L. Introduction to Micromachining and Micromechatronics Systems (MEMS) Laboratory. (4) (Formerly numbered 180L.) (Same as Mechanical Engineering CM150L and Electrical Engineering CM150L.) Lecture, four hours; outside study, one hour. Prerequisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4BL. Corequisite: course CM180L. Introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and its application area to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students go through process of fabricating MEMS device. Concurrently scheduled with course CM280L. Letter grading.

181A. Analytical Solid Mechanics. (4) Lecture, four hours; outside study, eight hours. 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.


184. Introduction to Geometry Modeling. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisites: course 94, Computer Science 31. Fundamentals of geometric modeling, parametric spaces, blending functions, cones, splines and Bezier curve, coordinate transformations, algebraic and geometric form of surfaces, analytical properties of surfaces, hands-on experience with CAD/CAM systems design and implementation. 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, nanorobots, mass spectrometry, X-ray crystallography, and optical and electrochemical biosensors. Students encouraged to create their own ideas in self-designed experiments. Concurrently scheduled with course C287L. Letter grading.

188. Special Courses in Mechanical and Aerospace Engineering. (2 to 4) Lecture, two to four hours; outside study, four to eight hours. Special topics in mechanical and aerospace engineering for undergraduates. Topics to be taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated once for credit with topic or instructor change. P/NP or letter grading.

194. Research Group Seminars: Mechanical and Aerospace Engineering. (2 to 4) Seminar, two hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field. Student presentation of projects in research specialty. May be repeated for credit. P/NP or letter grading.

199. Directed Research in Mechanical and Aerospace Engineering. (2 to 4) Lecture, two to four hours; outside study, four to eight hours. Directed research under the supervision of faculty members. Students work on experimental or temporary basis projects, such as those taught by resident and visiting faculty members. May be repeated once for credit. P/NP or letter grading.

Graduate Courses

231A. Convective Heat Transfer Theory. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 131A, 182B. Recommended: course 250A. Conservation equations for flow of real fluids. Analysis of heat transfer in laminar and turbulent, incompressible and compressible flows. Internal and external flows, free and forced. Polyatomic and single-component gases. Heat transfer and radiation transfer. Dependence of heat transfer on properties of materials and radiation 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. Micropartic Energy Transport. (4) Lecture, four hours; outside study, eight hours. Requisite: course 105D. Heat carriers (photons, electrons, phonons, molecules) and their energy characteristics, statistical properties of heat carriers, scattering and propagation of heat carriers, Boltzmann transport equations, derivation of classical laws from Boltzmann transport equations, deviation from classical laws at small scale. Letter grading.


233A. Nuclear Reactor Theory. (4) Lecture, four hours; outside study, eight hours. Requisite: course 182A. Underlying physics and mathematics of nuclear reactor (fission) core design. Diffusion theory, reactor kinetics, slowing down and thermalization, multiplegroup methods, introduction to transport theory. Letter grading.


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 such as current interest in nuclear engineering, such as reactor safety, risk-benefit trade-offs, nuclear materials, and reactor design. May be repeated for credit with topic change. S/U grading.

239H. Special Topics in Fusion Physics, Engineering, and Technology. (2 to 4) Seminar, two to four hours; outside study, eight hours. Designed for graduate mechanical and aerospace engineering students. Advanced treatment of subjects selected from research areas in fusion science and engineering, such as instabilities in burning plasmas, alternate fusion confinement concepts, inertial confinement fusion, fission-fusion hybrid systems, and fusion reactor safety. May be repeated for credit with topic change. S/U grading.

CM240. Introduction to Biomechanics. (4) (Same as Biomedical Engineering 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. Heat and mass transfer. Power generation. 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. Corequisite: course 182B. Development and application of fundamental fluid mechanics at graduate level, with emphasis on incompressible flow. Flow kinematics, basic equations, constitutive relations, exact solutions on the Navier/Stokes equations, vorticity, composition of flow fields, potential flow. Letter grading.

250B. Viscous and Turbulent Flows. (4) Lecture, four hours; outside study, eight hours. Requisite: course 150A. Fundamental principles of fluid dynamics applied to study of fluids containing large amounts of motion discussed in order of advancing Reynolds number; wakes, boundary layers, instability, transition, turbulent shear flows. Letter grading.

250C. Compressible Flows. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 150A, 150B. Effects of compressibility in viscous and inviscid flows. Steady and unsteady inviscid subsonic and supersonic flows; method of characteristics; small disturbance theories (linearized and hypersonic); shock dynamics. 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. Hypersonic and High-Temperature Gas Dynamics. (4) Lecture, four hours; outside study, eight hours. Recommended requisite: course 250C. Molecular and chemical description of equilibrium and non-equilibrium hypersonic and high-temperature gas flows, chemical thermodynamics and statistical thermodynamics for calculation gas properties, equilibrium flows of real gases, vibrational and chemical rate processes, nonequilibrium flows of real gases, and computational fluid dynamics methods for nonequilibrium hypersonic flows. 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 and generate turbulence of secondary motions. Linear stability theory; thermal, centrifugal, and shear instabilities; boundary layer instability. Nonlinear aspects: sufficient criteria for stability, subcritical instability parameters, critical states, transition to turbulence. 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, semiempirical and ab initio potential surfaces, trajectory calculations, statistical reaction rate theories. Practical examples of large-scale chain mechanisms from combustion chemistry of several elements, etc. Letter grading.

253A. Advanced Engineering Acoustics. (4) Lecture, four hours; outside study, eight hours. Advanced studies in engineering acoustics, including three-dimensional wave propagation; propagation in bounded media; Ray acoustics; attenuation mechanisms in fluids. Letter grading.


254A. Special Topics in Aerodynamics. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 150A, 150B, 152A, 152B, 152C. Special topics of current interest in advanced aerodynamics. Examples include transonic flow, hypersonic flow, sonic booms, and unsteady aerodynamics. Letter grading.


255B. Mathematical Methods in Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 255A. Concepts of stability; state-space interpretation; stability determination by simulation, linearization, and Lyapunov direct method; the Hamiltonian as a Lyapunov function; nonautonomous systems; averaging and perturbation methods of nonlinear analysis; parametric excitation and nonlinear resonance. Application to mechanical systems. Letter grading.

M256A. Linear Elasticity. (4) (Same as Civil Engineering M230A.) Lecture, four hours; outside study, eight hours. Requisite: course 156A or 166A. Kinetics of deformation, material and spatial coordinates, deformation gradient tensor, nonlinear and linear strain tensors, strain displacement relations; balance laws, Cauchy and Piola stresses, Cauchy equations of motion, strain energy, equilibrium, compatibility, strain energy equations, 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 stress intensity factors; engineering applications in stiffened structures, pressure vessels, plates, and shells. Letter grading.

M257A. Elastodynamics. (4) (Same as Earth and Space Science M252A.) Lecture, four hours; outside study, eight hours. Requisites: courses M256A, M256B. Equations of linear elasticity, Cauchy equations of motion, constitutive relations, boundary and initial conditions, principle of energy. Sources and waves in unbounded isotropic, anisotropic, and dissipative solids. Half-space problems. Guided waves in layered media. Applications to dynamic fracture, nondestructive evaluation (NDE), and mechanics of earthquakes. Letter grading.

258A. Nanomechanics and Micromechanics. (4) Lecture, four hours; outside study, eight hours. Requisite: course M256A. Analytical and computational modeling methods to describe mechanics of materials at scales ranging from atomicistic through microstructural and up to and through continuum. Discussion of atomistic simulation methods (e.g., molecular dynamics, Langevin dynamics, and kinetic Monte Carlo) and their applications at nanoscale. Developments and applications of dislocation dynamics and statistical mechanics methods in areas of nanostructure and microstructure, micro- and mesoscale, polycrystalline plastic deformation, material instabilities, and failure phenomena. Presentation of technical applications of these emerging modeling techniques to surfaces and interfaces, grain boundaries, dislocations and defects, surface growth, quantum dots, nanotubes, nanoclusters, thin films (e.g., optical thermal barrier coatings and ultrathin nanolayer materials), nano-identification, nano-mechanics, smart (active) materials, nanobending and microring, and torsion. Letter grading.

259A. Seminar: Advanced Topics in Fluid Mechanics. (4) Seminar, four hours; outside study, eight hours. Advanced study of topics in fluid mechanics, with intensive student participation involving assignments in research problems leading to term paper or oral presentation (possible help from guest lecturers). Letter grading.

259B. Seminar: Advanced Topics in Solid Mechanics. (4) Seminar, four hours; outside study, eight hours. Advanced study in various fields of solid mechanics on topics which may vary from term to term. Topics include dynamics, plasticity, and stability of solids. Letter grading.

260. Current Topics in Mechanical Engineering. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Designed for graduate mechanical and aerospace engineering students. Lectures, discussions, and student presentations and projects in areas of current interest in mechanical engineering. May be repeated for credit. S/U grading.


262. Mechanics of Intelligent Material Systems. (4) Lecture, four hours; outside study, eight hours. Recommended requisites: courses 163A, 294. Theory of motion control for modern computer-controlled machines; multi-axis computer-controlled machines; machine kinematics and dynamics; multi-axis motion coordination; coordinated motion with desired speed and acceleration; jerk analysis; motion command generation; theoretical and experimen- tal interpolators; motion trajectory design and analysis; geometry-speed-sampling time relationships. Letter grading.

263B. Spacecraft Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 256A. Theory and implementation of spacecraft dynamics. Operations for rendezvous and transfer orbit maneuvers. Spacecraft rendezvous and formation flying of flexible space structures. Letter grading.

263C. Mechanics and Trajectory Planning of Industrial Robots. (4) Lecture, four hours; outside study, eight hours. Requisite: course 256A. Theory and implementation of robot control and design considerations. Kinematic structure modeling, trajectory planning, and system dynamics. Differential motion and static forces. Individual student study projects. Letter grading.

263D. Advanced Robotics. (4) Lecture, four hours; outside study, eight hours. Recommended preparation: courses 155S, 171A, 263C. Motion planning and control of articulated dynamic systems: nonlinear joint control, experiments in joint control and multi-axis coordination, multi-body dynamics, trajectory planning, motion optimization, dynamic performance and manipulator redundancy, motion planning of manipulators in space, attitude avoidance. Letter grading.


M270A. Linear Dynamic Systems. (4) Same as Chemical Engineering M280A and Electrical Engineering M280A. State-space description of linear time-invariant (LTI) and time-varying (LTV) systems in continuous and discrete time. Linear algebra concepts such as eigenvalues and eigenvectors, singular values, Cayley/Hamilton theorem, Jordan form; solution of state equations; stability, controllability, observability, realizability, and minimality. Stabilization design via state feedback and observers; separation principle. Connections with transfer function techniques. Letter grading.

270B. Linear Optimal Control. (4) Lecture, four hours; outside study, eight hours. Requisite: course M270A or Electrical Engineering M240A. Existence and uniqueness of solutions to linear quadratic (LQ) optimal control problems for continuous-time and discrete-time systems and infinite horizon problems; Hamiltonian systems and optimal control; algebraic and differential Riccati equations; implications of controllability, stabilizability, observability, and detectability solutions. Letter grading.

M270C. Optimal Control. (4) (Same as Chemical Engineering M280C and Electrical Engineering M240C.) Lecture, four hours; outside study, eight hours. Requisite: course 270B. 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.


271B. Stochastic Estimation. (4) Lecture, four hours; outside study, eight hours. Requisite: course 271A. Linear estimation with orthogonal projection lemma, Bayesian filtering theory, conditional mean and risk estimators. Letter grading.


271D. Seminar: Special Topics in Dynamical Systems Control. (4) Seminar, four hours; outside study, eight hours. Seminar on current research topics in dynamical systems modeling, control, and applications. Topics selected from process control, differential games, nonlinear estimation, adaptive filtering, industrial and aerospace applications, etc. Letter grading.


275A. System Identification. (4) Lecture, four hours; outside study, eight hours. Methods for identification of linear systems. System identification with emphasis on identification of discrete-time (digital) models of sampled-data systems. Coverage of conversion to continuous-time models. Models identified include transfer functions and state-space models. Discussion of applications in mechanical and aerospace engineering, including identification of flexible structures, microelectromechanical systems (MEMS) devices, and acoustic ducts. Letter grading.


CM280A. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) Formerly numbered M282G. (Same as Biomedical Engineering CM292G and Electrical Engineering CM250A.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4B, 4L. Corequisite: course CM280, Electromicrotechnological techniques and microelectromechanical systems (MEMS). Methods of micromachining and how these methods can be used to produce variety of MEMS, including microelectromechanical systems and microactuators. Students design microfabrication processes capable of achieving desired MEMS device. Concur rently scheduled with course CM180. Letter grading.

M280B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Biomedical Engineering CM250B and Electrical Engineering M250B.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course CM180 or CM280A. Advanced discussion of micromachining processes used to construct MEMS. Coverage of many lithographic, deposition, and etching processes, as well as their combination in process integration. Material issues such as resistivity, corrosion, mechanical properties, and residual/intrinsic stress. Letter grading.

CM280L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (2) (Formerly numbered 280L.) (Same as Biomedical Engineering CM250L and Electrical Engineering CM250L.) Lecture, one hour; laboratory, four hours; outside study, one hour. Prerequisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4B, 4L. Corequisite: course CM280A. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students conduct experiments under faculty supervision on fabrication of MEMS device. Concurrently scheduled with course CM180L. Letter grading.

281. Microsciences. (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 Biomedical Engineering M252 and Electrical Engineering M252.) Lecture, four hours; outside study, eight hours. Introduction to MEMS design. Design methods, design rules, sensing and actuation mechanisms, microsensors, and microactuators. Designing MEMS to be produced with both foundry and nonfoundry processes. Computer-aided design for MEMS. Design project required. Letter grading.

283. Experimental Mechanics for Microelectromechanical Systems (MEMS). (4) Lecture, four hours; outside study, eight hours. Methods, techniques, and philosophies being used to characterize microelectromechanical systems for engineering applications. Material characterization, mechanical/material properties, mechanical characterization. Topics include fundamentals of crystallography, anisotropic material properties, and mechanical behavior (e.g., strength/ fracture/fatigue) as they relate to microscale. Considerable emphasis on emerging experimental approaches to assess design-relevant mechanical properties of MEMS. Letter grading.


285. Interfacial Phenomena. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 103, 105A, 105D, 182A. Introduction to fundamental physical phenomena occurring at interfaces and application of their knowledge to engineering problems. Fundamental concepts of interfacial phenomena, including surface tension, surfactants, interfacial thermodynamics, interfacial forces, interfacial hydrodynamics, and dynamics of triple line. Presentation of various applications, including wetting, change of phase (boiling and condensation), forms and emulsions, microelectromechanical systems, and biological systems. Letter grading.


M287. Nanoscience and Technology. (4) (Same as Electrical Engineering M257.) Lecture, four hours; outside study, eight hours. Introduction to fundamentals of nanoscale science and technology. Basic physical principles, quantum mechanics, chemical bonding and nanostructures, top-down and bottom-up (self-assembly) nanofabrication; nanocharacterization: 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.
286. Thermomechanical Processing of Materials. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 131A, 183. Thermodynamics, heat and mass transfer, principles of material processing: phase equilibria and transitions, transport mechanisms of heat and mass, moving interfaces and heat sources, natural convection, nucleation and growth of microstructure, etc. Applications with chemical vapor deposition, infiltration, etc. Letter grading.


298. Seminar: Engineering. (2 to 4) Seminar, to be arranged. Limited to graduate mechanical and aerospace engineering students. Seminars may be organized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change. Letter grading.

M299A. Seminar: Systems, Dynamics, and Control Topics. (2) (Same as Chemical Engineering M297 and Electrical Engineering M246S.) Seminar, two hours; outside study, six hours. Limited to graduate engineering students. Presentations of research topics by lecturers, with an emphasis on papers from fields of systems, dynamics, and control. Students who work in these fields present their papers and results. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Assistants Training Seminar. (2) Seminar, two hours; outside study, four hours. Preparatory: appointment as teaching assistant in department. Seminar on communication of mechanical and aerospace engineering principles, concepts, and methods; teaching assistant preparation, organization, and presentation of material, including use of visual aids; grading, advising, and rapport with students. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. Petition forms to request enrollment may be obtained from academic 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 mechanical and aerospace 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 mechanical and aerospace engineering students. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

598. Research for and Preparation of M.S. Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. Supervised independent research for M.S. candidates, including thesis prospectus. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. Usualy taken after students have been advanced to candidacy. S/U grading.
M160B. Health Outreach and Education for At-Risk Populations, (4) (Formerly numbered 190B.) (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.

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 and exotic noninfectious diseases. Syllabus subject to change. May be repeated for credit with topic change. P/NP or letter grading.

190C. Health Outreach and Education to At-Risk Populations, (4) Discussion, two hours; fieldwork, six to eight hours. Requisites: courses 190A, 190B. Processes involved with designing, delivering, and assessing community health education programs, under supervision of professional staff. P/NP or letter grading.

199. Directed Research in Medicine. (2 to 8) Tutoring, 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

M215. Interdepartmental Course: Tropical Medicine. (2) (Same as Pathology M215 and Pediatrics M215.) Lecture, two and one-half hours. Preparation: basic courses in microbiology and parasitology of infectious diseases in School of Medicine or Public Health. Study of current knowledge about diseases prevalent in tropical and/or less developing areas. Topics may include East and exotic infectious diseases, with coverage of problems in nutrition and exotic noninfectious diseases. Syllabus supplement topics covered in classroom. S/U grading.

M256. Interdisciplinary Response to Infectious Disease Emergencies: Medicine Perspective. (4) Lecture, three hours; discussion, one hour. Designed to instill in professional students ideas of common emergency health problems and coordinated response, with special attention to bioterrorism. Examination of tools to help students prevent, detect, and intervene in infectious disease emergencies. Interdisciplinary sessions also attended by students in Schools of Dentistry, Nursing, and Public Health during winter two weeks through five. Letter grading.

M260A-M260B. Methodology in Clinical Research I, II, (4-4) (Same as Biometrics M260A-M260B.) Lecture, four hours. Recommended 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 Biometrics 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. Ethics in Patient-Oriented Research. (2) (Same as Biometrics M261.) Lecture, two hours; discussion, two hours. Discussion of current issues in responsible conduct of clinical research, including reporting of research, basis for authorship, issues in genetic research, principles and practice of research on humans, conflicts of interest, Institutional Review Board (IRB), and related topics. S/U or letter grading.

M263. Clinical Pharmacology. (2) (Same as Biostatistics M263 and Psychiatry M263.) Lecture, two hours. Preparation: completion of professional health sciences degree (M.D., D.D.S., D.N.Sc., or Ph.D.). Overview of principles of clinical pharmacology, especially as they relate to clinical and translational medicine and to advances in contemporary medicine such as targeting, gene therapy, and genomics. Letter grading.

M270C. Advanced Modeling Methodology for Dynamic Biomedical Systems. (4) (Same as Biomedical Engineering M270C and Computer Science M290C.) Lecture, four hours; outside study, eight hours. Requisite: 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, noncompartmental, and input/output models, linear and nonlinear. Emphasis on model applications, limitations, and relevance in biomedical sciences and other limited data environments. Problem solving in PC laboratory. Letter grading.

M270D. Optimal Parameter Estimation and Experiment Design for Biomedical Systems. (4) (Same as Biostatistics M270, Biomedical Engineering M270B, and Computer Science M290B.) Lecture, four hours; outside study, eight hours. Requisite: course M270C. Review of estimation methodology and parameter model estimation algorithms for fitting dynamic system models to biomedical data. Model discrimination methods. Theory and algorithms for designing optimal experiments for developing and quantifying models, with special focus on optimal sampling schedule design for kinetic models. Exploration of PC software for model building and optimal experiment design via applications in physiology and pharmacology. Letter grading.


Microbiology, Immunology, and Molecular Genetics

College of Letters and Science and David Geffen School of Medicine

UCLA

1602 Molecular Sciences

Box 951489

Los Angeles, CA 90095-1489

(310) 825-8482

fax: (310) 206-5231

http://www.mimg.ucla.edu

Jeffery F. Miller, Ph.D., Chair

Professors

Arnold J. Berk, M.D.

Douglas L. Black, Ph.D.

Benjamin Bonavida, Ph.D.

David A. Campbell, Ph.D.

Irvin S.Y. Chen, Ph.D.

Genhong Cheng, Ph.D.

Asim Dasgupta, Ph.D.

James S. Economou, M.D., Ph.D.

John L. Fahey, Ph.D.

Lawrence T. Feldman, Ph.D.

C. Fred Fox, Ph.D.

Robert P. Gunsalus, Ph.D.

Marcus Horowitz, M.D.

Patricia J. Johnson, Ph.D.

H. Ronald Kaback, M.D.

Aldons J. Luisi, Ph.D.

Otoniel Martinez-Maza, 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.

Serie L. Morrison, Ph.D.

Wenyuan Shi, Ph.D.

Lorry Simpson, Ph.D.

Stephen T. Smale, Ph.D.

Karl O. Stetter, Ph.D.

H. Ronald Stevens, Ph.D.

Fuyuhiko Tamanoi, Ph.D.

Christel H. Uittenbogaart, M.D., in Residence

Randolf Wall, Ph.D.

Bernadine J. Wisnieski, Ph.D.

Owen N. Witte, M.D. (President's Endowed Professor of Developmental Immunology)

Jerome Zack, Ph.D.

Z. Hong Zhou, Ph.D.

Professors Emeriti

Frederick A. Eisler, Ph.D.

Sydney M. Finegold, M.D.

Dexter H. Howard, Ph.D.

Rafael J. Martinez, Ph.D.

James N. Miller, Ph.D.

I. Debi Nayan, B.V.Sc., Ph.D.

Donald P. Nierlich, Ph.D.

Dan S. Ray, Ph.D.

Ell E. Sercarz, Ph.D.

Felix O. Wettstein, Ph.D.

Associate Professors

Beth A. Lazazera, Ph.D.

Benhur Lee, M.D.

M. Carrie Miceli, Ph.D.

Robert W. Simons, Ph.D.

Otto O. Yang, M.D.

Assistant Professors

Kenneth A. Bradley, Ph.D.

Peter J. Bradley, Ph.D.

Kent L. Hill, Ph.D.

Manuel Penichet, M.D., Ph.D.

April D. Pyle, 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, bio-
Microbiology, Immunology, and Molecular Genetics

Lower Division Courses

6. Introduction to Microbiology. (4) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 101 or Life Sciences 2. Designed for nontechnical students; introduction to biology of microorganisms (bacteria, viruses, protozoa, algae, fungi), their significance as model systems for understanding fundamental cellular processes, and their role in human affairs. P/NP or letter grading.

7. Developments in Biotechnology. (4) Lecture, three hours; demonstration/laboratory, one hour. Recommended preparation: course 6 or Life Sciences 2. Not open for credit to students with credit for course 101 or Life Sciences 3. Survey of recent developments in biotechnology, with emphasis on single-celled organisms. Review of basic principles of microbiology as they apply to biotechnology and examination of wide variety of topics, including alternate energy sources, pollution, cleanup, genetic fingerprinting, genetic engineering, and agricultural and food microbiology. P/NP or letter grading.

12. Biological Threats to Society: Bioterrorism and Emerging Infections. (4) Lecture, four hours. Examination of biological threats to American society. Coverage of biological weapons going back to first attempts to use microbes or toxins as weapons, and of emerging infections. Introduction to basic biology to understand infectious disease. P/NP or letter grading.

Upper Division Courses


102. Introductory Virology. (4) Lecture, three hours; discussion, one hour. Requires: Life Sciences 3 and 4, with grades of C– or better. Recommended corequisites: course 102L. Biological properties of bacterial and animal viruses, replication, methods of detection, interactions with host cells and multicellular hosts. Letter grading.

103L. Laboratory Methods in Modern Microbiology and Immunology. (5) Lecture, two hours; laboratory, six hours. Requires: Life Sciences 3, 4. Recommended prerequisite: course 101. Practical exposure to modern laboratory methods and analytical techniques that are common to many disciplines, including bacteriology, virology, immunology, pathogenesis, parasitology, genetics, genomics, and bioinformatics. Active use and application of scientific method while working collaboratively on interdisciplinary experiments and projects. Students should leave with ability to draw analogies between disciplines and choose most appropriate method to analyze problems within context of new topics. Letter grading.


Undergraduate Study

Microbiology, Immunology, and Molecular Genetics B.S.

Premicrobiology, Immunology, and Molecular Genetics Major

While students are completing the preparation courses for the major, they are classified as Premicrobiology, Immunology, and Molecular Genetics majors.

Preparation for the Major

Life Sciences Core Curriculum

Required: Life Sciences 1, 2, 3, 4; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4AL, and 4BL, or 6A, 6B, and 6C.

Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade of D or F in two core curriculum courses, either in separate courses or 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/admin_tr.htm for up-to-date information regarding transfer selection for admission.

Students intending to major in Microbiology, Immunology, and Molecular Genetics may seek counseling and petition to enter the major in the Student Affairs Office, 1602A Molecular Sciences.

The Major

Required: Chemistry and Biochemistry 153A, Microbiology, Immunology, and Molecular Genetics 101, 101L, 185A; two laboratory courses from Chemistry and Biochemistry 153L, Microbiology, Immunology, and Molecular Genetics 102L, C120, 198C, 199B; one course from Microbiology, Immunology, and Molecular Genetics 102, 106, 159; and at least six upper division elective courses (22 units minimum) selected from the departmental list (available in the Student Affairs Office and at http://www.migm.ucla.edu). Sixteen of the 22 elective units must be departmental courses not already taken to fulfill a requirement.

Each major course must be taken for a letter grade of C– or better, with a minimum overall 2.0 grade-point average in the major.

Honors Program

Overall grade-point averages of 3.2 and 3.5 in the preparation for the major and major respectively are required to apply for departmental honors. In addition students must have junior standing and the sponsorship of a faculty adviser from the department. The core of the program consists of Microbiology, Immunology, and Molecular Genetics 198A, 198B, and 198C research, culminating in a thesis. If the thesis is accepted by the honors committee and students complete all major requirements with a GPA of at least 3.5, they are awarded the bachelor’s degree with departmental honors. The department also offers an honors seminar course each Winter Quarter that is required for the honors program. For further information, contact the Student Affairs Office, 1602A Molecular Sciences.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Microbiology, Immunology, and Molecular Genetics offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Microbiology, Immunology, and Molecular Genetics.
C120. Advanced Techniques in Microbiology. (4) Lecture, one hour; laboratory, six hours. Requisites: course 101L or 102L, with a grade of C or better. Introduction to current recombinant techniques. Experiments include PCR, cloning, and other recombinant techniques. DNA binding recombinant protein is purified from Escherichia coli and its ability to bind to DNA studied using gelshift assay. Introduction to protein/protein interaction using yeast two-hybrid system and to tissue culture techniques and transfection and expression of genes for human light and heavy chain antibody. Concurrently scheduled with course C220. Letter grading.

121A. Microbial Molecular Biology Laboratory. (4) (Formerly numbered 188B.) Lecture, two hours; laboratory, six hours. Requisites: courses 101, and 101L or 102L, with grades of C or better. Limited to 24 students. Discovery-based research experience in which students evaluate hypotheses, conduct experiments, and analyze data generated through active participation in a project that utilizes techniques from combination of following disciplines: molecular biology, environmental microbiology, bacteriology, community ecology, bioinformatics, and biological systematics. Experiments include enrichment culture, environmental DNA isolation, PCR, cloning, gel electrophoresis, DNA sequencing reactions, database searches, and phylogenetic analysis. Letter grading.


CM133. Frontiers in Biotechnology. (4) (Formerly numbered C133.) (Same as Management CM176.) Lecture, three hours; enforced office time, one hour (to provide selective experience for undergraduate students in project research and written presentation). Requisites: Chemistry 153A and 153B, or Life Sciences 3 and 4, with grades of B or better. Integration of science and business in biotechnology. Coevolution with pharmaceutical, agricultural, and other key industries, therapeutics, crop improvement, devices, and other industry sectors. Academic research leading to licensing and founding of companies that turn research breakthroughs into marketable products. Stages of product development and development. Staged financing and growth: private offerings, public offerings, mergers and acquisitions. Concurrently scheduled with course CM223. Letter grading. P/NP or letter grading.

C134. Ethics and Accountability in Biomedical Research. (2) Seminar, two hours. Designed for graduate students and undergraduates who have credit for life science course. Individual studies 199 course. Responsibilities and ethical conduct of investigators in research, data management, mentorship, grant applications, and publications. Responsibilities to peers, sponsoring institutions, and society. Conflicts of interest, disclosure of potential conflicts, object welfare, human subject protection, and areas in which investigational goals and certain societal values may conflict. Concurrently scheduled with course C234. P/NP grading.

CM156. Human Genetics. (4) (Same as Human Genetics CM156 and Molecular, Cell, and Developmental Biology CM156.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Strongly recommended: Molecular, Cell, and Developmental Biology 100 or C139 or M140. Application of genetic principles in human populations, with emphasis on cytogenetics, biochemical genetics, population genetics, and family studies. Lectures and readings in literature, with focus on current questions in fields of medical and human genetics, and methodology appropriate to answer such questions. Concurrently scheduled with course CM256. Letter grading.

159. Advanced Molecular Genetics. (5) (Formerly numbered C159.) Lecture, three hours; discussion, two hours. Requisites: Chemistry 153A, Life Sciences 4. Integrated conceptual analysis of classical and modern molecular genetics of microbes, with coverage of key papers from elucidation of genetics code to present. Essential elements of experimental design, analysis of results, and scientific logic. Letter grading.

168. Molecular Parasitology. (4) (Formerly numbered C168.) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 3, 4. Survey of parasitic protozoa, not only as parasites that interact with host, but also as models for analysis of basic biological phenomena such as gene regulation, molecular development, cell-cell interactions, molecular evolution, and novel biochemical pathways. Letter grading.

C174. Advanced Topics in Molecular Parasitology. (2) Lecture, two hours. Requisites: course C168, 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.

185A. Immunology. (5) Lecture, three hours; discussion, 90 minutes. Requisites: Life Sciences 3, 4. Recommended requisites or corequisites: Chemistry 153A, 153L, Molecular, Cell, and Developmental Biology 100 or C139 or M140. Not open for credit to students with credit for course 261. Introduction to experimental immunobiology and immunochromeny; cellular and molecular aspects of humoral and cellular immune reactions. Letter grading.

191H. Honors Research Seminars: Microbiology, Immunology, and Molecular Genetics. (2) Seminar, two hours. Requisite or corequisite: course 198A or 198B. Limited to junior/senior Microbiology, Immunology, and Molecular Genetics honors program students. Discussion of current research literature, with focus on thesis topics/areas that students are working on as part of departmental honors requirements. One-hour presentation of student thesis research and current literature associated with it required. May be repeated for credit. Letter grading.

193A. Journal Club Seminars: Microbiology, Immunology, and Molecular Genetics. (2) Seminar, two hours. Requisite or corequisite: course 198A or 198B. Limited to junior/senior Microbiology, Immunology, and Molecular Genetics honors program students. Discussion of readings selected from current literature in microbial, immunologic, and molecular genetics field. May be repeated for credit. Letter grading.

194B. Research Group Seminars: UC LEADS and NIH/MARC. (2) Seminar, two hours. Limited to students in UC LEADS and NIH/MARC programs. Analysis, review, and critique of current papers in biomedical sciences disciplines, using skills necessary for effective oral communication and effective use of software such as PowerPoint for oral presentations. May be repeated for credit. Letter grading.

197. Individual Studies in Microbiology, Immunology, and Molecular Genetics. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with supervision, 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 grading.

198A-1998-198C. Honors Research in Microbiology, Immunology, and Molecular Genetics. (4-4-4) Tutorial, 12 hours. Preparation: minimum 3.0 grade-point average in premajor and major. Limited to junior/senior Microbiology, Immunology, and Molecular Genetics majors. Supervised independent research project under guidance of departmental faculty mentor. Copy of report describing research must be filed with Student Affairs Office by end of term. Individual contract required. P/NP or letter (198C).

199A-1999-199C. Directed Research in Microbiology, Immunology, and Molecular Genetics. (4-4-2 to 4) Tutorial, 12 hours. Preparation: minimum 3.0 grade-point average in premajor and major. Limited to junior/senior Microbiology, Immunology, and Molecular Genetics majors. Supervised independent research project under guidance of departmental faculty mentor. Copy of report describing research must be filed with Student Affairs Office by end of term. Individual contract required. P/NP or letter (199C).

Graduate Courses

208. Molecular Biology of Animal Viruses. (4) (Formerly numbered M208.) Lecture, three hours. Preparation: courses in general biochemistry and general microbiology, including viral virology. Recommended for advanced undergraduate students with a major in public health, biology, or microbiology and for graduate students with interest in any field of biology or chemistry. Overview of animal viruses, including viral structure, virus cell interaction, virus replication, and viral oncogenesis. Special emphasis on understanding the molecular mechanisms involved in control and regulation of replication, transcription, and translation of viral genome and its complex interaction with host. Letter grading.

C220. Advanced Techniques in Microbiology. (4) Lecture, one hour; laboratory, six hours. Requisites: course 101L or 102L, with a grade of C or better. Introduction to current recombinant techniques. Experiments include PCR, cloning, and other recombinant techniques. DNA binding recombinant protein is purified from Escherichia coli and its ability to bind to DNA studied using gelshift assay. Introduction to protein/protein interaction using yeast two-hybrid system and to tissue culture techniques and transfection and expression of genes for human light and heavy chain antibody. Concurrently scheduled with course C120. Letter grading.
CM222. Mouse Molecular Genetics. (2) Same as Human Genetics CM222.) Lecture, two hours. Requisites: course CM156, Life Sciences 3, 4. Emphasis on use of mouse as a model to study fundamental biological questions. Topics include mouse genome and functional genomics, mutant phenotyping and cloning of disease genes, transcriptional and translational regulation, mouse genetics, stem cell biology, neurobiology, and modeling human genetic disorders. Reading materials include original papers and reviews. Co-requisite: course CM122. S/U or letter grading.

M229. Molecular Mechanisms of Host/Pathogen Interaction. (4) (Same as Pathology M229.) Lecture, two hours; discussion, two hours. Requisite: Biological Sciences 153A and/or 153B, or Life Sciences 3 and 4, with grades of B or better. Integration of science and business in biotechnology. Coevolution with pharmaceutical, agricultural, and other key industries. Therapeutics, crop improvement, devices, and other industry sectors. Academic research leading to licensing and founding of companies that turn research breakthroughs into marketable products. Stages of product discovery and development. Staged financing and growth: private offerings, public offerings, deals, collaborations, outsourcing, intellectual property, regulation, pricing, profits, risks, public perception. Building value, exit strategies, and mergers and acquisitions. Concurrently scheduled with course CM133. S/U or letter grading.

CM233. Frontiers in Biotechnology. (4) (Formerly numbered C233.) (Same as Management CM276.) Lecture, two hours; discussion, one hour; seminar, two hours. Designed for graduate students. Discussion and student presentations of recent work in molecular and cellular interactions with eukaryotic host cells that result in disease or pathogen survival. Topics include pathogenesis of common viruses, bacteria, fungi, and parasites, basis of toxin-mediated cellular damage, and immune suppression of microbial tissue damage. Letter grading.

CM256. Human Genetics. (4) (Same as Human Genetics CM256 and Molecular, Cell, and Developmental Biology CM256.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Strongly recommended: Molecular, Cell, and Developmental Biology 100 or C139 or M140. Application of genetic principles in human populations, with emphasis on current advances in human genetics, population genetics, and human genetics and methodologies 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) (Formerly numbered M261.) Lecture, four hours. Requisite: Biological Chemistry CM253. Strongly recommended corequisite: course 298. Comprehensive course for graduate students and selected undergraduate students covering fundamentals and recent advances in molecular and cellular immunology. Lectures supplemented by course 298 seminar, with focus on reading and analysis of primary research articles. Oral presentation required. S/U or letter grading.

262A-262B-262C. Seminars: Current Topics in Immunobiology of Cancer. (2-2-2) Seminar, two hours. Designed for graduate students (or undergraduate students with approval of instructor). Review of recent literature in immunobiology, biology, and biochemistry of cancer, with emphasis on fundamental studies involving cell-mediated immunity, humoral response, tumor specific antigens, and new techniques. Discussion of reports on scientific meetings. Each course may be repeated for credit. S/U or letter grading.

270. Seminar: Molecular 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.

C247. Advanced Topics in Molecular Parasitology. (2) (Same as Molecular, Cell, and Developmental Biology M240.) Lecture, 90 minutes; discussion, one hour. Overview of current progress in research on cytokines and other immune system molecules in reproductive biology. S/U or letter grading.

C249. 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.

M250. 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.


MIDWEST AND NORTH AFRICAN 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: idps@international.ucla.edu
http://www.international.ucla.edu/idps/menas/

Sharon E. Gerstel, Ph.D., Chair
Faculty Advisory Committee

Osman M. Galal, M.D., Ph.D. (Community Health Sciences)
Nouri Gana, Ph.D. (Comparative Literature)
Sharon E. Gerstel, Ph.D. (Art History)
Ghislaine E. Lydon, Ph.D. (History)
Michael G. Morony, Ph.D. (History)
Steven D. Nelson, Ph.D. (Art History)
Willenima Z. Wendrich, Ph.D. (Near Eastern Languages and Cultures)

Scope and Objectives

The major and minor in Middle Eastern and North African Studies (MENAS) offer in-depth knowledge and specialized study of this geographic region, its peoples, and its cultures from the end of antiquity to the present. The program also explores the role and influence of this rich cultural heritage around the world. A strong foundation in history is complemented by a wide selection of courses from art history, geography, Near Eastern languages and cultures, political science, and sociology. The graduate major in this discipline is called Islamic Studies. For details, see the program by that name earlier in this section.

Undergraduate Study

Middle Eastern and North African Studies B.A.

Preparation for the Major

Required: The first-year course in Arabic, Armenian, Hebrew, Persian, or Turkish, or the equivalent level of proficiency as determined by admission into a second-year language course (other languages may be substituted by petition); History 3D; and three lower division courses (at least 12 units) with Middle Eastern or North African content selected from Anthropology 8, 9, Comparative Literature 1A, 1B, 1C, 1D, Economics 1, 2, Ethnomusicology 20B, 91L, 91N, Geography 3, History 20, 21, 22, Near Eastern Languages 50A, 50B, 50C, Political Science 20, 50, Sociology 1. Other
courses may be substituted by petition, but only with advance approval.

To enter the major, students must be in good academic standing (minimum overall 2.0 grade-point average), have completed 45 units and the requirements for the Preparation for the Major, and attend a mandatory counseling session and file a petition with the academic counselor, 10357 Bunche Hall.

Transfer Students

Transfer applicants to the Middle Eastern and North African Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one course in Middle Eastern and North African history and three additional courses with relevant content (eligibility of courses to be determined at the introductory counseling meeting).

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

The Major

Required: At least 11 upper division courses as follows: (1) three courses at the intermediate or advanced level or the equivalent in the Middle Eastern language taken in lower division, or the equivalent level of proficiency as determined by a departmentally administered examination, (2) History 105A, 105B, 105C, and (3) five elective courses, including courses in three different departments and two courses in a single department, to be selected from Anthropology 176, Art History 104A, 104B, C104C, 105E, Economics 110, 111, 112, 120, Ethnomusicology 161L and 161N (both must be taken to equal one 4-unit course), French 121, 160, Geography 135, 187, History, 108A, 116A, 116B, 164B, 164C, or 167A must be included) and two courses with specific Middle Eastern or North African content. Courses must be selected from Anthropology 176, Art History 104A, 104B, C104C, 105E, Economics 110, 111, 112, 120, Ethnomusicology 161L and 161N (both must be taken to equal one 4-unit course), French 121, 160, Geography 135, 187, History, 108A, 116A, 116B, 164B, 164C, 167A, upper division Near Eastern Languages and Cultures nonlanguage courses, Political Science 132A, M132B, 157, 165, Sociology 187.

Students may petition for the following preapproved courses to fulfill upper division elective requirements for the major: (1) any one special topics course with substantial Middle Eastern or North African content and focus on the period after 300 C.E. and (2) one relevant methodology course such as Political Science 170A, Psycholoygy 142H, or Sociology 112. Other courses may be substituted by petition, but only with advance approval.

No more than 32 of the 44 units required for the major may be in one department, and at least 22 upper division units must be in departments that offer a major in the College of Letters and Science. No more than 20 units may be applied toward both this minor and a major or minor in another department or program. Each course must be completed with a grade of C (2.0) or better.

Students are encouraged to gain overseas experience by study abroad through the Education Abroad Program in Egypt, Israel, or Turkey.

Middle Eastern and North African Studies Minor

The Middle Eastern and North African 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, have completed 45 units, and file a petition and seek counseling with the academic counselor, 10357 Bunche Hall.

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 208B, 91L, 91N, Geography 3, History 20, 21, 22, Near Eastern Languages 50A, 50B, 50C, Political Science 20, 50, Sociology 1.


Other courses may be substituted by petition, but only with advance approval.

No more than 8 to 10 units (two courses) may be applied toward both this minor and a major or minor in another department or program.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Molecular and Medical Pharmacology

David Geffen School of Medicine

UCLA

23-120 Center for the Health Sciences

Box 951735

Los Angeles, CA 90095-1735

(310) 825-0390

tel.: (310) 794-1819
e-mail: gradinfo@mednet.ucla.edu
http://www.nuc.ucla.edu

Michael E. Phelps, Ph.D., Chair

Professors

Utahl Banerjee, Ph.D.

Jorge R. Barrio, Ph.D. (Elizabeth R. and Thomas E. Platt Professor of Gerontology)

Christian Behrenbruch, M.B.A.

Jonathan Braun, M.D., Ph.D.

Maria Castro, Ph.D.

Gautam Chaudhuri, M.D., Ph.D.

Matthew Conolly, M.D.

Magnus Dahibom, Ph.D.

Roy Doumani, L.L.D.

Jon M. Fukuto, Ph.D.

Cameron B. Gundersen, Ph.D.

James R. Heath, Ph.D.

Harvey R. Herschman, Ph.D. (Crump Professor of Medical Engineering)

David A. Hovda, Ph.D.

Sung-Cheng (Henry) Huang, D.Sc.

Louis J. Igarro, Ph.D. (Jerome J. Belzer Professor of Medical Research)

Daniel L. Kaufman, Ph.D.

Barbara A. Levey, M.D.

Eddyhe D. London, Ph.D.

Pedro Lowenstein, M.D., Ph.D.

Jamshid Maddahi, M.D.

John C. Mazzotti, M.D., Ph.D. (Frances Stark Professor of Neurology)

Paul Mischel, M.D.

Richard W. Olsen, Ph.D.

Michael E. Phelps, Ph.D. (Norton Simon Professor of Biophysics)

Nagichettiar Satyamurthy, Ph.D.

Heinrich R. Schelbert, M.D., Ph.D.

Christiaan Schiepers, M.D., Ph.D.

Liga Toro, Ph.D.

Owen N. Witte, M.D. (President’s Professor of Developmental Immunology)

Hong Wu, M.D., Ph.D.

Professor Emeriti

Arthur K. Cho, Ph.D.

Associate Professors

Samson A. Chow, Ph.D.

Johannes Czernin, M.D.

Sherryl G. Howard, Ph.D.

Noriyuki Kasahara, M.D., Ph.D.

Harley I. Kornblum, M.D., Ph.D.

Paul A. Krogtad, M.D.

William P. Melega, Ph.D.

Srinivasa Reddy, Ph.D.

Desmond Smith, M.D., Ph.D.

Jide Tian, M.D.

Joy A. Umbach, Ph.D.

Anna Wu, Ph.D.

Christine Wu, Ph.D.

Assistant Professors

David B. Agus, M.D.

Martin Allen-Auerbach, M.D.

Wei Chen, M.D., Ph.D.

Thomas Graeber, Ph.D.

Arion Hadjioannou, Ph.D.

Jing Huang, Ph.D.

Meisheng Jiang, Ph.D.

Huiying Li, Ph.D.

Meisheng Jiang, Ph.D.

Michael Van Dam, Ph.D.

Martin Wallner, Ph.D.

Lily Wu, Ph.D.

Michael A. Chow, Ph.D., Vice Chair

Johannes Czernin, M.D., Vice Chair

Harvey R. Herschman, Ph.D., Vice Chair

Chair

Christiaan Schiepers, M.D., Ph.D.

Owen N. Witte, M.D.

Hong Wu, Ph.D.

Professor Emeriti

Samson A. Chow, M.D.

Johannes Czernin, M.D.

Heinrich R. Schelbert, M.D., Ph.D.

Christiaan Schiepers, M.D., Ph.D.

Liga Toro, Ph.D.

Owen N. Witte, M.D. (President’s Professor of Developmental Immunology)

Hong Wu, M.D., Ph.D.

Professor Emeriti

Arthur K. Cho, Ph.D.

Associate Professors

Samson A. Chow, Ph.D.

Johannes Czernin, M.D.

Sherryl G. Howard, Ph.D.

Noriyuki Kasahara, M.D., Ph.D.

Harley I. Kornblum, M.D., Ph.D.

Paul A. Krogtad, M.D.

William P. Melega, Ph.D.

Srinivasa Reddy, Ph.D.

Desmond Smith, M.D., Ph.D.

Jide Tian, M.D.

Joy A. Umbach, Ph.D.

Anna Wu, Ph.D.

Christine Wu, Ph.D.
Scope and Objectives

The Department of Molecular and Medical Pharmacology has basic and clinical components in which students have opportunities to develop intellectually and experimentally in basic biological sciences placed in the context of human disease. The department conducts integrative teaching and research programs that begin with molecular interactions and extend to studies of diseases and their treatment in humans. Departmental investigators study the biochemistry and pharmacology of drugs, gene expression and its regulation, signal transduction processes, cell-to-cell communication, viral replication and pathogenesis, autoimmune disease, neuronal development and plasticity, and integrated organ functions using techniques of chemistry and structural biology, DNA microarrays, molecular and cell biology, transgenic and chimeric mice, and cellular and organ imaging. Organic synthesis, genetic engineering, and imaging techniques such as confocal fluorescent and cryoelectron microscopy, autoradiography, and positron emission tomography (PET) are extensively employed. The imaging techniques are available in the Crump Institute for Molecular Imaging, Ahman son Biological Imaging Clinic, and UCLA-DOE Laboratory of Structural Biology and Molecular Medicine, which are affiliated with the department.

The goal of the education program is to provide faculty members and students the opportunity to examine the molecular and cellular basis of disease and the mechanisms of drugs in their treatment, as well as to visualize the changes in the disease state with procedures that monitor the molecular basis of cellular and organ function.

The graduate program seeks to prepare students for these interdisciplinary activities with a basic foundation in genetics, molecular and cellular biology, and pharmacology during their first year in residence. The second year is spent in the laboratory and in elective courses selected to reflect each student’s interest, background, and requirements for the research undertaken. Numerous opportunities for interaction with other departments, institutes, and programs are provided through interdisciplinary coursework and many collaborative research activities.

Although the department offers only graduate degrees, upper division undergraduate courses are offered with enrollment restrictions as indicated in the course descriptions.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaas/library/pgmrqpintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Molecular and Medical Pharmacology offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Molecular and Medical Pharmacology.

The department also offers two M.D./Ph.D. programs concurrently with the School of Medicine. One is the Medical Scientist Training Program (MSTP) in which candidates are medical students that have been accepted into MSTP by the School of Medicine in order to qualify. The second is the 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.

Molecular and Medical Pharmacology

Upper Division Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M110A</td>
<td>Drugs: Mechanisms, Uses, and Misuse</td>
<td>(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.</td>
</tr>
<tr>
<td>110B</td>
<td>Drugs: Mechanisms, Uses, and Misuse</td>
<td>(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.</td>
</tr>
<tr>
<td>199</td>
<td>Directed Research in Molecular and Medical Pharmacology</td>
<td>(2 to 8) Tutorial, three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Special studies in pharmacology, including either reading assignments or laboratory work or both, designed for proper training of students. Culuminating paper or project required. May be repeated for credit. Individul contract required. P/NP or letter grading.</td>
</tr>
</tbody>
</table>

Graduate Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>Introduction to Laboratory Research</td>
<td>(4 to 8) Laboratory, eight to 16 or 20 hours. Individual projects in laboratory research for beginning graduate students. At end of each term, students submit to their supervisor reports covering research performed. Pharmacology graduate students must take this course three times during their first two years in residence. S/U or letter grading.</td>
</tr>
<tr>
<td>203</td>
<td>Medical Pharmacology</td>
<td>(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.</td>
</tr>
<tr>
<td>M205A</td>
<td>Introduction to Chemistry of Biology</td>
<td>(3) Formerly numbered M205. (Same as Chemistry M205A.) Lecture, three hours. Chemical biology language and techniques of biology. Structure of biological molecules, kinetics and thermodynamics of biological systems, catalysis and electron transfer, genomics, proteomics, and metabolomics. S/U or letter grading.</td>
</tr>
<tr>
<td>M205B</td>
<td>Issues on Chemistry/Biology Interface</td>
<td>(2) (Same as Chemistry M205B.) Seminar, one hour. Requisites: 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.</td>
</tr>
<tr>
<td>211A-211B</td>
<td>Principles of Pharmacology</td>
<td>(4-2) Lecture, three to eight hours; discussion, zero to nine hours. Preparation: mammalian physiology, biochemistry. Syotematic consideration of the interaction between drugs and biological systems and of principal groups of drugs used in therapeutics. Particular attention on modes of action, pharmacokinetics, and disposition to provide a scientific basis for their rational use in medicine. S/U or letter grading.</td>
</tr>
<tr>
<td>234A-234B</td>
<td>Experimental Methods in Pharmacology</td>
<td>(2-2) Laboratory, three hours. Survey of experimental methods and instrumentation used in analysis, identification, and study of mechanisms of action of pharmacologically active compounds. S/U or letter grading.</td>
</tr>
<tr>
<td>M234C</td>
<td>Laboratory in Toxicological Methods</td>
<td>(2) Same as Environmental Health Sciences M245 and Molecular Toxicology M245. Lecture, one hour; laboratory, four to five hours. Survey of experimental techniques used in study of toxic substances. Experimental conducted within known toxin to demonstrate its effects at molecular, cellular, and tissue levels. Presentation of principles of techniques and methods of data analysis at discussion session prior to laboratory. Letter grading.</td>
</tr>
<tr>
<td>237</td>
<td>Research Frontiers in Cellular and Molecular Pharmacology</td>
<td>(8) Lecture, 10 hours; laboratory, 30 hours total. Detailed examination of principles of pharmacology and mechanisms of drug action at organismal, tissue, cellular, and molecular levels, with emphasis on receptors, receptor/receptor coupling, neurotransmitters, cardiovascular pharmacology, autonomic and central nervous system pharmacology. S/U or letter grading.</td>
</tr>
<tr>
<td>M241</td>
<td>Introduction to Chemical Pharmacology and Toxicology</td>
<td>(6) (Same as Molecular Toxicology M241.) Lecture, six hours. Preparation: organic and biological chemistry. Designed for molecular and medical pharmacology students. Introduction to general principles of pharmacology. Role of chemical properties of drugs in their distribution, metabolism, excretion, and modes of action. S/U or letter grading.</td>
</tr>
<tr>
<td>M248</td>
<td>Introduction to Biological Imaging</td>
<td>(4) (Same as Biomedical Engineering M248 and Biomedical Physics M248.) Lecture, three hours; laboratory, one hour; outside study, seven hours. Exploration of role of biological imaging in modern biology and medicine, including imaging physics, instrumentation, image processing, and applications of imaging for range of modalities. Practical techniques provided through series of imaging laboratories. Letter grading.</td>
</tr>
<tr>
<td>251</td>
<td>Seminar: Pharmacology</td>
<td>(2) Seminar presented by students, faculty, and guest lecturers on a variety of topics. S/U grading.</td>
</tr>
</tbody>
</table>
Molecular Biology

Interdepartmental Program
College of Letters and Science

UCLA 168 Boyer Hall
Box 951570
Los Angeles, CA 90095-1570
(310) 825-1018
fax: (310) 206-7286
http://www.mbl.ucla.edu

Sabeeka Merchant, Ph.D., Chair

Faculty Advisory Committee

Peter J. Bradley, Ph.D. (Microbiology, Immunology, and Molecular Genetics)
Michael F. Carey, Ph.D. (Biological Chemistry)
Guillaume F. Charifxue, Ph.D. (Chemistry and Biochemistry)
Jau-Nian Chen, Ph.D. (Molecular, Cell, and Developmental Biology)
Albert J. Courey, Ph.D. (Chemistry and Biochemistry)
Christopher T. Denny, M.D. (Pediatrics)
Sabeeka Merchant, Ph.D. (Chemistry and Biochemistry)
Peter Tontonoz, M.D., Ph.D. (Pathology and Laboratory Medicine)
Geraldine A. Weinmaster, Ph.D. (Biological Chemistry)

Scope and Objectives

The Ph.D. in Molecular Biology is offered under the supervision of an interdepartmental committee. The Molecular Biology Institute serves this committee and the various departments concerned in support of faculty research and teaching associated with the Ph.D. program. Staff members are from participating departments and from the Molecular Biology Institute. Areas for study include cell biology; developmental biology and neurobiology; nucleic acid chemistry, biochemistry; gene regulation; immunobiology; microbiology/virology and pathogenesis; molecular evolution and paleobiology; oncogenes and signal transduction; plant molecular biology; protein and enzyme structure and function; genomics; bioinformatics; and structural biology.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree

The Molecular Biology Program offers the Doctor of Philosophy (Ph.D.) degree in Molecular Biology.

Molecular Biology

Graduate Course

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.

Molecular, Cell, and Developmental Biology

College of Letters and Science

UCLA 2128 Life Sciences
Box 951606
Los Angeles, CA 90095-1606
(310) 825-7109, Undergraduate Office
fax: (310) 267-1880
e-mail: undergraduate@mcdb@lifesci.ucla.edu
(310) 794-4256, Graduate Office
e-mail: mcdb@lifesci.ucla.edu
http://www.mcdb.ucla.edu

Utpal Banerjee, Ph.D., Chair

Professors

Utpal Banerjee, Ph.D.
Robert B. Goldberg, Ph.D.
Volker Hartenstein, Ph.D.
Ann M. Hirsch, Ph.D.
Luisa M. Iruela-Arispe, Ph.D.
David K. Jacobs, Ph.D.
Steven E. Jacobsen, Ph.D.
Harumi Kasamatsu, Ph.D.
James A. Lake, Ph.D.
Frank A. Laski, Ph.D.
Chentao Lin, Ph.D.
Shuo Lin, Ph.D.
Karen M. Lyons, Ph.D.
John R. Merriam, Ph.D.
Elaine M. Tobin, Ph.D.

Professors Emeriti

William R. Clark, Ph.D.
John H. Fessler, Ph.D.
Bernard O. Pinney
Andrew C. Diener, Ph.D.
Fritiof S. Sjostrand, Ph.D.
Clara M. Szego, Ph.D.

Associate Professors

Jau-Nian Chen, Ph.D.
Paul H. O’Lague, Ph.D.

Assistant Professors

Amander T. Clark, Ph.D.
Andrew C. Diener, Ph.D.
William E. Lowry, Ph.D.
Hanna K.A. Mikloka, M.D., Ph.D.
Matteo Pelegri, Ph.D.
Alvaro Sagasti, Ph.D.

Lecturer

Pei-Yun Lee, Ph.D.

Adjunct Professors

Kenneth A. Feldman, Ph.D.
Richard B. Flavell, Ph.D.

Adjunct Assistant Professor

Roger I. Pennell, Ph.D.
Scope and Objectives
The revolution in modern biology that began with the elucidation of the structure of DNA by Watson and Crick in the 1950s has had a profound effect not only on biological research, but on the way biology is taught as a subject. The field of biology spawned by this discovery, generally called molecular biology, has provided an entirely new framework within which to approach questions in cell and developmental biology. The specializations, both technical and conceptual, demanded by this field have led to the growth of molecular biology and its related disciplines into an essentially separate branch of scientific inquiry.

Students who complete the requirements for the Bachelor of Science degree in Molecular, Cell, and Developmental Biology are exceptionally well prepared to pursue careers in cellular and subcellular biological research, biomedical research, or medicine or allied health fields. The degree combines essential background studies in mathematics, chemistry, and physics with a general introduction to all of the biological subjects, as well as in-depth exposure to key topics in molecular, cell, and developmental biology. The Ph.D. degree provides opportunity for advanced concentrated study and requires independent and innovative research that ultimately results in publishable dissertation materials.

Undergraduate Study
Molecular, Cell, and Developmental Biology B.S.
The Bachelor of Science degree in Molecular, Cell, and Developmental Biology (MCDDB) 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; 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, 153L, Molecular, Cell, and Developmental Biology M140 or 165A, 104, 138 or 141, 144 or 165B. Credit for a maximum of two upper division developmental biology courses may be applied toward the major requirements — the first as a required course and the second as elective units. Due to content overlap, students with credit for both courses 165A and 165B cannot receive major credit for course M140.

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, 194B, or 199, is acceptable. The following courses outside the department may be taken to satisfy a maximum of 10 units in this category: Biological Chemistry CM153G, Biomathematics 160 or Biostatistics 100A or Statistics 100A, Chemistry and Biochemistry 153C, 156, C159A, C159B, CM160A, Ecology and Evolutionary Biology 110, 121, 146, 162, Human Genetics C144, Life Sciences 100HA or 100HB or 100HC, Microbiology, Immunology, and Molecular Genetics 101, 102, 106, 159, 168, C174, 185A, Physiological Science C126, 166.

Laboratory: At least 4 units of upper division laboratory experience selected from Chemistry and Biochemistry 154, Ecology and Evolutionary Biology M158, 162, Life Sciences 100HA or 100HB or 100HC, 187A, Microbiology, Immunology, and Molecular Genetics 101 and 101L (both courses must be taken), 102 and 102L (both courses must be taken), Molecular, Cell, and Developmental Biology 120L, 155, 198A through 198D, 199, 199A through 199D, Physiological Science 166.

A maximum of 12 units of Molecular, Cell, and Developmental Biology 198A through 198D or 199A through 199D and no more than one course from 199 may be applied toward the major. Credit for 199 courses from other departments may not be applied except by petition.

Any single course may be applied toward only one category within the major (e.g., course C141 may be applied toward the required or elective category but not toward both).

Each course applied toward requirements for preparation for the major and the major must be taken for a letter grade. Majors must earn a C– or better in each preparation for the major course, and at least a 2.0 (C) overall average in all courses applied toward the major.

Honors Program
Admission
The honors program provides exceptional Molecular, Cell, and Developmental Biology and Plant Biotechnology majors with the opportunity to do research culminating in an honors thesis. Junior and senior majors who have completed all university-level coursework, including all preparation courses and requirements for the major with an overall grade-point average of 3.0 or better and a 3.5 GPA or better in the required major courses, may apply for admission to the honors program. Students must have the sponsorship of an approved faculty adviser.

For further information and application forms, students should consult the Student Affairs Office, 2128 Life Sciences, early in their educational planning. Completed applications should be submitted at least two weeks prior to the term in which students plan to begin the honors program.

Requirements
The core of the program consists of at least one approved undergraduate seminar course from Molecular, Cell, and Developmental Biology 191 and three research courses (12 units minimum) from 199A, 199B, and 199C, culminating in a thesis.

To qualify for graduation with honors, students must satisfactorily complete all requirements for the honors program and the major and obtain at least an overall 3.0 grade-point average and a 3.5 GPA or better in coursework required for the major. On recommendation by the faculty sponsor and with approval of the thesis by the departmental honors committee, students are awarded no honors, departmental honors, or highest departmental honors.

At the discretion of the departmental honors committee, students who have (1) a GPA of 3.6 or better, both overall and in the major and (2) demonstrated exceptional accomplishment on the research thesis are awarded highest departmental honors.

Computing Specialization
Majors in Molecular, Cell, and Developmental Biology may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the major, (2) completing Program in Computing 10A, 10B, 10C, 30, and 60, and (3) completing one course from Computer Science CM186B or Ecology and Evolu-
tionary 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://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Molecular, Cell, and Developmental Biology offers Master of Arts (M.A.) 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; five and one-half hours; experimental service learning, 30 minutes. Introduction to interdisciplinary debates surrounding personal and societal responses to AIDS and 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 embryonic stem cells as various social, ethical, political, and economic aspects of stem cell research. P/NP or letter grading.

60. Biomedical Ethics. (5) Lecture, three hours; discussion, one hour. Examination of ethical issues in research and exploration of how and why bioethics is relevant to reproductive screening, policy formulation, public regulation, and law. Provides foundation in traditional ethics, consideration of subcategories of bioethics, neuroethics, and eugenics, and how to apply ethics to contemporary issues in research and technology. P/NP or letter grading.

70. Genetic Engineering and Society. (4) Lecture, three hours; discussion, one hour. Designed for nonmajors. Not open to students with credit for Life Sciences 3 or 4. Basic principles of genetic engineering. Overview of genetic engineering techniques and relationship of genetic engineering to medicine, agriculture, and society. Emphasis on specific genetic engineering applications to generate discussion on its use in society. Letter grading.

80. Green World: Plant Biology for Now and Future. (5) Lecture, two hours and one-half hours; laboratory, two hours. Designed for nonmajors. Basic principles of plant biology and introduction to techniques for manipulating plants for improved agriculture, sources of renewable clean energy, reclamation of deforested and nutritionally depleted soils, and biological strategies to produce biodegradable plastics, antibacteriads, and other commodities. Underexploited agriculture crops also featured. P/NP or letter grading.

97X. PEERS Forum: Pathways in Science. (1) (Formerly numbered 97X.) (Same as Chemistry 97X.) Lecture, one hour. Limited to students in Program for Excellence in Education and Research in Sciences (PEERS). Series of lectures and workshops to acquaint students with practice of science, opportunities available to participate in research as undergraduates in students, and careers available to graduates with science degrees. May be repeated twice, but only 1 unit may be applied toward graduation. P/NP grading.

Upper Division Courses

100. Introduction to Cell Biology. (5) Lecture, three hours; discussion, one hour. Enforced requisites: Life Sciences 3, 4. Enrolled in underclassmen. P/NP or letter grading.


120. Introduction to Plant Biology. (4) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Introduction to plant biology, as well as to concepts and techniques in molecular biology and genetics. Letter grading.

120L. Introduction to Plant Biology Laboratory. (4) Laboratory, four hours. Enforced requisites: Life Sciences 3, 4. Enforced corequisite: course 120. Introduces plant biology and enables hands-on experience doing experiments and making their own observations about plant biology. Letter grading.


M140. Cell Biology: Cell Cycle. (5) (Same as Biological Chemistry C158.) Lecture, four hours; discussion, one hour. Enforced requisites: Life Sciences 3, 4. Enforced corequisite: course 120. Introduces the cell cycle and its regulation with laboratory exercises designed to incorporate concept of scientific method and recent advances in cell biology research. Letter grading.

140. Molecular Basis of Plant Differentiation and Development. (5) Lecture, three hours; discussion, one hour. Enforced requisites: Life Sciences 1, 3, 4. In-depth study of basic processes of growth differentiation and development in plants and molecular mechanisms underlying these processes. Discussion of variety of plant systems, with focus on developing critical understanding of current experimental basis of research in this field. Concurrently scheduled with course C239. Letter grading.


144. Molecular Biology of Mammal Cells. (3) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 3, 4. Not open for credit to students with credit for Chemistry 135B or Ecology and Evolutionary Biology 121. Structure of genes and control of gene expression. Prokaryotic and eukaryotic transcription and replication; repair and recombination; RNA processing. Letter grading.

C150. Plant Chemical and Molecular Communication. (4) Lecture, three hours; discussion, one hour. Preparation: completion of life sciences core curriculum. Introductory course in chemical ecology and how natural compounds affect gene expression. Emphasis on roles of natural compounds in plant/microbe, plant/animal, and plant/herbivore interactions; synopsis of principles of plant defense mechanisms and responses to microbial infections. Concurrently scheduled with course C250. P/NP or letter grading.


CM156. Human Genetics. (4) (Same as Human Genetics CM156 and Microbiology CM156.) Lecture, three hours; discussion; four hours. Enforced requisites: Life Sciences 3, 4. Strongly recommended: course 100 or C139 or M140. Application of genetic principles in human populations; emphasis on cytogenetics, biochemical genetics, population genetics, and family studies. Lectures and readings in literature, with focus on current questions in fields of medical and human genetics and methodologies appropriate to answer such questions. Concurrently scheduled with course CM256. Letter grading.

CM160. Biological Catalysis. (4) (Same as Chemistry CM158.) Lecture, four hours. Requisites: course 100 or C139 or M140, Chemistry 110A, 135A, 153B, Life Sciences 3. Reaction mechanisms in molecular biology; experimental approaches for study of enzymes, including kinetics, isotopic labeling, stereochemistry of chemical reaction, design of pharmaceutically active agents and artificial enzymes. Drug metabolism and interactions addressed on mechanistic level. Concurrently scheduled with course CM252. Letter grading.

165A. Biology of Cells. (5) Lecture, three hours; discussion, one hour. Requisite: Chemistry 140D or 30B, Life Sciences 3. Molecular basis of cellular structure and function, with focus on each individual cellular organelle, as well as interaction of cells with extracellular and with other cells. Material presented in context of experimental questions and answers to incorporate concept of scientific method and recent advances in cell biology research. Exposure to discussions to recent scientific articles that directly relate to information examined in lectures. Letter grading.
165B. Molecular Biology of Cell Nucleus. (5) Lecture, three hours; discussion, two hours. Requisites: course 165A, Chemistry 14D or 30B, Life Sciences 3, 4, 143, 144, 165A. Molecular model of eukaryotic cell nucleus, with focus on structure, organization, replication, and repair of eukaryotic genome; eukaryotic gene expression, including transcription, translation, and transport; cell cycle and cancer. Study of advanced specialized topics to allow integrated approach to molecular cell biology. Material presented in context of experimental questions and answers to incorporate concept of scientific method and recent advances in cell biology research. Exposure in discussions to current literature that directly relates to information examined in lectures. Letter grading.

168. Stem Cell Biology. (5) Lecture, three hours; discussion, one hour. Enforced requisites: courses 138, 165A. Strongly recommended: courses 143, 165B (or Microbiology C132). State-of-art education of embryonic and adult stem cells and how these pluripotent/multipotent cells can be used to treat congenital defects, diseases, or injury in humans. Review of current knowledge of human and mouse embryonic stem cells and how they develop into various tissue types. Discussion of adult stem cells in hematopoietic, nervous, and other organ systems to provide examples of tissue-specific stem cells and their impact in human disease. Examination of various model organisms as examples of how model organisms have helped to discover fundamental principles in stem cell biology. How advances in cell and molecular biology and tissue engineering can be applied to use of stem cells in regenerative medicine. Ethical and legal issues related to stem cell research. Letter grading.

CM169. Advanced Principles of Molecular and Cellular Biosciences II. (8) (Same as Biological Chemistry CM169 and Human Genetics CM169.) Lecture, five hours. Requisites: Chemistry 153A, 153B, 153C. Recommended: Chemistry CM153G. Fundamental principles and experimental approaches in four of various model organisms as examples of how model organisms have helped to discover fundamental principles in stem cell biology. How advances in cell and molecular biology and tissue engineering can be applied to use of stem cells in regenerative medicine. Ethical and legal issues related to stem cell research. Letter grading.


171. Principles of Neurobiology. (4) Lecture, three hours; discussion, one hour. Enforced requisites: Life Sciences 3. Strongly recommended: course 100 or M140 or 165A. Not open for credit to students with credit for course M175A (or Neuroscience M101A, Physiological Science M180A, or Psychology M117A). Lecture, two to three hours; discussion, one to two hours. Enforced requisites: course 165A. Molecular biology and neurobiology, including description of structure of neurons and nervous systems; ionic mechanisms responsible for generating membrane potentials, action potentials, and synaptic potentials; synaptic transmission; information transfer, signal transduction, intracellular protein transport, and structure and function of cytoskeleton, including cell-cell and cell-substrate interactions. Genetics and molecular genetics of Drosophila and mammals. Concurrency with scheduled course CM223A. Letter grading.

172. Genomics and Bioinformatics. (5) Lecture, three hours; discussion, one hour. Requisite: course 144 or 145, 165A, 165B, 168, or Microbiology C132. Genomics is study of complete repertoire of molecules in cells. Topics include human and yeast genomes and genetic approaches to study of function of individual genes, fundamental bioinformatics algorithms used to study relationship between nucleotide and protein sequences and reconstruction of their evolution, use of microarray technologies to measure changes in expression of genes and mechanism of gene expression in complex organisms, analysis of regulatory networks, genome data in order to make better predictions of gene function, and to analyze human genome data to gain more complete understanding of cellular biology. Letter grading.


M175A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry CM153G (or 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 Physiological Science majors only. Grade of C– or better is required to proceed to Physiological Science 111B. Cellular neurophysiology, membrane potential, action potentials, and synaptic transmission. Sensory systems and motor systems; how assemblies of neurons process complex information and control movement. P/NP or letter grading.

M175B. Molecular and Developmental Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: courses M175A (or Neuroscience M101A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 115, Life Sciences 3, 4. Molecular biology of channels and receptors; focus on voltage dependent channels and neurotransmitter receptors. Molecular biology of supramolecular mechanisms: synaptic transmission, axonal transport, cytoskeleton, muscle. Classical experiments and modern molecular approaches in development of neurobiology. P/NP or letter grading.

M175C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisite: courses M175A (or Neuroscience M101A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 115. Neural mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.

M181. Biological Bases of Psychiatric Disorders. (4) (Formerly numbered M191.) (Same as Neuroscience M130, Physiological Science M181, Psychiatry M174, and Psychology M175.) Lecture, four hours; discussion, two hours. Requisite: course M175A (or Neuroscience M101A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 115. Underlying brain systems and psychiatric symptoms and neurological disorders, including schizophrenia, depression, bipolar disorder, obsessive-compulsive disorder. Provide basis for understanding of brain dysfunctions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.

190A-190B-190C. Joint Research Colloquium. (1-1-1) Seminar, two hours. Designed for junior/senior department majors intended for students with strong commitment to pursue graduate studies in molecular, biochemical, physiological, and biomedical fields. Weekly variable topics course with reading, discussion, and presentation of paper selected from current literature. May be repeated once for credit. P/NP or letter grading.

192A. Undergraduate Practicum in Molecular, Cell, and Developmental Biology. (4) Seminar, two hours. Limited to seniors. Letter grades. Intended for students with strong commitment to pursue graduate studies in molecular, biochemical, physiological, and biomedical fields. Weekly variable topics course with reading, discussion, and presentation of paper selected from current literature. May be repeated once for credit. P/NP or letter grading.

192B. Undergraduate Practicum: CityLab. (2) Seminar, two hours. Limited to juniors/seniors in any life science major. CityLab training and supervised practicum for advanced undergraduate students. Students assist in preparation of materials and development of innovative programs under guidance of faculty members in small course settings. Consult Undergraduate Office for further information. May not be applied toward course requirements for Molecular, Cell, and Developmental Biology majors. Training and supervised practicum for advanced undergraduate students. Students assist in preparation of materials and development of innovative programs under guidance of faculty members in small course settings. May not be applied toward course requirements for Molecular, Cell, and Developmental Biology majors. May be repeated once for credit. P/NP or letter grading.

193. Journal Club Seminars: Molecular, Cell, and Developmental Biology. (1) Seminar, two hours. Corequisites: course 198A or 198B or 199A or 199B or 199A or 199B or 199A or 199B or 199A or 199B or 199A or 199B. Limited to juniors/seniors. Involvement in laboratory's weekly research group meeting to encourage student participation in research and to stimulate progress in specific research areas. Discussion of use of specific research methods and current literature in field of or research of faculty members or students. May be repeated for credit. P/NP or letter grading.
M222. Molecular Evolution. (2) Lecture, two hours. Preparation: knowledge of molecular biology and molecular genetics. Discussion of diverse mechanisms of evolution and speciation. Includes topics such as molecular clock, homology, and gene expression. Original research proposal required. Letter grading.

222D. Seminar: Plant Morphogenesis. (2) Lecture, three hours; discussion, one hour. Preparation: one hour. Requirements: Mathematics 3C, Physics 6C. Selections from current research in the field. Presentation and discussion of key questions of plant morphogenesis. May be repeated for credit. Letter grading.


224. Molecular Basis of Vascular Biology. (4) Lecture, four hours. Requisites: Life Sciences 4, Developmental and pathological aspects of vascular biology. Presentation and discussion of key questions of vascular biology with mechanistic viewpoint. Major emphasis on experimental approaches and current research in field. Introduction to several model systems along with presentation of specific topic. Basic information provided as to how this knowledge is obtained in laboratory. Experimental approaches and model organisms. Letter grading.

228. Prokaryotic and Eukaryotic Gene Systems. (2) Lecture, two hours. Presentations concerning current experimental approaches in study of DNA replication, transcription, and translation. SU or letter grading.


254. Seminar: Plant Morphogenesis. (2) Seminar, two hours. S/U or letter grading.

255. RNA Editing. (4) Lecture, two hours; discussion, one hour. Preparation: knowledge of molecular biology and molecular genetics. Discussion of diverse set of novel RNA modification phenomena known as RNA editing. Topics include U insertion/deletion type of editing in trypanosome mitochondria, C to U substitution editing in apo B mRNA and plant mitochondria, C insertion editing in Physarum mitochondria, etc. Discussion of mechanism, function, and evolution of these phenomena. S/U grading.

C239. Molecular Basis of Plant Differentiation and Development. (5) Lecture, three hours; discussion, one hour. Requirements: Life Sciences 4. In-depth study of basic processes of growth differentiation and development in plants and molecular mechanisms underlying these processes. Discussion of variety of plant systems, with focus on developing critical understanding of current experimental basis of research in this field. Concurrently scheduled with course C141. Preparation and presentation of term paper, in addition to other coursework, required of graduate students. 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.

242. Topics in Neurobiology. (4) Lecture, three hours. Requisite: course 171. Selected current problems in neurobiology discussed in depth, with emphasis on analysis of original papers. May be repeated for credit. Letter grading.


CM252. Biological Catalysis. (4) (Same as Biological Chemistry M252, Chemistry CM252 and Pharmacology M252.) Lecture, four hours. Requisites: course 100 or C139 or M140, Chemistry 110A, 153A, 153B, 153C, 156, Chemical and physical properties of proteins and nucleic acids. Biosynthesis, structure, and function of proteins, nucleic acids, and multicomponent complexes; protein and nucleic acid enzymology and gene expression. Structure, cloning, and analysis of DNA; biosynthesis and processing of RNA; biosynthesis, purification, structure, and analysis of proteins; correlation of structure and biological properties. Short computer module to teach aspects of protein structure. Genetic, molecular genetic, genomic, and proteomic approaches in bacteria and yeast. Concurrency scheduled with course CM163G. Letter grading.

254. Seminar: Plant Morphogenesis. (2) Seminar, two hours. S/U or letter grading.

255. RNA Editing. (4) Lecture, two hours; discussion, one hour. Preparation: knowledge of molecular biology and molecular genetics. Discussion of diverse set of novel RNA modification phenomena known as RNA editing. Topics include U insertion/deletion type of editing in trypanosome mitochondria, C to U substitution editing in apo B mRNA and plant mitochondria, C insertion editing in Physarum mitochondria, etc. Discussion of mechanism, function, and evolution of these phenomena. S/U grading.

Graduate Courses

CM220. Cell, Developmental, and Molecular Neurobiology. (6) (Same as Neuroscience M220 and Neuroscience M201.) Lecture, six hours. Fundamentals of topics concerning cellular, developmental, and molecular neurobiology, including intracellular signaling, cell-cell communication, neurogenesis and migration, synapse formation and elimination, programmed neuronal death, and neurotrophic factors. Concurrently scheduled with course C139. Letter grading.

C222A-C222D. Advanced Topics in Cell and Molecular Biology. (2 each) Lecture, two hours. Requisites: courses 100 or C139 or M140, 144, Life Sciences 3 and 4. Recent developments in fields of cellular, cell, and developmental biology. Concurrently scheduled with courses C174A-C174D. Letter grading.
CM256. Human Genetics. (4) (Same as Human Genetics CM256 and Microbiology CM256.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3.4 or C139 or M140. Application of genetic principles in human populations, with emphasis on cytogenetics, biochemical genetics, population genetics, and family studies. Lectures and readings in literature, with focus on current questions in fields of medical and human genetics and methodologies appropriate to answer such questions. Concurrently scheduled with courses CM156, Independent research project required of graduate students. Letter grading.

26A-266B-266C. Seminars: Development, Stem Cells, and Disease Mechanisms. (2-2-2) (Formerly numbered M266B-266C.) Seminar, two hours. Enforced requisites: course 138 or 143, Life Sciences 3, 4. Limited to graduate students. Advanced course based on research papers on fundamental cellular mechanisms governing development and disease. Disease results from genetically determined or acquired deficits in cell and molecular processes; analysis of these processes in context of normal development indicates ways of dealing with corresponding disease. S/U grading.

M272. Stem Cell Biology and Regenerative Medicine. (4) (Same as Pathology M272.) Lecture, two hours; discussion, two hours. Designed for graduate students. Presentation of current knowledge of embryonic and adult stem cells and factors that regulate their growth and development. Major emphasis on how advances in cell and molecular biology and tissue engineering can be applied to use of stem cells in regenerative medicine. Bioethical and legal issues related to stem cell research. S/U or letter grading.

276. Seminar: Molecular Genetics. (2) Seminar, two hours. Topics vary each term. S/U or letter grading.

Seminar: Genetics. (2) Seminar, two hours. S/U or letter grading.

278. Seminar: Molecular Genetics of Development. (2) Seminar, two hours. Designed for graduate students. Topics vary from year to year, with focus on establishment of position and pattern during embryogenesis by interaction of signal transduction systems and transcription factors. S/U or letter grading.


283. Seminar: Topics in Cell Biology. (2) Seminar, two hours. Discussion of various topics on biology of eukaryotic cells. Topics vary from year to year and include bioenergetics, motility, organelle DNA, membrane structure and function, oncogenic transformation, nuclear organization and function. S/U or letter grading.

284. Seminar: Structural Macromolecules. (2) Seminar, one hour; discussion, three hours. Presentation and discussion of current topics in extracellular active structural macromolecules — their synthesis, structure, and roles in cell and developmental biology. Letter grading.

286. Seminar: Plant Development. (2) Seminar, one hour; discussion, two hours. Preparation: one plant physiology course and at least one advanced undergraduate or graduate plant development or biochemistry course. Seminar on specific topics in plant development. Content varies each term. S/U grading.

289. Current Topics in Plant Molecular Biology. (2) Discussion, one hour. Recent research developments in field of plant molecular biology. Opportunities for graduate students to discuss individual research work. S/U grading.


295. Seminar: Molecular, Cell, and Developmental Biology. (2) Seminar, two hours. In-depth surveys of recent developments in molecular, cell, and developmental biology research. Reading and presentation of primary research articles to learn to critically evaluate research papers and to organize and present seminars on specific research topics. S/U or letter grading.

296. Advanced Topics in Molecular, 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 specialty of faculty member teaching course. S/U grading.

297. Advances in Molecular Analysis of Plant Development and Plant/Microbe Interactions. (2) Discussion, two hours. Recent advances in plant molecular biology, with emphasis on control of gene expression both during plant development and in plant/microbe interactions. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty — responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Preparation for Teaching Molecular, Cell, and Developmental Biology in Higher Education. (2) Seminar, two hours. Designed for graduate students. Study of problems and methodologies in teaching molecular, cell, and developmental biology, including workshops, seminars, apprentice teaching, and peer observation. S/U grading.

599. Directed Individual (or Tutorial) Studies. (2 to 12) Tutorial, to be arranged. S/U 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.


MOLECULAR CELLULAR AND INTEGRATIVE PHYSIOLOGY

Interdepartmental Program
College of Letters and Science and David Geffen School of Medicine

UCLA
2317 Life Sciences
Box 951606
Los Angeles, CA 90095-1606
(310) 825-3891
fax: (310) 206-9184
e-mail: mcarr@physci.ucla.edu
http://www.mcip.ucla.edu

James G. Tidball, Ph.D., Chair

Faculty Advisory Committee
Mark A. Frye, Ph.D. (Physiological Science)
David L. Glanzman, Ph.D. (Neurobiology, Physiological Science)
Thomas J. O’Dell, Ph.D. (Physiology)
James G. Tidball, Ph.D. (Pathology and Laboratory Medicine, Physiological Science)
Yehon Wang, Ph.D. (Anesthesiology, Physiology)
Nancy L. Wayne, Ph.D. (Physiology)

Scope and Objectives
Physiology is the study of the functional processes that collectively constitute life. The studies usually employ quantitative analyses of normal life processes, of pathological defects in normal life processes, of model systems to clarify and test basic physiological principles, and of functional specializations of organisms that have evolved under the influence of differing selective forces. Thus, physiology contributes importantly to advances in knowledge both in the basic biological sciences and in biomedical sciences and provides an essential foundation for the practice of medicine.

The primary objective of the interdepartmental Molecular, Cellular, and Integrative Physiology Program is to train a new generation of physiologists who apply modern knowledge in molecular and cellular biology and systems physiology to important questions in organismic function. Students learn to conceptualize physiological questions across several levels of organization and to understand how research strategies incorporating each of the levels of analysis can be formulated. This approach to physiology education is responsive to the need for physiologists who can intellectually and technically span disciplines related to physiology that are typically separated.

Coursework consists of formal instruction in the most current information in molecular biology, cell biology, and the molecular and cellular foundations of physiology. In addition, students identify an area of emphasis in biophysics, cellular and molecular biology, or integrative/comparative physiology in which additional studies are pursued. The heart of the program, however, is the research that leads to the dissertation, which is performed under the guidance of a faculty mentor. The program faculty includes more than 60 professors in the David Geffen School of Medicine and College of Letters and Science. Collectively they have been recently ranked by the National Research Council in the top five in the U.S. for their quality as an academic faculty.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree
The Molecular, Cellular, and Integrative Physiology Program offers the Doctor of Philosophy (Ph.D.) degree in Molecular, Cellular, and Integrative Physiology.
Molecular, Cellular, and Integrative Physiology

Graduate Courses

M200G. Biology of Learning and Memory. (4) (Same as Neurobiology M200G, Neuroscience M220, and Psychology M208.) Lecture, four hours. Molecular, cellular, circuit, systems, neuroanatomy, theory, and models of learning and memory. Cross-disciplinary focus on learning and memory to provide integrative view of subject that emphasizes emerging findings that take advantage of novel groundbreaking models. Letter grading.

M215. Molecular and Cellular Foundations of Physiology. (5) (Same as Physiological Science M215.) Lecture, three hours; discussion, two hours. Application of molecular and cellular approaches to systems level questions. Basic foundation for study of major physiological systems, with emphasis on levels of organization from molecular to macroscopic. Letter grading.


249. Seminar: Pathogenic Mechanisms in Muscle Disease. (2) Seminar, two hours. Recent advances have been made in genetic identification of molecular basis of muscle disease, and some mechanisms involved have been elucidated. Focus on muscle diseases in which substantial mechanistic information has been obtained, including particular cellular locations and diseases associated with those locations. Topics include Duchenne muscular dystrophy, congenital muscular dystrophy, limb girdle dystrophy, Ullrich myopathy, and other forms of genetically inherited muscle disease. S/U grading.

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.
M246. Molecular Toxicology. (4) (Same as Environmental Health Sciences M246.) Lecture, four hours. Enforced requisite: Environmental Health Sciences 240. Fundamental aspects of toxicology required for deep understanding of toxicological processes, with research-oriented outlook. Dissemination of information about important molecular toxicological topics to make students think about them from research perspective. Students learn about cutting-edge research areas of molecular toxicology, how to most optimally extract important information from research papers, how to critique papers, how to formulate alternative hypotheses for data in papers, how to formulate ideas for future research, and how to express their ideas effectively in oral settings. Letter grading.

296A-296G. Research Topics in Molecular Toxicology. (2 each) Research group meeting, two hours. Advanced study and analysis of current topics in molecular toxicology. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296A. Chemical Toxicology.
296B. Molecular Carcinogenesis.
296C. Teratogenesis.
296D. Molecular Topics in Boron Biology.
296E. Germ Cell Cytogetic/Genetic Biomarkers.
296F. Genetic Toxicology.
296G. Laboratory Analysis.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprenticeship personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. Individual guided studies under faculty supervision. May not be applied toward degree course requirements. May be repeated for credit. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examinations. (2 to 12) Tutorial, four hours. May not be applied toward degree course requirements. May be repeated for credit. S/U grading.

599. Ph.D. Dissertation Research. (8 to 12) Tutorial, to be arranged. May not be applied toward degree course requirements. May be repeated for credit. S/U grading.

**MOVING IMAGE ARCHIVE STUDIES**

**Interdepartmental Program**

Graduate School of Education and Information Studies and School of Theater, Film, and Television

UCLA
103G East Melnitz Building
Box 951622
Los Angeles, CA 90095-1622

(310) 206-4966
fax: (310) 825-3383
e-mail: miasinfo@ucla.edu
http://www.mias.ucla.edu

Jan-Christopher Horak, Ph.D., Acting Director
Leah A. Lievrouw, Ph.D., Chair

**Faculty Advisory Committee**

Jean-François Blanchette, Ph.D. (Information Studies)
Nicholas K. Browne, Ed.D. (Film, Television, and Digital Media)
Jan-Christopher Horak, Ph.D. (Film, Television, and Digital Media)
Leah A. Lievrouw, Ph.D. (Information Studies)

Chon A. Noriega, Ph.D. (Film, Television, and Digital Media)
Edward Richmond
Rob Stone

**Scope and Objectives**

The Moving Image Archive Studies M.A. is an interdepartmental degree program offered jointly by the Department of Information Studies in the Graduate School of Education and Information Studies and the cinema and media studies faculty of the Department of Film, Television, and Digital Media in the School of Theater, Film, and Television. The program is an intensive, specialized two-year course of study consisting of graduate seminars, directed studies, and an extensive practicum program, as well as special topic screenings, guest lectures, and technical demonstrations. The program is also affiliated with the UCLA Film and Television Archive.

The goal of the program is not merely training, but a broad education grounded in historical, critical, and theoretical study. The subject matter encompasses the aesthetics and history of film and television, the cultural responsibilities of selection and curatorial access and programming for the public, collection management, cataloging and documentation, and technical aspects of preservation and restoration. Seminars and practica are taught by a combination of UCLA faculty members, academic scholars, top-level preservationists, and other archive specialists.

The program recognizes that traditional models of archival work have been redefined in recent years to emphasize moving image preservation as an ongoing process of activities along a continuum that includes curatorship, laboratory preservation, storage management, cataloging, and access. The program encourages familiarity with all these closely related archival functions and provides opportunities for specialization within them.

A key goal is to link theory with practice. The program embraces hands-on practica in archives, libraries, studios, and laboratories in the Los Angeles area, as well as nationally and internationally.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gsaa/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 Moving Image Archive Studies Program offers the Master of Arts (M.A.) degree in Moving Image Archive Studies.

**Moving Image Archive Studies**

**Graduate Courses**

200. Moving Image Archiving: History, Philosophy, Practice. (4) Seminar, four hours. Introduction to historical development of moving image archives. Critical analysis of archival policies regarding collection development, access, exhibition, cataloging, preservation, and restoration. Introduction to principle models and methodologies of moving image archive practices from 1938 establishment of International Federation of Film Archives to the present, addressing practices such as collection development of classical, national, regional, and nonmainstream materials (small gauge formats, independent and amateur productions, new media); changing role of technology in preservation and restoration; ethics of moving image archiving; cataloging standards and document classification, database structures, alternative modes of archive administration and funding; cultural impact of public programming; research and publication supported by moving image archives; access, education, and archival production. S/U or letter grading.

210. Moving Image Preservation and Restoration. (6) Seminar, four hours. Critical analysis of distinct models for archival preservation and restoration of moving image media. Examination and evaluation of current preservation standards for storage and duplication. Discussion of critical preservation problems such as nitrate deterioration, color fading, vinegar syndrome, and irreplaceable formats. Exploration of case studies of specific restoration projects through critical before and after studies, with focus on crucial ethical issues embedded within each technical and aesthetic decision facing restorers. Of special interest is question of whether it is possible and appropriate to speak of particular schools and/or philosophies of restoration. Range of key issues addressed, such as identification of original versus subsequent and multiple versions and theoretical and practical distinctions between different types of restoration. S/U or letter grading.

220. Archaeology of Media. (4) Seminar, four hours. History of moving image technologies. Examination of relationship between technological evolution and forms of moving image expression. Lectures combined with extensive presentations of full range of analog, video, and digital image types to train students to develop discerning eye required for professionals working in 21st-century moving image archive. In addition to study of specific technological developments such as new gauges, formats, color processes, aspect ratios, film stocks, and projection systems, exploration of larger economic and industrial forces behind them. Study of aesthetic consequences of specific production and exhibition innovations by examining different types of images, genres, and narratives that accompany and influence passage of new technologies. S/U or letter grading.

230. Moving Image Cataloging. (4) Seminar, four hours. Introduction to methodologies and standards specific to moving image cataloging. Discussion and debate of continued application of Library of Congress subject headings and genres to cataloged moving image materials. Exposure to variety of indexing languages used today within online environments and practical training in application of cataloging principles to motion pictures and television programs. Survey of general theories and alternate documentation practices at work within field as well as specific cataloging rules established by FIAF for local and national moving image archives. Discussion of important issues of public access, exploring various methods and protocols for making collection-related information available through secondary and nonsystematic channels such as study guides, collection profiles, Websites, stand-alone databases, and exhibition catalogs. Letter grading.
240. Collection Development. (4) Seminar, four hours. Analysis of collection development policies for moving image archives and their relationship to archival practice, from cataloging to preservation and access. Day-to-day operation of archives involves complex set of interrelated activities, including collection identification and selection; conservation and storage; budget planning and grant writing, staff training, and supervision; and donations, deposit agreements, and application of copyright law. Exploration of these essential tasks and their implications for archives through case studies of moving image archives with distinct collection types, ranging from 35mm narrative to small-format video and digital media. S/U or letter grading.

250. Access to Moving Image Collections. (4) Seminar, four hours. Survey and analysis of policies and procedures used to provide access to moving image collections. Identification and exploration, through lecture and discussion, of three distinct modes of public access: traditional access, public exhibition, and proactive access. S/U or letter grading.

498. Individual Directed Studies: Practicum in Moving Image Archiving. (2 to 8) Tutorial, 12 hours. Hands-on experience at entry professional level in archive, library, information center, or media laboratory supervised by one archivist or other appropriately qualified professional and one program faculty member. S/U grading.

596. Directed Individual Study or Research. (2 to 4) Tutorial, four hours. Study or research in areas or subjects not offered as regular courses. S/U or letter grading.

MUSIC
School of the Arts and Architecture
UCLA
2539 Schoenberg Music Building
Box 951616
Los Angeles, CA 90095-1616
(310) 825-4761
fax: (310) 206-4738
http://www.music.ucla.edu

Roger Bourland, Ph.D., Chair

Professors
Roger Bourland, Ph.D.
Kenneth E. Burrell, B.A.
Vladimir Chernov, M.M.
Paul S. Chihara, Ph.D.
Juliana K. Gondet, M.M.
Gary G. Gray, M.M.

Adjunct Professors
Christopher Hanulik, B.M.
Douglas H. Masek, D.M.A.

Adjunct Associate Professors
William C. Booth, M.M.
Christoph Bull, D.M.A.
Mark C. Carlson, Ph.D.

Adjunct Assistant Professors
Judit I. Hansen, B.A.
Jennifer Judkins, Ph.D.
Brian O’Connor, B.M.
Jennifer L. Snow, D.M.A.
Peter F. Yates, D.M.A.

Scope and Objectives
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.

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, and conducting.

Undergraduate Study
Music B.A.

Admission
All applicants for admission and change of major are required to pass an audition in their principal performing medium.

Preparation for the Major
Required (for all concentrations except music education): Music 20A, 20B, 20C, with grades of C or better; 12 units from courses 60A through 65; two years (12 units) of performance organizations (courses C90A through C90N): Music History 26A, 26B, 26C. Students taking string, woodwind, brass, or percussion lessons must select from Music C90E, C90F, C90G, C90M (Fall Quarter only), or 90N; students taking vocal lessons must select from C90A, 90D, or 90L; students taking keyboard or guitar lessons may choose from C90A through C90N. Students must participate in a minimum of two different organizations over the course of their stay at UCLA. In addition, they are required to take one college year — or at least one course at level three — of French, German, Italian, or Spanish, which may be used to fulfill the school language requirement.

Music Education: Music 20A, 20B, 20C, with grades of C or better; 12 units from courses 60A through 65; three years (18 units) of performance organizations (courses C90A through C90G and C90M Fall Quarter only); Music History 26A, 26B, 26C; Ethnomusicology 20A or 20B or 20C. In addition, students are required to take one college year — or at least one course at level three — of French, German, Italian, or Spanish, which may be used to fulfill the school language requirement.

The Major
Required (for all concentrations): Music 120A, 120B, 120C, with grades of C or better, Music History 126A, 126B, 126C, and courses selected from one of the concentrations listed below.

Composition: A minimum of 41 upper division units, including Music 104A or 104B, 106A, 106B, 116, 123A, 123B, 123C, 124A or 124B or 124C, 127, and at least 8 elective units selected from courses 104A or 104B (if not already taken), 117, 118A, 118B, additional terms of 123A, 123B, 123C, 124A or 124B or 124C (if not already taken), 197, Ethnomusicology 117, C136A, C136B, 146, C156A, C156B, 157, 158A, 158B, 158C, 160, 170, 181. A senior recital, to include at least 30 minutes of original music, is also required (except by petition only).

Music Education: A minimum of 37 upper division units, including Music 100A, 100B, 100C, 110, 111A, 111B, 114A, 114B, 114C, 114D and 114F or 119, 114E, 114G through 114I, 116, 117 or 118A, and three courses from 160A through 165. A senior recital is required.

Performance: Twelve units in performance instruction from Music 160A through 165 (including junior and senior recital requirements); 4 units of chamber ensembles (Music C175); 4 units of elective courses from 106B, 116, 117, 118A, 118B, 119, Music History 130, 135A, 135B, 135C, 191A through 191G, Ethnomusicology M108A, 108B, 120A, 120B, 121, 170; and one upper division elective course in music. During each term in which students take
private lessons, they must participate in a performance organization for a letter grade. Students taking string, woodwind, brass, or percussion lessons must select from Music C90E, C90F, C90G, C90M (Fall Quarter only), or C90N; students taking vocal lessons must select from C90A, C90D, or C90L; students taking keyboard or guitar lessons may choose from C90A through C90N.

**Theory:** Six courses selected in consultation with a faculty adviser.

### Graduate Study

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

### Music Lower Division Courses

**1A-1B. Fundamentals of Music.** (4-4) Lecture, three hours; discussion, two hours. Designed for nonmusic majors. P/NP or letter grading. **1A.** Introduction to elements of music: pitch and rhythm symbols, meter and time signatures, notation, scales, intervals, and chord structure. **1B.** Requisite: course 1A. Diatonic harmony; four-part writing, including inversions, sevenths, secondary dominants, and modulation; organization of melody and accompaniment; simple analysis; sight-singing and ear training.

3. **Preparatory Music Theory for Music Majors.** (4) Lecture, four hours; laboratory, one hour. Limited to Music majors. Course for Music majors in music fundamentals, including musicianship, theory, and terminology. Letter grading.

**4A-4B-4C. Basic Musicianship.** (2-2-2) Laboratory, three hours. Class instruction in elementary ear training and keyboard skills.

5. **Beginning Voice Class.** (2) Studio, four hours; outside practice and preparation, two hours. Not open to voice majors. Correct singing techniques, including vocal mechanism, posture and breathing, musical warm-ups, optimal vocal production, diction, and performance delivery to be put into practice in classroom study, vocal exercises, and performances. Final recital with piano accompaniment required. May be repeated for maximum of 12 units with a grade of C in each course. Letter grading.

7. **Understanding and Movie Music.** (4) Lecture, four hours; outside study, eight hours. Musical experience helpful, but not required. Brief historical survey of film music, with strong emphasis on recent development: Japanese animation, advertising, and MTV, as well as computer tools and digital scoring methods. Designed to inspire and inform those interested in movie music. Offered in summer only. P/NP or letter grading.

8G. **Graduate Piano Sight-Reading.** (2) Limited to graduate students. Designed to help entering graduate students remedy entrance deficiencies, to be cleared by examination. May be repeated. SU grading.

10. **Computer-Assisted Sight-Singing Laboratory.** (2) Lecture, two hours; laboratory, one hour. Requisite: course 1A. Individualized, self-instructed approach to development of sight-singing skills through individual use of a computer music, keyboard instrument, and linear program learning.

15. **Art of Listening.** (5) Lecture, three hours; discussion, one hour. Examination of listening skills through direct interaction with live performance, performers, and composers. Relations of listening to theoretical, analytical, historical, and cultural frameworks. Music as aesthetic experience and cultural practice. P/NP or letter grading.

16. **Hollywood Musical and American Dream.** (4) Lecture, three hours; discussion, one hour. Examination of composers, writers, and filmmakers whose creative efforts changed how one could view American life as seen through Hollywood musicals. P/NP or letter grading.

20A. **Music Theory I.** (4) Lecture, two hours; discussion, six hours. Preparation: passing score on departmental examination. Theory: species counterpoint through fifth species; description of triads and inversions. Musicianship: interval recognition; fixed-do solfeggio of diatonic and modal scales; dictation of diatonic melodies; two-part dictation of small-cadence, note-against-note melodies; simple rhythmic dictation; use of treble and bass clefs.

20B. **Music Theory II.** (4) Lecture, four hours; discussion, four hours. Requisite: course 20A with a grade of C or better. Theory: diatonic harmony through secondary dominants and diminished sevenths; modulation to dominant and relative keys; writing of four-part chorales; style composition in baroque dance forms; introduction to figured bass notation. Musicianship: harmonic dictation, including secondary dominants, seventh chords, but not modulations; more advanced two-part dictation; harmonic one-part dictation; more advanced sight-singing; keyboard (three-part open score in homophonic textures, introduction to tonal harmony).

20C. **Music Theory III.** (4) Lecture, four hours; discussion, four hours. Requisite: course 20B with a grade of C or better. Theory: chromatic harmony including development of tonality; 1800 to 1850; appro- priate analysis and style composition. Musicianship: advanced sight-singing; two-part contrapuntal dictation; keyboard harmony (harmonic sequences in major and minor keys); reading in open score of four homophonic parts.

60A-65. **Undergraduate Instruction in Performance.** (2-2) Laboratory, one hour. Limited to Music majors. Course for Music majors in music fundamentals, including musicianship, theory, and terminology. Letter grading.

60A. **Dolpin.** 60B. Violola. 60C. Cello. 60D. String Bass. 60E. Harp. 60F. Classical Guitar. 60G. Viola da gamba. 60K. Lute. 61A. Flute. 61B. Oboe. 61C. Clarinet. 61D. Bassoon. 61E. Saxophone. 62A. Trumpet. 62B. French Horn. 62C. Trombone. 62D. Tuba. 63. Percus- sion. 64A. Piano. 64B. Organ. 64C. Harpsichord. 65. Voice.

80A. **Beginning Keyboard.** (4) Laboratory, five hours; preparation/practice, seven hours. Simple keyboard skills together with basic aspects of music theory and its practical application to keyboard: sight-reading; tonal melody, chord theory, melody and rhythm, simple compositions, and improvisations. Offered in summer only. P/NP or letter grading.

80F. **Beginning Guitar Class.** (4) Laboratory, five hours; preparation/practice, seven hours. Introduction to guitar techniques, accompanying, and arranging for the instrument; coverage of note reading and tabula-ure. Offered in summer only. P/NP or letter grading.

C90A. **UCLA Chorale.** (2) Activity, four hours. Prepa- ration: audition. Select mixed ensemble of 50 to 60 voices performing choral music appropriate for a concert ensemble. May be repeated for credit without limitation. May be concurrently scheduled with course C480. P/NP or letter grading.

90B. **College Chorus.** (4) Nonaudition mixed cho- rus of 50 to 150 voices performing medium and con- cert-length choral works from baroque to the present. College Chorus performs only as part of “Choral Union,” a large chorus made up of all of the choral en- semble. May be repeated for credit without limitation. P/NP or letter grading.

90C. **Chamber Singers.** (2) Activity, three hours. Preparation: audition. Select mixed ensemble of 16 to 20 voices performing chamber choral music of all pe- riods, with emphasis on Renaissance and baroque music. May be repeated for credit without limitation. P/NP or letter grading.

90E. **Symphony Orchestra.** (2) Activity, four hours. Preparation: audition. Group performance of symphonic literature, as well as orchestral accompaniment for opera and major choral works. May be repeated for credit without limitation. May be concurrently scheduled with course C481. P/NP or letter grading.

90F. **Symphonic Band.** (2) Preparation: audition. Group performance of instrumental music scored for band. May be repeated for credit without limitation. P/NP or letter grading.

90G. **Wind Ensemble.** (2) Activity, four hours. Preparation: audition. Group performance of concert literature for wind ensemble. May be repeated for credit without limitation. May be concurrently sched- uled with course C482. P/NP or letter grading.

90L. **Music Theater Workshop.** (2) Activity, six hours. Preparation: audition. Rehearsal and perfor- mance of scenes and complete operas, as well as repertoire, stage movement, and foreign language diction coach- ing. May be repeated for credit without limitation. P/NP or letter grading.

90M. **Marching and Varsity Bands.** (2) Activity, four hours; preparation: audition. Group performance of special band arrangements for football and basketball games as well as special events. May be repeated for credit without limitation. P/NP or letter grading.

90N. **Jazz Ensemble.** (2) Activity, three hours. Prep- aration: audition. Group performance of jazz and pop- ular music in ensembles of 20 to 30 instruments. May be repeated for credit without limitation. P/NP or letter grading.

90P. **Alexander Technique.** (2) Activity, two hours; outside preparation and practice, four hours. Limited to Music majors. Introduction to principles of Alexander technique. Study of musician’s postural attitude at the instrument. Designed to help instrumentalists and vocal- ists prevent injuries and performance anxiety. May be repeated with consent of instructor. P/NP grading.

90Q. **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. P/NP or letter grading.

90R. **Guitar Accompanying.** (2) Activity, four hours; outside study, two hours. Collaboration with instru- mentalists and/or vocalists in role of accompanists. Performance includes, but is not limited to, lessons, rehearsals, special studio performance projects, mas- ter classes, concerts, auditions, juries, and recitals. May be repeated for credit without limitation. P/NP or letter grading.
Upper Division Courses

10A-100B-100C. Music in American Education. (4-4-4) Lecture; four hours; laboratory, one hour. Requisites: courses 20A, 20B, 20C, 11C, 120A, 120B, 120C, Music History 26A, 26B, 26C. Critical study and analysis of organization, curriculum, and literature of music programs for elementary and secondary schools in American education. Each course may be taken independently for credit. Letter grading. 100A. General Music; 100B. Choral Music; 100C. Instrumental Music.

10A. Modal Counterpoint. (3) Lecture, three hours. Requisite: course 120C (accelerated section). In-depth exploration of counterpoints and technical methods of counterpoint of 15th and 16th centuries through writing and analysis of important forms of the period, including species, canon, free counterpoint, cantus firmus, point of imitation, fugue, etc. Letter grading.

10B. Special Topics in Counterpoint. (3) Lecture, three hours. Requisite: course 120C (accelerated section). In-depth exploration of polyphonic styles and textures since 1750, with emphasis on late-19th- and 20th-century modes of expression, through writing and analysis. Letter grading.

10A. Orchestration I. (4) Lecture, four hours; laboratory, one hour. Requisites: courses 120C, 123C. Ranges and characteristics of instruments, with exercises in scoring. P/NP or letter grading.

10B. Orchestration II. (4) Discussion, three hours. Requisites: courses 10A, 120C (accelerated section), 123C. Scoring and analysis for ensembles and full orchestra. P/NP or letter grading.

110. Learning Approaches in Music Education. (4) Lecture, two hours; activity, two hours; outside study, eight hours. Introduction to concepts and skills central to teaching music. Exploration of three modes of music teaching: learning through notation, oral transmission, and imitation. Study of improvisation and communal composition using clarinet and guitar. Evaluation of experiences in context of major learning theories. Letter grading.

111A. Technology in Music Education I. (1) Laboratory, three hours. Requisite or corequisite: course 20A. Provides music educators with tools and knowledge necessary to use appropriate computer hardware and software for purposes of music sequencing, arranging, and scoring, with emphasis on applications that are appropriate for use in public and/or private schools for levels K-12 and higher education. Activities include familiarization with computer systems and software, computer-assisted music notation and publication, and development of basic sequencing techniques. Letter grading.

111B. Technology in Music Education II. (1) Laboratory, three hours. Requisite: course 111A. Introduction to instructional uses of computers in music classrooms, with emphasis on practical information necessary to integrate and implement microcomputers in schools, including training in arranging, multimedia production, and classroom instruction techniques. Additional topics include teacher-administrative functions and public relations. Letter grading.

112. Guided Field Experiences in Music Education. (1) Field studies, three hours. Initial field experiences for those who wish to teach and earn single subject certification in music. Novice teachers work under direct guidance of UCLA music education faculty members and practicing public school instructor to develop and refine their instruction in K-12 settings. P/NP grading.

114A-114I. Study of Instrumental and Vocal Techniques. (1 each) (Formerly numbered 114A-114I.) Studio, three hours; laboratory, three hours. Prerequisites: course 20A. Applied studies in basic performance techniques and tutorial materials. Each of courses 114A through 114I may be repeated once for credit. Letter grading. 114A. High String. 114C. Flute; 114D. Double Reeds; 114E. Trumpet and Trombone; 114F. Horn and Tuba; 114G. Snare Drum; 114H. Other Percussion; 114I. Voice.

116. Introduction to Conducting. (2) Lecture, three hours. Requisites: courses 20A, 20B, 20C, 120A. 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 choral and instrumental repertoire. 118A-118B. Advanced Study and Conducting of Choral and Instrumental Literature. (2-2) Lecture, one hour; laboratory, two hours. Requisites: courses 116, 117. Detailed study of musical style, performance practices, and rehearsal techniques. Each course may be repeated once for credit. 118A. Choral; 118B. Instrumental.

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 control of faults, health and care of voice, and instructional techniques. Letter grading.

120A. Music Theory IV. (4) Lecture, four hours; discussion, four hours. Preparation: passing score on departmental first-year examination. Requisites: courses 20C with a grade of C (2.0) or better. Theory: baroque counterpoint including choral prelude; two-part invention; exposition and first modulation of a three-part invention; canonic principles; analysis of inventions, canons, and fugues. Musicianship: sight-singing of extended chromatic melodies; advanced harmonic dictation (diatonic and chromatic); keyboard harmonization of modulating melodies; elementary score reading.

120B. Music Theory V. (4) Lecture, four hours; discussion, four hours. Requisite: course 120A with a grade of C (2.0) or better. Theory: advanced chromatic harmony including development of harmony from 1850; analytical position. Musicianship: advanced score reading; advanced harmonic dictation; preparation for departmental examination. 120C. Music Theory VI. (4) Lecture, four hours; discussion, two hours; laboratory, two hours. Requisite: course 120B with a grade of C (2.0) or better. 20th-century harmonic language, including nonfunctional harmony, polytonality, free atonality, serialism, and minimalism.

121. Special Topics in 20th-Century Music. (4) Lecture, three hours. Requisites: courses 20A, 20B, 20C, 120A, 120B, 120C. In-depth study of certain aspects of 20th-century music ranging from individual composers and smaller forms to larger stylistic concerns. May be repeated once for credit. C122. Speculative Music Theory. (4) Discussion, three hours. Requisites: courses 20A, 20B, 20C, 120A, 120B, 120C. Requisites: course 120A with a grade of C (2.0) or better. Application of theoretical studies through analysis and compositional exercises in styles of given periods. May be repeated once for credit. May be concurrently scheduled with course C222.

123A-123B-123C. Composition. (4-4-4) Lecture, three hours. Requisites: courses 20A, 20B, 20C. 120A, 120B, 120C. Course 123A is requisite to 123B, which is requisite to 123C. Designed for composition students. Vocal and instrumental composition in the smaller forms, including style composition and 20th-century techniques. Each course may be repeated once for credit, but first year must be taken in sequence.


124B. Scoring for Wind Ensemble. (4) Discussion, three hours. Requisites: courses 106B, 120C (accelerated section), 123C. Practical applications in scoring and arranging for large wind ensembles. Preparation and production of score and parts. At least one reading by UCLA Chorale or other choral group scheduled. Letter grading.

131A. Development of Latin Jazz. (4) Same as Ethnomusicology 131A. Lecture, four hours; discussion, one hour. Survey of historical and stylistic development of musical style referred to today as “Latin jazz.” P/NP or letter grading.

136A-136B-136C. Historical Survey of Music Literature. (4-4-4) Lecture, four hours; discussion, one hour. Historical survey of major works from music theater, tracing development of the art form from its European beginning to the American music theater of today. P/NP or letter grading. 136A. Early Forms to 1918; 136B. 1919 to 1945; 136C. 1945 to 1975.

140A-165. Undergraduate Instruction in Performance for the Performance Specialist. (2 each) Studio, one hour. Limited to junior/senior Music majors who have been accepted by audition into performance specialization. Individual instruction. Students must perform in noon concert once during their junior year and must present full recital 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, 140A. Violin; 140B. Viola; 140C. Cello; 140D. String Bass; 140E. Harp; 140F. Classical Guitar; 140G. Viola da gamba; 140H. Lute; 141A. Flute; 141B. Oboe; 141C. Clarinet; 141D. Bassoon; 141E. Saxophone; 141F. Trumpet; 141B. French Horn; 142C. Trombone; 142D. Tuba; 143. Percussion; 144A. Piano; 144B. Organ; 144C. Harpsichord; 145C. Voice.

147. Vocal Diction. (2) Formerly numbered 174A-174B-174C. Lecture, two hours; outside study, four hours. Designed for Music majors. Sounds of language as applied to singing, including use of Interna- tional Phonetic Alphabet, translation of art song texts, and application to student’s current vocal repertoire. Background in each language encouraged. P/NP or letter grading.

C175. Chamber Ensembles. (2) Requisite: audition. Students must be at advanced level of their instrument to participate. Application of study of performance techniques of literature appropriate to the ensemble. Students may enroll in two sections per term; total of 12 units may be applied toward degree. Not open to first-year students. May be concurrently scheduled with course C485. P/NP or letter grading.
C176. Electronic Music Composition. (4) Lecture, three hours; laboratory, three hours. Preparation: Advanced experience and accomplishment in serious composition (art music), two years of music theory. Limited to music composition majors. Exercises in electroacoustic orchestration, meta-pitch composition, notation software (Sibelius), sequencing and film scoring software (Logic), text collages (ProTools), and final project. May be concurrently scheduled with course C225. P/NP or letter grading.

CM182. Music Industry. (4) (Same as Ethnomusicology CM182 and Music History CM186.) Lecture, four hours; outside study, eight hours. Limited to Ethnomusicology, Music, and Music History majors. Examination of influence of music industry on way music is created, performed, listened to, evaluated, and used today. Historical approach taken, beginning with music published in 18th century and continuing through development of audio recordings to MTV and popular music today. Concurrently scheduled with course CM282. Letter grading.

C185. Historical and Philosophical Foundations of Music Education. (4) Lecture, three hours. Preparation: completion of undergraduate music education concentration in Upper School education in the U.S. according to established schools of thought. May be concurrently scheduled with course C225. 

195. Community or Corporate Internships in Music. (2 to 4) Tutorial, six hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with supervising instructor and submit periodic reports of their work experiences. May be repeated for a maximum of 8 units. Individual contract with supervising faculty member required. P/NP grading.

197. Individual Studies in Music. (2 or 4) Tutorial, one hour. Preparation: 3.0 grade-point average. Limited to seniors. Individual intensive study in music, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter (research project) required. May be repeated for a maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

M201. Repertory and Analysis. (2) (Same as Musicology M201.) Seminar, two hours. Requisite or corequisite: Musicology 200A. Exploration of defined repertory and analytical approach. Specific topics vary. May be repeated for credit. S/U grading.

202. Analysis for Performers. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Survey of analytical techniques and approaches required for professional performers, including phrase structure, harmonic rhythm and prolongation, small and large forms, theories of musical coherence, and understanding of styles. Letter grading.


204. Music Bibliography for Performers. (4) Lecture, three hours; outside study, nine hours. Designed for graduate music performance students. Survey of general bibliographic techniques in music, with emphasis on materials for performing musicians. Letter grading.

C222. Speculative Music Theory. (4) Discussion, three hours. Designed for graduate music students. Techniques of composition and analysis of tonal composition studied through cog analysis and compositional exercises in styles of given periods. May be repeated once for credit. May be concurrently scheduled with course C122.

C225. Historical and Philosophical Foundations of Music Education. (4) Lecture, three hours. Preparation: 3.0 grade-point average. May be concurrently scheduled with course C185. Additional assignments, as well as evidence of greater depth of study, required of graduate students.

C226. Electronic Music Composition. (4) Lecture, three hours; laboratory, three hours. Preparation: Advanced experience and accomplishment in serious composition (art music), two years of music theory. Designed for graduate students. Limited enrollment. Exercises in electroacoustic orchestration, meta-pitch composition, notation software (Sibelius), sequencing and film scoring software (Logic), text collages (ProTools), and final project. May be concurrently scheduled with course C185. S/U or letter grading.


252. Seminar: Composition. (4) (Formerly numbered 252A.) Seminar, three hours. Compositional projects for varying acoustic instrumental and vocal ensembles. Students expected to perform their compositions from sketches at piano or present notation files of work-in-progress with playback file, where appropriate. Performance of completed works in graduate composition concerts by UCLA student perform- ers. S/U or letter grading.

253. Seminar: Special Topics in Composition and Theory. (4) (Formerly numbered 251B.) Seminar, three hours. Intensive exploration of specialized aspects of composition. May be repeated for credit. S/U or letter grading.

254. Advanced Music Analysis: Pre-Tonal Music. (4) Seminar, three hours. Designed to provide gradua- tion 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 works of tonal and post-tonal periods, and ap- proaches to musical structures used by composers before modern tonal harmonic syntax had fully devel- oped. Letter grading.


260A. Seminar: Composition for Motion Pictures and Television. (6) Seminar, three hours; laboratory, three hours. Practical experience in composing for commercial movies. Difference between underscore and source music and discussion of surrealistic effect with use of dreams, memory, sequence, or montage. Study of three principal areas of filmmaking — preproduction, production (shooting), and post- production. Examples from classic movies and dis- cussion of their scores. Composition of actual cues for film scoring software (Logic), text collages (ProTools), and final project. Separate cues involve dialogue, melo- drama, comedy, chase, memory montage, and ten- sion. Letter grading.

260B. Seminar: Composition for Motion Pictures and Television. (6) Seminar, three hours; laboratory, three hours. Focus on scoring one entire scene for television episodic or original student film. Discussion of recent television shows. Composition of one original title song and short cues to some- one else’s song required. Term assignment involves student orchestra recording to picture, designed to ap- proximate actual conditions of completing professional Hollywood assignment, from spotting to scoring. Letter grading.

261A-261F. Problems in Performance Practices. (4 each) Seminar, three hours; outside study, nine hours. Limited to graduate performance students. In- vestigation of primary source readings in perfor- mance practices as related to period; analytical re- ports and practical applications in class demonstra- tions. May be repeated for credit. Letter grading.


C267. Selected Topics in Keyboard Literature. (4) Lecture, four hours. Corequisite: course 464A or 464B or 464C. In-depth study of selected topics in keyboard literature, concentration of perfor- mance through analysis, historical and compara- tive studies, and actual performances by participants. May be concurrently scheduled with course C167.

270A-270G. Seminars: Music Education. (6 each) Seminar, three hours. May be repeated for credit. 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; media laboratory, one hour. Designed for graduate music performance students. Survey of music and its place in emerging digital world of the arts, including training in arranging and multime- dia production.

CM282. Music Industry. (4) (Same as Ethnomusicology CM282 and Musicology CM288.) Lecture, four hours; outside study, eight hours. Limited to Ethnomusicology, Music, and Musicology majors. Examination of influence of music industry on way music is created, performed, listened to, evaluated, and used today. Historical approach taken, beginning with music pub- lished in 18th century and continuing through develop- ment of audio recordings to MTV and popular mus- sic today. Concurrently scheduled with course C212. 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.

330. Introduction to Orff Schulwerk. (2) Lecture, two 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.

S331A-S331B-S331C. Orff Schulwerk Training Courses. (4-4-4) Lecture, 10 hours; discussion, five hours; laboratory, 15 hours. Requisite: course 330. Course S331A is requisite to S331B, which is requisite to S331C. In-depth courses in teaching of Orff Schulwerk. Offered in summer only. S/U or letter grading. S331A. Level I (Begin- ning). S331B. Level II (Intermediate). S331C. Level III (Advanced).

Music / 465

469. Instrumental Pedagogy. (4) Lecture, three hours; discussion, one hour: Preparatory: advanced proficiency in voice. Designed for graduate music students. Study of teaching techniques for voice, including thorough investigation of the vocal mechanism and its use, plus study of noted teachers of the past and present. Further emphasis on practical teaching experience in class.

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.

C480. UCLA Chorale. (2) Activity, four hours. Preparation: audition. Designed for M.M. and D.M.A. students. Select mixed ensemble of 50 to 60 voices performing choral music appropriate for a concert choral ensemble, with emphasis on music after 1700. May be repeated for credit with different emphasis. May be concurrently scheduled with course C390A.

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 C390E. S/U or letter grading.

C482. Wind Ensemble. (2) Activity, four hours. Preparation: audition. Designed for M.M. and D.M.A. students. Group performance of concert literature for wind ensemble. May be repeated for credit without limitation. May be concurrently scheduled with course C390C.

C485. Chamber Ensembles. (2) Preparation: audition. Students must be at advanced level of their instrument to participate. Applied study of performance practices of literature appropriate to the ensemble. 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, S/U or letter grading.

495. 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.

496. Technology Seminar. (2) Seminar, two hours; laboratory, one hour; outside study, three hours. Introductory to departmental and campuswide technology resources, exploration of applications of technology in education, and development of means of using technology to assess and document teaching competence. S/U grading.


596A. Directed Individual Studies in Orchestration and Composition. (2, 4, or 6) Tutorial, to be arranged. Only 4 units may be applied toward M.A. or M.M. degree requirements. May be repeated for credit. S/U or letter grading.

596C. Directed Individual Studies in Music Education. (2, 4, or 6) Tutorial, to be arranged. Only 4 units may be applied toward M.A. or M.M. degree requirements. May be repeated for credit. S/U or letter grading.

596D. Directed Individual Studies in Performance Practices. (2 to 12) Tutorial, to be arranged. Only 4 units may be applied toward M.A. or M.M. degree requirements. May be repeated for credit. S/U or letter grading.

597. Preparation for Master’s Comprehensive Examination or Ph.D. Qualifying Examinations. (2 or 4) Tutorial, to be arranged. S/U grading.

598. Guidance of M.A. Thesis. (4, 8, or 12) Tutorial, to be arranged. Only 4 units may be applied toward degree requirements. May be repeated for credit. S/U grading.

599. Guidance of Ph.D. or D.M.A. Dissertation. (4, 8 or 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

MUSICOLGY
College of Letters and Science
UCLA
244 Schoenberg Music Building
Box 951623
Los Angeles, CA 90095-1623
(310) 206-5187
fax: (310) 206-9203
e-mail: bumann@humnet.ucla.edu
http://www.musicology.ucla.edu

Raymond L. Knapp, Ph.D., Chair
Timothy D. Taylor, Ph.D., Vice Chair

Professors
Raymond L. Knapp, Ph.D.
Susan K. McClary, Ph.D.
Timothy D. Taylor, Ph.D.
Robert W. Fink, Ph.D.

Professors Emeriti
Murray C. Bradshaw, Ph.D.
Richard A. Hudson, Ph.D.
Robert M. Stevenson, Ph.D.

Associate Professors
Robert W. Fink, Ph.D.
Elisabeth C. Le Guin, Ph.D.
Tama J.M. Levitz, Ph.D.
Mitchell B. Morris, Ph.D.
The Department of Musicology provides students with a broad understanding of the history of music. Courses cover virtually every period, style, and genre, including jazz and other popular musics.

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**

**Music History B.A.**

**Admission**

The Music History program assumes that students have some musical background before entering UCLA. Although auditions are not required, prospective majors should be sufficiently competent on an instrument or in voice to participate in a performance group, as required by the program.

**Preparation for the Major**

**Required:** Music 20A, 20B, 20C, Music History 26A, 26B, 26C, 88, and 6 units (three terms) of performance organizations selected from Ethnomusicology 91A through 91Z, Music C90A through 90M, or Music History 28A through 28C.

Enrollment in Music 20A requires either a minimum score on the Music Theory Placement Examination administered by the Music Department or successful completion of Music 3 (or a comparable year-long college-level music theory sequence). Students with limited musicianship skills may find it useful to enroll in Music 4A, 4B, 4C concurrently with Music 20A, 20B, 20C. Transfer applicants may petition to waive courses 20A, 20B, 20C if they have completed equivalent work prior to enrolling at UCLA.

**Transfer Students**

Transfer applicants to the Music History major with 90 or more units must complete the following courses prior to admission to UCLA: one year of music theory and one year of music history and analysis. Experience in music performance is strongly recommended. Transfer students are required to take Music History 26A, 26B, 26C at UCLA but are exempt from course 88.

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:** Music 120A, 120B, 120C, Music History 126A, 126B, 126C, 190 (concurrent with either 198 or 199), 193C, 193D; two courses from Music History 191A through 191G; one course from 160 through 185; one additional 4- to 6-unit upper division course; and one upper division ethnomusicology course (4 to 5 units). Students not pursuing departmental honors must take course 199 (2 units) in Fall Quarter of their senior year. Students may petition to substitute theory or analysis courses in ethnomusicology or music history for one or more of Music 120A, 120B, 120C, as appropriate. 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 quarter of Music History 198 with a grade of A— or better on the resulting thesis.

To qualify for graduation with departmental highest honors, students must (1) complete all requirements for the major, (2) have a cumulative GPA of 3.9 or better in upper division courses in the department and an overall GPA of 3.65 or better, and (3) complete at least one quarter of Music History 198 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 courses with grades of C or better.

**Required Upper Division Courses (18 to 22 units):**

Music History 193A, 193B, one course from 160 through 185 (6 units), and two additional 4- to 6-unit upper division courses.

No more than two courses may be applied toward both this minor and a major or minor in another department or program.

Each minor course must be taken for a letter grade (courses offered only on a P/NP grading basis are acceptable), with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, [http://www.gndt.ucla.edu/gasaa/library/pgmrqintro.htm](http://www.gndt.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 Musicology offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Musicology.

**Music History**

**Lower Division Courses**


2. **Introduction to Classical Music.** (5) Lecture, four hours; discussion, one hour. Survey of music of Western classical tradition, with emphasis on historical context, musical meanings, and creation of the tradition itself. P/NP or letter grading.

3. **The Beatles.** (5) Lecture, four hours. Examination of life and music of the Beatles within social and historical context of the 1960s. P/NP or letter grading.

4. **History of Rock and Roll.** (5) Lecture, four hours. Analysis of forms, practices, and meanings of rock and roll music, broadly conceived, from its origin to the present. Emphasis on how this music has reflected and influenced changes in sexual, racial, and class identities and attitudes. Letter grading.

5. **Musicology / 467**

6. **Music History 193A, 193B, one course from 160 through 185 (6 units), and two additional 4- to 6-unit upper division courses.**

7. **Film and Music.** (5) Lecture, four hours; film viewing, two hours. History of music and cinema, particularly ways music is used to produce meanings in conjunction with visual image. P/NP or letter grading.
65. Blues in American Music. (5) (Formerly numbered 22.) Lecture, four hours. History of blues, both as specific genre and as form of technology and approaches that have been at center of American music, and culture, from 19th-century roots to present. Exploration of commonly accepted blues mainstream exemplified by figures like Bessie Smith, Robert Johnson, and B.B. King, but also central role blues has played in jazz, folk, country, gospel, rock, soul, and rap. While following evolution of music through 20th century; examination of metaphor for African American culture as it permeates American traditions. P/NP or letter grading.


70. Beethoven. (6) (Formerly numbered 34.) Lecture, four hours. Designed for undergraduate students. Life and works of Ludwig van Beethoven. P/NP or letter grading.

72. Sacred Music. (5) (Formerly numbered 139.) Lecture, four hours; discussion, one hour. Study of sacred music and its religious, cultural, and larger dimensions of African American experience as mediated through groove-based music. Letter grading.

Upper Division Courses

126A-126B-126C. History and Analysis of Music II. (5-5-5) Lecture, four hours; laboratory, one hour. History of the history and analysis of American music from 1600 to present. P/NP or 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 in music scenes, underground, behind the scenes, and in semiotic fabric of everyday life. Letter grading.


152. Selected Topics in Music of Mozart. (6) Seminar, two hours. Preparation: ability to read music and engagement in greater depth. Letter grading.


155. Blues and Individual Expression. (6) Lecture, four hours; discussion, one hour. Designed for undergraduate students. Life and works of Johann Sebastian Bach. P/NP or letter grading.


165. Blues and Individual Expression. (6) Seminar, two hours. Preparation: ability to read music and engagement in greater depth. Letter grading.
188. Topics in Music History. (4) Lecture, three hours; laboratory, one hour. Variable topics selected from several outstanding composers in Western art music. Consent of Schedule of Classes for topics to be offered. May be repeated for credit. Letter grading.

190. Research Colloquia in Music History. (1) Seminar, one hour. Designed for senior Music History majors. Students chosen by the faculty to work together on advanced research under the direction of faculty members. May be repeated for credit. Letter grading.

191A-191G. Junior Variable Topics Research Seminars. (Formerly numbered 191A-191G.) Seminar, one hour. Limited to junior or senior Music History majors. Aspects of music of each period studied in depth. Reading, discussion, and development of culminating project. May be repeated for credit. P/NP or letter grading. 191A. Middle Ages; 191B. Renaissance; 191C. Baroque; 191D. Classic; 191E. Romantic; 191F. 20th Century; 191G. Other Topics.


193A. Music History Journal Club Seminars for Minors. (2) Seminar, two hours. Limited to junior or senior Music History minors. Overview of music history as academic discipline to introduce students to readings and lectures on current topics in field. Study of music and its history under number of guises, including historical study of music, addressing both research methodologies and historical narratives. Theoretical issues central to musicology as it is practiced at UCLA and elsewhere, including gender and sexuality, music and politics, race, popular music studies, and jazz studies. P/NP grading.

193B. Music History Performance Seminars for Minors. (2) Seminar, two hours. Limited to senior Music History minors. Overview of how music historians engage with issues of musical performance. Consideration of how historical concerns, theoretical issues, and methodologies can inform music as practice, especially as it is performed, recorded, listened to, and otherwise consumed. P/NP grading.

193C. Music History Journal Club Seminars for Majors. (2) Seminar, two hours. Limited to Music History majors. Introduction to discipline through discussion of readings and lectures on current topics in field, with focus especially on its practice at UCLA, and addressing research methodologies and development of bibliographic control. Normally taken in junior year. P/NP grading.

193D. Music History Performance/Analysis Seminars for Majors. (2) Seminar, two hours. Recommended requisite: course 193C. Limited to Music History majors. Introduction to how music historians engage with issues of musical performance. How of how historical concerns, theoretical issues, and methodologies can inform music as practice, especially as it is performed, recorded, listened to, and otherwise consumed. Continued attention to issues of bibliographic control. Normally taken in senior year. P/NP grading.

197. Individual Studies in Music History. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between the faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198. Honors Research in Music History. (2 to 4) Tutorial, two hours. Preparation: completion of minimum of four division music history courses with departmental grade-point average of 3.5 or better and overall GPA of 3.0. Limited to junior/senior Music History majors. One- to two-semester independent research study project under supervision of appropriate faculty member, culminating in departmental honors thesis of approximately 25 pages. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Music History. (2 to 4) Tutorial, two hours. Preparation: minimum of 3.0 grade-point average. Limited to junior/senior Music History majors. Supervised individual research under guidance of faculty mentor. Culminating paper or project required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

**Musicology**

**Graduate Courses**


200B. Historiography and Cultural Theory. (6) Seminar, three hours. Designed for graduate musicology, ethnomusicology, and music students. Critical examination of past and present theories that inform historical study of music, with emphasis on impact of recent cultural theory. Letter grading.

200C. Analysis and Criticism. (6) Seminar, three hours. Designed for graduate musicology, ethnomusicology, and music students. Introduction to recent developments in field of musicology, with focus on problems of how music operates as cultural practice and how musical meanings can most effectively be analyzed. Letter grading.

202. Journal Club. (2) Seminar, two hours. Requisite or corequisite: course 200A. Exploration of defined repertory through readings and analysis. Specific topics vary. May be repeated for credit. S/U grading.

203. Seminar: Musical Form. (4) Seminar, three hours. Requisite or corequisite: course 200A. Exploration of issues in musicology through readings and discussions of current literature. Specific topics vary. May be repeated for credit. S/U grading.

210. Medieval Notation. (4) Seminar, three hours. Vocal and instrumental notation; paleography of period. S/U or letter grading.

211. Renaissance Notation. (4) Seminar, three hours. Vocal and instrumental notation; paleography of period. S/U or letter grading.

220. Divine Love in 17th-Century Music. (4) Seminar, three hours. Designed for graduate students. During 17th-century Counter-Reformation, many artists drew on concepts of divine love and mystical ecstasy to instill personal devotion among religious practitioners. Examination of often profoundly erotic music composed for spiritual purposes within this cultural context. Letter grading.


222. Music of Guillaume Dufay. (4) Seminar, three hours. Designed for graduate musicology students. Through study of Dufay’s life and music, students become familiar with those scholarly methods specific to study of early music in general and Dufay’s music in particular and extend their analysis and interpretation of Dufay’s music and 15th-century music and culture. Letter grading. Specific topics vary from year to year. May be repeated for credit. Meets with corresponding course from 265A through 265G series. Current syllabus available in both courses not allowed. Letter grading.

225. Experimental Music. (4) Seminar, three hours. Designed for graduate students. Exploration of wide range of post-1960 musical styles characterized as experimental, both in cultivated and vernacular traditions. Composers may include Cage, Young, Reich, Riley, Adams, Andriessen, Bryars, Eno, Nancarrow, Velvet Underground, Negativland, Sonic Youth. Letter grading.

240. Topics in Jazz. (4) Seminar, three hours. Designed for graduate students. Seminar in jazz history, with focus on major figure (e.g., Louis Armstrong, Duke Ellington) or issue (e.g., cultural hierarchy, jazz outside the U.S.). Intensive research on important topic in jazz studies. Letter grading.

250A-250B. Seminars: History of Music Theory. (4-4) Seminar, three hours. Requisite: course 200A. Course 250A is not requisite to 250B. S/U or letter grading.


Near Eastern Languages and Cultures

College of Letters and Science

UCLA
378 Humanities Building
Box 951511
Los Angeles, CA 90095-1511

(310) 825-4185
fax: (310) 206-6456
http://www.nelc.ucla.edu

Elizabeth F. Carter, Ph.D., Chair

Professors
Elizabeth F. Carter, Ph.D.
Michael D. Cooper, Ph.D.
S. Peter Cowe, Ph.D. (Narekatsi Professor of Armenian Studies)
Robert K. Englund, Ph.D.
Lev Hakak, Ph.D.
Ismaïl K. Poonawala, Ph.D.
Yona Sabar, Ph.D.

William M. Schindereuw, Ph.D. (Kershaw Professor of Ancient Eastern Mediterranean Studies)
Susan E. Slyomovics, Ph.D.
Hossein Ziai, Ph.D.

Professors Emeriti
Amin Banani, Ph.D.
Arnold J. Band, Ph.D.
Andras E. Bodrogligeti, Ph.D.
Giorgio Buccellati, Ph.D.
Herbert A. Davidson, Ph.D.
Hanns-Peter Schmidt, Ph.D.

Associate Professors
Carol A. Bakhos, Ph.D.
Willemina Z. Wendrich, Ph.D.

Assistant Professors
Ra’anan S. Boustan, Ph.D.
Aaron A. Burke, Ph.D.
Jacco Diekeman, Ph.D.
Nouri Gana, Ph.D.
M. Rahim Shayegan, Ph.D. (Musa Sabi Professor of Iranian Studies)

Lecturers
Nancy Ezer, Ph.D.
Michael Fishbein, Ph.D.
Latteh E. Hagigi, M.A.
Anahid Keshishian, Ph.D.

Adjunct Assistant Professor
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 and modern and ancient languages of the Near East: Akkadian, ancient Egyptian, Arabic, Armenian, Berber, Coptic, Hebrew, Persian, and Turkic. To meet increasing demands for a knowledge of this area and its past and present, it treats each language in a wide perspective — as a means of communication, as a vehicle of a cultural heritage, as a research tool for the area, and as an object of research itself.

Undergraduate majors may be taken in Ancient Near Eastern Civilizations, Arabic, Hebrew, Iranian Studies, and Jewish Studies. M.A. and Ph.D. programs are offered in ancient Near Eastern civilizations, Arabic, Armenian, Hebrew, Iranian, Semitics, and Turkic.

Courses in the department prepare students for careers in government, foreign trade, teaching abroad, journalism abroad, archaeology, and further academic work involving the area.

Undergraduate Study

The department offers the Bachelor of Arts degree in five fields: (1) Ancient Near Eastern Civilizations, (2) Arabic, (3) Hebrew, (4) Iranian Studies, and (5) Jewish Studies. In each of these fields students must meet the requisites and take the courses prescribed. Their adviser assists in selecting a plan of study developed around their interests.

Students may combine their major with one in another department (double major) to enhance their educational opportunities. Due to the number of additional courses required, they are advised to consider this option early in their academic career and in consultation with program advisers in both majors.

Ancient Near Eastern Civilizations B.A.

There are four options for a major in Ancient Near Eastern Civilizations: (1) Mesopotamia, (2) Egypt, (3) Near Eastern archaeology and cultures, and (4) biblical studies.

Preparation for the Major

Requisite for all options: Near Eastern Languages 50A; requires for options 1, 2, and 3: German 1, 2, 3 (French 1, 2, 3 may be substituted); requisites for option 4: Hebrew 1A, 1B, 1C. Majors in all four fields are encouraged to continue their language study beyond the requisite levels.

Transfer Students

Transfer applicants to the Ancient Near Eastern Civilizations major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one civilization course for all options, one year of German or French for the options in Mesopotamia, Egypt, and Near Eastern archaeology and cultures, and one year of Hebrew for the biblical studies option.
The Major

Majors in all four options are required to take 14 upper division courses selected in consultation with the program adviser.

Majors selecting option 1 (Mesopotamia) are required to take 14 courses as follows: four language courses (Semitics 140A, 140B, 141, 142) and two literature and history courses (Ancient Near East M104, 150A). The remaining eight courses are to be selected from Ancient Near East M103A, M103B, 130, 140A, 140B, 145, 150B, 150C, 160, 161, 162, 163, 164A, 164B, 164C, 170, Iranian 169, Jewish Studies M150A. One course must be in research methodology (such as Anthropology C115R, 130, 150, English 140A, or Linguistics 110) taken preferably in another department with the consent of the adviser.

Majors selecting option 2 (Egypt) are required to take 14 courses as follows: four language courses (Ancient Near East 120A, 120B, 120C, 121A) and three literature and history courses (Ancient Near East M103A, M103B, 150B). The remaining seven courses are to be selected from Ancient Near East M104, 121B, 121C, 123A, 123B, 124, 130, 150A, 150B, 150C, 160, 161, 162, 163, 164A, 164B, 164C, 170, Art History M101A, M101B, Iranian 169, Jewish Studies M150A, M182A. One course must be in research methodology (such as Anthropology C115R, 130, 150, English 140A, or Linguistics 110) taken preferably in another department with the consent of the adviser.

Majors selecting option 3 (Near Eastern archaeology and cultures) are required to take 14 courses as follows: three upper division courses in any Near Eastern language (Akkaadian, Arabic, Egyptian, Hebrew) and two courses in research methodology (such as Anthropology 111, M115A, C115R, 117, 130, 150). The remaining nine courses are to be selected from Ancient Near East M103A, M103B, M104, 120A, 120B, 120C, 121A, 121B, 121C, 123A, 123B, 124, 130, 150A, 150B, 150C, 160, 161, 162, 163, 164A, 164B, 164C, 185, Art History M101A, M101B, M102A, M102B, Classics 168, Jewish Studies M150A, 170, M182A, Semitics 140A, 140B, 141, 142.

Majors selecting option 4 (biblical studies) are required to take 14 courses as follows: four language courses (Hebrew 102A, 102B, 102C, 120) and three history and literature courses (Jewish Studies M150A, M182A, English 108B). The remaining seven courses are to be selected from Ancient Near East M103A, M103B, M104, 130, 150A, 150B, 160, 161, 162, 163, 164A, 164B, 164C, 165S, 170, English 108A, 108C, Greek 130, Hebrew 125, 130, 135, History 186A, 186B, 186C, Jewish Studies 150B, 170, Latin 120, Semitics 130.

Study Abroad

Students are encouraged to spend time abroad either to (1) study with an education abroad program or (2) work on a UCLA-affiliated archaeological excavation in the broader Middle East. For information on studying abroad, contact the Education Abroad Program, B300 Murphy Hall, (310) 825-4995; for UCLA-affiliated excavations, contact the departmental student affairs officer at (310) 825-4165.

Arabic B.A.

Preparation for the Major

Required: Arabic 1A, 1B, 1C.

Transfer Students

Transfer applicants to the Arabic major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Arabic.

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

The Major

Required: Fourteen courses, including seven from Arabic 102A, 102B, 102C, 103A, 103B, 103C, 120, 130, 132, 141, 142; three literature and culture courses from Arabic 150, 151, Islamic 110, 130, 151; and two history courses from History 105A, 105B, 105C, 106A, 108B. The remaining two courses may be selected from Ancient Arabic 111A, 111B, 111C, 112A, 112B, 112C, Art History 104A, Geography 187, History 105A, 105B, 105C, 106A, 108B. No more than two of the 14 courses may be credited through a proficiency test administered by the department.

Preparation for the Major

Required: Hebrew 1A, 1B, 1C, or equivalent.

Transfer Students

Transfer applicants to the Hebrew major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Hebrew.

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

The Major

Required: Fourteen courses, including Hebrew 102A, 102B, 102C, 103A, 103B, 103C; one term of Hebrew 120 or 125; and one term of Hebrew C140. The remaining six courses may be selected from Hebrew 111A, 111B, 111C, 130, 135, C140, 160, 170, 180A, 180B, 199. Jewish Studies M150A, 150B, 175, M182A, M182B, Semitics 110, 115, 130, 140A, 140B. No more than two of the 14 courses may be credited through a proficiency test administered by the department. A maximum of two Hebrew 197 or 199 courses (8 units total) may be applied toward the major.

Iranian Studies B.A.

Students majoring in Iranian Studies may combine the major with specialization in other fields to enhance their career opportunities. Due to the number of additional courses required, they are advised to consider this option early in their academic career.

Preparation for the Major

Required: Iranian 1A, 1B, 1C, or equivalent.

Transfer Students

Transfer applicants to the Iranian Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Persian.

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

The Major

Required: Fourteen courses, including at least six from Iranian 102A, 102B, 102C, 103A, 103B, 103C, 140, 141, 142, 180A, 180B and at least five courses from Ancient Near East 150A, 150B, 163, Arabic 1A, 1B, 1C, Art History 104A, 104B, C104C, Ethnomusicology 20B, History 105A, 105B, 105C, Iranian 120, 169, 170, 181A, 181B, 187, 199, 220A, 220B, 231A, 250, Political Science 157. The remaining three courses may be selected from any of the above. No more than two of the 14 courses may be credited through a proficiency test administered by the department. A maximum of two Iranian 197 or 199 courses (8 units total) may be applied toward the major.

Jewish Studies B.A.

Students must select one of five tracks: (1) Jewish history, (2) Jewish religions, (3) Jewish literature and culture, (4) American Jewish literature and culture, or (5) Israeli studies.

Preparation for the Major

Required: Jewish Studies 10.

Transfer Students

Transfer applicants to the Jewish Studies major with 90 or more units must complete the following introductory course prior to admission to UCLA: one social, cultural, and religious institutions of Judaism course.

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

The Major

Majors in all five tracks are required to take 14 upper division courses selected in consultation with the program adviser, including seven required core courses, five courses within the selected track, and two electives to be chosen
from Hebrew, Jewish studies, or any courses listed under any track.

Core requirements include Jewish Studies M184A (or History M184A); one year of upper division Hebrew (either Hebrew 102A, 102B, and 102C, or Hebrew 103A, 103B, and 103C); two terms of the Jewish History sequence selected from Jewish Studies M182A, M182B, M182C, M184B; and one course on the Hebrew Bible selected from English 108A, Hebrew 120, or Jewish Studies M150A, 150B.

A third year of Hebrew or one year of Yiddish or another Jewish language is strongly recommended but not required.

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.

A course may be applied toward only one category within the major (i.e., core requirement, track requirement, or electives). No more than 20 units may be applied toward both the Jewish Studies major and a major or minor in another department or program.

For the Jewish history track, students are required to complete the remaining two courses from Jewish Studies M182A, M182B, M182C, M184B and three courses from the following list, in addition to the core courses for the major: Ancient Near East 162, History M182D, 183A, 183B, 186A, 191A, 197, Jewish Studies 140A, 140B, 170, M182D, M182E, M182F, M184D, 197, 199.

For the Jewish religion track, students are required to complete Jewish Studies 150B and four of the following courses, in addition to the core courses for the major: Ancient Near East 162, English 108A, 108C, 199, Hebrew 120, 125, 130, History 186A, Jewish Studies 130, 135, M150A, M151A, 155, 170, M182A, M182B, M187, 197, 199.

For the Jewish literature and culture track, students are required to complete Hebrew 103A, 103B, 103C, and two of the following courses, in addition to the core courses for the major: English 103, 108A, 108C, 182C, German 112, Hebrew 111A, 111B, 111C, 120, 125, 130, C140, Iranian 131, Jewish Studies 135, 143, M150A, 150B, M151A, 151B, 155, 170, 175, 177, M187, 197, 199.

For the American Jewish studies track, students are required to complete Sociology 159 and four of the following courses, in addition to the core courses for the major: English 103, 182C, 199, History 197, Jewish Studies 135, 140A, 140B, M151A, 177, M182F, M184C, 199, Yiddish 101A, 101B, 101C, 102A, 102B, 104.

For the Israeli studies track, students are required to complete Hebrew 103A, 103B, 103C, and two of the following courses, in addition to the core courses for the major: Hebrew 111A, 111B, 111C, C140, History 183B, 197, Jewish Studies 142, 151B, 175, M182B, M184D, 197, 199, Political Science 121A, 132A, M132B, 139, 164, 199.

**Study in Israel**

Students are encouraged to spend up to one year in Israel either to (1) study with an education abroad program or (2) study at an Israeli university. For information on studying in Israel, contact the Education Abroad Program, B300 Murphy Hall, (310) 825-4889.

**Arabic and Islamic Studies Minor**

The Arabic and Islamic Studies minor is designed for students who wish to augment their major program with a group of related courses that provide a systematic introduction to the study of Arabic language and literature and Islam.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed Arabic 1A, 1B, 1C, or the equivalent as determined by the department, and file a petition in 378 Humanities Building, (310) 825-4165.

**Required Upper Division Courses (28 units):**

Seven courses in Arabic or Islamsics; 199 courses may not be applied. With approval of the undergraduate adviser, two of the seven courses may be taken outside the department. Courses recommended as electives for the major in Arabic (Art History 104A, Geography 187, History 105A, 105B, 105C, 106A, 108B, Political Science 132A, M132B, 157) may be applied. Other courses may be applied as extra-departmental courses with approval of the adviser.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Armenian Studies Minor**

The Armenian Studies minor is designed for students who wish to augment their major program with a group of courses that provide a systematic introduction to the study of Armenian culture.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed Armenian 101A, 101B, 101C, or the equivalent as determined by the department, and file a petition in 378 Humanities Building, (310) 825-4165.

**Required Upper Division Courses (28 units):**

Seven courses from the Armenian section of the department; 199 courses may not be applied. With approval of the undergraduate adviser, two of the seven courses may be taken outside the department. Provided the content of the courses bears a direct relation to the culture of the Near East.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Near Eastern Languages and Cultures Minor**

The Near Eastern Languages and Cultures minor is designed for students who wish to augment their major program in the College of Letters and Science with a group of related courses from various linguistic, literary, archaeological, and historical disciplines of the Near East, from ancient Egypt, Mesopotamia, and biblical studies to the modern Arabic, Armenian, Iranian, Jewish, and Turkish world.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in 378 Humanities Building, (310) 825-4165.

**Required Upper Division Courses (28 units):**

Seven courses selected in consultation with an academic adviser from any of the courses offered by the department; 199 courses may not be applied. With approval of the undergraduate adviser, two of the seven courses may be taken outside the department, provided the content of the courses bears a direct relation to the culture of the Near East.

Each minor course must be taken for a letter grade, with an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmgrintro.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 Near Eastern Languages and Cultures offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Near Eastern Languages and Cultures.

Ancient Near East

(Akkadian, Aramaic, Phoenician, and Ugaritic are listed under Semitics.)

Lower Division Course

10W. Jerusalem: Holy City. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Survey of religious, political, and cultural history of Jerusalem over three millennia as symbolic focus of three faiths: Judaism, Christianity, and Islam. Transformation of sacred space as reflected by literary and archaeological evidence through examination of testimony of artifacts, architecture, and iconography in relation to written word. Study of creation of mythic Jerusalem, landscape and experience. SAT satisfies Writing II requirement. Letter grading.

Upper Division Courses

M101A. Egyptian Art and Archaeology. (4) Formerly numbered Near Eastern Languages M101A.) (Same as Art History M101A). Lecture, three hours. Study of architecture, sculpture, painting, and minor arts during Predynastic period and Old Kingdom. P/NP or letter grading.

M103A-M103B. Ancient Egyptian Civilization. (4-4) (Same as History M103A-M103B). Lecture, three hours; discussion, one hour (when scheduled). Course M103A is not requisite to M103B. Designed for juniors/seniors. Political and cultural institutions of ancient Egypt and ideas on which they were based. P/NP or letter grading. M103A. Chronological discussion of Prehistory, Old and Middle Kingdom. M103B. New Kingdom and Late period until 332 B.C.

M104. History of Ancient Mesopotamia and Syria. (4) (Same as History M104.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political and cultural development of “Fertile Crescent,” including Palestine, from Late Uruk period to Neo-Babylonian. Letter grading.

M101A-M101B-M101C. Iranian Civilization. (4-4-4) (Same as History M101A-M101B-M101C and Iranian M110A-M110B-M110C.) Lecture, three hours; discussion, one hour (when scheduled). History of ancient Iran from rise of Elam to end of Sasanian dynasty — Elamite civilization and Mede, Achaemenid, Arsacid, and Sasanian Empires. Emphasis on ancient Iran, but may be offered for early Islamic period. P/NP or letter grading.

120A-120B-120C. Elementary Egyptian. (5-5-5) Lecture, five hours. Course 120A is requisite to 120B, which is requisite to 120C. P/NP or letter grading. 120A. Introduction to hieroglyphic script and phonology and morphology of Middle Egyptian. Basic rules of Middle Egyptian syntax, with focus on nominal, adjectival, and adverbial sentences. 120B. Verbal system and syntax of verbal sentences of Middle Egyptian. 120C. Reading of authentic Egyptian texts to deepen knowledge of Egyptian grammar and to acquire familiarity with aims and methods of philology, study of ancient texts.

121A-121B-121C. Intermediate Ancient Egyptian Readings. (5-5-5) Lecture, three hours. Requisite: course 120C. Course 121A is requisite to 121B, which is requisite to 121C. Thematic readings in ancient Egyptian historical, religious, and literary texts. May be repeated for credit. P/NP or letter grading.

123A-123B. Coptic. (5-5) Lecture, three hours. Course 123A is requisite to 123B. Introduction to Coptic grammar and reading of Coptic texts. P/NP or letter grading.

124. Middle Egyptian Technical Literature. (4) Lecture, three hours. Requisite: course 121C. Reading of Middle Egyptian technical literature in hieroglyphic transcription. Medical, veterinary, mathematical, and astronomical texts included. P/NP or letter grading.

130. Ancient Egyptian Religion. (5) Lecture, three hours; discussion, one hour. Introductory survey of various ancient Egyptian religious beliefs and practices, their origin, and development. Discussions of religious institutions such as divine kingship and pharaonic foundations. P/NP or letter grading.

135. Religion in Ancient Israel. (4) Lecture, three hours. Introductory survey of various ancient Israelite religious beliefs and practices, their origin, and development, with special attention to diversity of religious practice in ancient Israel and Canaan during first millennium B.C.E. P/NP or letter grading.

140A-140B-140C. Elementary Sumerian. (4-4-4) Lecture, three hours. Requisites: Semitics 140A, 140B. Elementary grammar and reading of royal inscriptions, letters, and administrative texts from Ur III period. P/NP or letter grading.


150A-150B-150C. Survey of Ancient Near Eastern Literatures in English. (4-4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading. 150A. Mesopotamia; 150B. Egypt; 150C. Syria and Palestine, Asia Minor, Persia.


162. Archaeology and Religion of Israel. (4) Lecture, three hours. Survey of archaeology of Palestine from Bronze Age to destruction of Jerusalem in A.D. 70, with emphasis on religious development of ancient Israel. P/NP or letter grading.

163. Archaeology of Iran. (4) Lecture, three hours. Designed to introduce students to Iranian archaeology from prehistoric through Achaemenid times. P/NP or letter grading.

164A. Sumerians. (4) Lecture, three hours. Survey of main archaeological periods in Mesopotamia, with special emphasis on historic periods and reference to neighboring cultural areas. P/NP or letter grading.

164B. Assyrians. (4) Lecture, three hours. Survey of main archaeological periods in Mesopotamia, with special emphasis on historic periods and reference to neighboring cultural areas. P/NP or letter grading.

164C. Babylonians. (4) Lecture, three hours. Survey of main archaeological periods in Mesopotamia, with special emphasis on historic periods and reference to neighboring cultural areas. P/NP or letter grading.

165. Egyptian Archaeology. (4) (Formerly numbered 165.) Seminar, three hours. Requisite: one course from M103A, M103B, 130, or Near Eastern Languages 50A. Opportunity to research aspects of topics in ancient Egyptian archaeology. Topics vary each year. May be repeated for credit. Concurrently scheduled with course 226E. P/NP 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 art 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 characterization and social role 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.


M185D. Religions of Ancient Near East. (4) (Same as History M185D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Main polytheistic systems of ancient Near East, with emphasis on Mesopotamia and Syria and with reference to religion of ancient Israel: varying concepts of divinity, hierarchies of gods, prayer and cult, magic, wisdom, and moral conduct. P/NP or letter grading.

197. Individual Studies in Ancient Near East. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Ancient Near East. (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

M201. Archaeological Research Design. (4) (Same as Archaeology M201A.) Lecture, three hours. Requisite: Archaeology 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 extended research, initial application, or oral examination. Students work closely with faculty members and report weekly on their progress. Preparatory course of at least two oral progress-report presentations, one theoretical and one practical, on one or both 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.

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 Greek-Roman Period. (4-4) Lecture, three hours. Requisite: course 121C. Introduction to grammar and orthography of hieroglyphic texts from Greek-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 121E. 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.
261. Practical Field Archaeology. (2 to 8) Seminar, six hours. Consent of instructor required. This course is en-rolled with S/U 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 M207.) Seminar, three hours. Selected topics on political, social, and intellectual history of ancient Mesopotamia. May be repeated for credit. S/U or letter grading.

250X. Seminar: Ancient Mesopotamia. (1) Seminar, two hours. Course for students who participate regularly in class discussions. P/NP or letter grading.

250. 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 development of objects in museum collections. Students work with objects in Los Angeles County Museum of Art. S/U or letter grading.

263. Seminar: Egyptian Monuments. (4) Seminar, two hours. Selected monuments and sites in area of Luxor (Ancient Thebes), architecture and decoration of temples and tombs; structure and occupation of settlements. May be repeated. S/U or letter grading.

M265. Depositional History and Stratigraphic Analysis. (4) (Same as Archaeology M265.) Lecture, two hours. Theoretical understanding of depositional processes and stratigraphic procedures as used in development of cultural materials. Study of topics 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.

C266. Egyptian Archaeology. (4) Seminar, three hours. Consent of instructor required. This course is en-rolled with S/U or letter grading.

111A-111B-111C. Elementary Spoken Egyptian Arabic. (4-4-4) Lecture, three hours. Knowledge of Arabic not required; not suitable for heritage speakers. Introduction to Egyptian colloquial Arabic. P/NP or letter grading.

111S. Summer Intensive Elementary Egyptian Arabic. (4) Lecture, three hours. Introduction to spoken Arabic dialect of Egypt which is language used in Egyptian press and broadcasting. Activities involving reading, writing, speaking and listening. P/NP or letter grading.

112A-112B-112C. Advanced Spoken Egyptian Arabic. (4-4-4) Lecture, three hours. Study of Egyptian colloquial Arabic for heritage speakers or students who have completed courses 1A, 1B, 1C. P/NP or letter grading.

115. Studies in Arabic Dialectology. (4) Lecture, three hours. Introduction to one spoken dialect of Arabic, with emphasis on speaking and listening comprehension. Dialects vary from year to year based on student interest and instructor availability and may include: Iraq, Levantine, North African, or Gulf Arabic. P/NP or letter grading.

116A-116B-116C. Elementary Arabic. (5-5-5) Lecture, five hours. Consent of instructor required. This course is en-rolled with S/U grading.


120. Islamic Texts. (4) Lecture, four hours. Consent of instructor required. Course listed with S/U or letter grading.
Graduate Courses

220. Seminar: Islamic Texts. (4) Seminar, three hours. Doctrines and hermeneutics of various schools of thought in Islam, with selected readings from major works. May be repeated for maximum of 24 units. S/U or letter grading.

M231. Tutorial in Judeo-Arabic. (4) (Same as Hebrew M231.) Requisites: course 102C, Hebrew 102C. Reading of Judeo-Arabic texts by Maimonides (medieval religion, medicine, philosophy) and more recent texts in Judeo-Arabic dialects of Iraq and Egypt, all with comments on grammar and deviations from norms of classical Arabic. S/U or letter grading.

240. Seminar: Arab Historians and Geographers. (4) Seminar, three hours. Selected readings from the works of major historians, geographers, and travelers. May be repeated for maximum of 24 units. S/U or letter grading.

250. Seminar: Classical Arabic Literature. (4) Seminar, two hours. Selected topics from classical Arab prose and poetry. May be repeated for maximum of 24 units. 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.


Armenian

Upper Division Courses

101A-101B-101C. Elementary Modern Western Armenian. (5-5-5) Lecture, five hours. Course 101A is requisite to 101B, which is requisite to 101C. Armenian grammar, conversation, and exercises. P/NP or letter grading.

102A-102B-102C. Intermediate Modern Western Armenian. (5-5-5) Lecture, five hours. Requisite: course 101A. Designed for students with speaking fluency and reading abilities in Armenian. Exploration of advanced Western Armenian in following areas of competency: fluency, literacy, accuracy, and proficiency. Use of language to engage literary themes and cultural issues of historical and contemporary significance for Armenian speakers. P/NP or letter grading.

104A-104B-104C. Advanced Modern Western Armenian. (4-4-4) Lecture, four hours. Requisite: course 102C. Designed for students with speaking fluency and reading abilities in Armenian. Exploration of advanced Western Armenian in following areas of competency: fluency, literacy, accuracy, and proficiency. Use of language to engage literary themes and cultural issues of historical and contemporary significance for Armenian speakers. P/NP or letter grading.

106A-106B-106C. Advanced Modern Eastern Armenian. (4-4-4) Lecture, four hours. Requisite: course 105C. Discussion of contemporary Armenian society and cultural issues through readings from critical essays, editorials, short stories, and poems written since World War II and film showings. Emphasis on enhancing students’ self-expression orally and in written form.

110. History of Armenian Language. (4) Lecture, three hours. Requisite: course 101C or 104C. Exploration of history of Armenian language as reflected in literature created in preliterate (6th through 9th centuries) and literate (5th through 20th centuries) periods. Students will examine changes within the language system and also consider the impact of cultural and political changes on the development of the language. Letter grading.

130. Armenian Civilization Under Bagratid Dynasties, 961 to 1064. (4) Lecture, four hours. Interdisciplinary examination of social, political, economic, artistic, and religious factors in creation of works of literature, art, architecture, and science. Letter grading.

150A-150B. Survey of Armenian Literature in English. (4-4) Lecture, three hours. Knowledge of Armenian not required. Each course may be taken independently for credit. P/NP or letter grading.


231A-231B-231C. Intermediate Classical Armenian. (4-4-4) Lecture, four hours. Development of Armenian language in following periods: preliterate (5th through 20th centuries), Simonides (6th century), Middle Armenian (7th through 12th centuries), and earliest attested form, Grabar, literary version of an ancient written form. Letter grading.

250. Seminar: Classical Armenian Literature. (4) Lecture, four hours. Requisite: course 101C or 104C. Exploration of deeper philosophical values. All texts read in original language. P/NP or letter grading.


252. Modern Armenian Drama as Vehicle for Social Critique. (4) Lecture, four hours. Readings of selected plays from 1668 to 1992 from three main genres of tragedy, comedy, and serious drama and featuring works by most significant Armenian playwrights. Focus is on classroom discussion of contemporary mores and as agents for social reform. Concurrently scheduled with course 252L. Letter grading.

253. Art, Politics, and Nationalism in Modern Armenian Literature. (4) Lecture, four hours. Examination of role of literature in modern Armenian society in service to cause or causes, as propaganda for various ideologies, as art for art’s sake, etc. Exploration of contrasting aesthetics implicit in these differing interpretations. Concurrently scheduled with course 252L. P/NP or letter grading.

255. Issues in Armenian American Literature and Culture. (4-4) Lecture, four hours. Preparation: reading knowledge of modern Eastern and Western Armenian. Theoretically informed exploration of some of most salient questions related to Armenian American community, literature, and other cultural artifacts in interaction with its pluralistic American amity. Concurrently scheduled with course 252S. Letter grading.

260A-160B. Armenian Literature of 19th and 20th Centuries. (4-4) Lecture, three hours. Requisites: courses 102A, 102B, 102C. Reading of texts and discussion of various genres of modern Armenian literature within context of Armenian cultural renaissance. P/NP or letter grading.

265. Armenian Film and Culture. (5) Lecture, six hours. Requisite: course 101C or 104C. Overview of development of Armenian cinematography from first talkies to present, with focus on work of most semimain directors from Armenian Republic, as well as various voices from worldwide diaspora. Concurrently scheduled with course 226S. P/NP or letter grading.

270. Armenian Poetry, 1880 to 1930. (4) Lecture, three hours. Requisite: course 101C or 104C. Examination of process behind creation of range and variety of poetic expression that developed in new literary forms of 19th and 20th centuries. Concurrently scheduled with course 271C. Letter grading.

Graduate Courses


230A-230B-230C. Elementary Classical Armenian. (4-4-4) Lecture, three hours. Course 230A is requisite to 230B, which is requisite to 230C. Introduction to grammar of classical literary language (5th to mid-19th centuries) and guided readings in narrative prose texts. Letter grading.


Near Eastern Languages and Cultures / 475
130. Berbers. (4) Lecture, four hours. Examination of main features of Berber societies and cultures, with particular attention to social structures and institutions on one hand, and to customs, values, and beliefs on the other. Presentation of broad framework within which study of particular aspects of Berber cultures may be pursued. P/NP or letter grading.

Hebrew

Upper Division Courses


103A-103B-103C. Advanced Hebrew. (4-4-4) Lecture, four hours; laboratory, four hours. Examination of biblical Hebrew prose texts from Dead Sea, with focus on grammar, paleography, and biblical interpretation in Dead Sea Scrolls. May be repeated for credit. P/NP grading.

180A-180B. Survey of Hebrew Grammar. (4-4) Lecture, three hours. Requisites: 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 Israeli Hebrew, traditional pronunciation of Hebrew by various Jewish communities, Hebrew contribution to other Jewish languages (Yiddish, Ladino, Judeo-Arabic). P/NP or letter grading.

188FL. Special Studies: Readings in Hebrew. (2) Seminar, two hours. Requisite: course 102C. Students must be concurrently enrolled in an affiliated main course. Primary readings and advanced training in Hebrew. Additional work in Hebrew to enrich and augment work assigned in main course, including reading, writing, and other exercises in Hebrew. P/NP or letter grading.

197. Individual Studies in Hebrew. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned readings and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Directed Research or Senior Project in Hebrew. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


225. Studies in Dead Sea Scrolls. (2 or 4) Seminar, three hours. Requisite: course 120. Critical study of Dead Sea Scrolls, with attention to history of biblical 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.

M231. Texts in Judeo-Arabic. (4) Formerly numbered 231. Same as Arabic M231. Requisites: course 102C, Arabic 102C. Reading of Judeo-Arabic texts by Maimonides (medieval religion, medicine, philosophy) and more recent texts in Judeo-Arabic dialects of Iraq and Egypt, all with emphasis in an grammatical and deviations from norms of classical Arabic, S/U or letter grading.
235. Hebrew Literature of Second Temple Period. (4) Seminar, three hours. Designed for students who have basic language skills and capacities necessary for reading Biblical texts; discussion or Rabbinic Hebrew. Reading, analysis, and interpretation of Hebrew literature composed during Second Temple period. Relevant sources include Chronicles, Ezra-Nehemiah, Ecclesiastes, Daniel, and 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, style, grammar, and syntax and to subsequent Rabbinic writings. Course builds following skills: reading unpointed texts, mastering distinctive elements of vocabulary, 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.


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.


20A-20B-20C. Accelerated Elementary Persian. (6-6-6) Lecture, 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: two courses 102C. Students who successfully complete courses 20A, 20B, 20C with grades of A may be permitted to enroll. Each course may be taken independently for credit. 103A. Introduction to Persian Poetry. 103B. Introdution to Classical Persian Prose; 103C. Introdution to Contemporary Persian Poetry and Prose.

104. Philosophical Texts. (4) Lecture, three hours. Requisites: course 102C. Students who successfully complete courses 20A, 20B, 20C with grades of A may be permitted to enroll. Each course may be taken independently for credit. 103A. Introduction to Persian Poetry. 103B. Introdution to Classical Persian Prose; 103C. Introdution to Contemporary Persian Poetry and Prose.

M110A-M110B-M110C. Iranian Civilization. (4-4-4) Formerly numbered 1010A-1010B-1010C. (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 Sasanian dynasty — Elamite civilization and Mede, Achaemenid, Arsacid, and Sasanian 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; discussion, two hours. Proficiency-based course in basic grammar of literary Kurdish (Sorani). Graded readings, translation, composition (level one), conversation (levels one and two).

120. Comparative Study of Six Major Persian Poets. (4) Lecture, two hours; discussion, one hour. Preparation: knowledge of Persian. Lectures in Persian, readings in English and Persian. Comparative study of six major Persian poets from the 10th to 14th century who shaped the sense of Persian identity and delineated chief distinguishing characteristics of Persian thought and culture. P/NP or letter grading.

130. Intellectual History of Jews of Persia. (4) Lecture, three hours. Readings in English. Introduction to intellectual history of Jews in Persia by highlighting select areas of Judeo-Persian studies and focusing on various authors and their work. P/NP or letter grading.

131. Introduction to Judeo-Persian: Language and Culture. (4) Lecture, three hours. Preparation: knowledge of Persian equivalent to course 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 (Adabiyâyât). (4) Lecture, three hours. Requisite: course 103A. Study of major Persian poets and prose writers: prose — Hâfez, Sa’di, Rûmi, Bahâr, Dekhikor, and others; poetry — Hâfez, Sa’di, Rûmi, Bahâr, Dekhikor, 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 120C. 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 which have helped shape the values of Persian society. 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 independent-ly 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, and Khita). May be repeated for credit with consent of instructor. P/NP or letter grading.

169. Civilization of Pre-Islamic Iran. (4) Lecture, three hours. Knowledge of Iranian civilization from the beginning through Sasanian period.

170. Religion in Ancient Iran. (4) History of religion in Iran from the beginning to the Mohammedan conquest; Indo-Iranian background, Zoroastrianism, Manichaism, Mazdakism.


187. Variable Topics in Iranian Studies. (4) Lecture, three hours. Variable topics; consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit. P/NP or letter grading.

Graduate Courses


221. Rumi, Mystic Poet. (4) Seminar, three hours. Requisite: course 220A or 220B. Study of life and works of Rumi in context of Sufism and poetic creativity. May be repeated twice for credit.

M222A-M222B. Vedic. (4-4) (Same as South Asian M222A-M222B.) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to course 222A. May be repeated for credit.


231A-231B-231C. Advanced Middle Iranian. (4-4-4) Formerly numbered 231A-231B. Lecture, three hours. Requisite: course 231A. 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, Khota- nese, 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.


Islamics

Upper Division Courses

110. Introduction to Islam. (6) Lecture, three hours; discussion, one hour. Genesis of Islam, its doctrines, and practices, with readings from the Qur’an and hadith; schools of law and theology; piety and Sufism; reform and modernism. P/NP or letter grading.

188FL. Special Studies: Readings in Iranian. (2) Seminar, two hours. Requisite: course 102C. Students must be concurrently enrolled in affiliated main course. Includes readings and advanced training in Iranian. Additional work in Iranian to enrich and augment work assigned in main course, including read-ing, writing, and other exercises in Iranian. P/NP or letter grading.

197. Individual Studies in Iranian. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Irani-an. (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. Indi-vidual contract required. P/NP or letter grading.

Near Eastern Languages and Cultures / 477
130. Shi’a in Islamic History. (4) Seminar, three hours; discussion, one hour. Rise and development of Shi’a Islam, its doctrines, and practices; major branches: Twelvers, Ismailis, and 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, 10 minutes. Required prerequisite: course 110. Based on original writings of major Islamic thinkers in English translation, provides balanced picture of enormous ideological variety found in contemporary Islamic thought and civilization; modern trends of reinterpretation and reform. 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/NP 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 developments in following disciplines: Arabic language and literature, Qur’anic sciences, traditions, jurisprudence, theology, and Sufism. 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. Culumnating paper or project. Letter grading. Individual contract required. P/NP or letter grading.

151B. Spirit of Secularism: Jewish Cultures in Secular Age. (4) (Same as History M183G) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of emergence of distinct forms of Jewish culture in modern age, particularly those that challenge traditional forms of Jewish religious culture (e.g., laws, customs, or rituals). P/NP or letter grading.

151A. Modern Jewish Religious Movements and Their Ideologies. (4) Lecture, three hours. Introduction to Jewish law from biblical literature to modern legal systems. Comparison of Jewish legal systems to modern secular systems and discussion of ethical dimensions of legal systems. P/NP or letter grading.

150A-150B. Hebrew Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading. 150A. Literary Traditions of Ancient Israel: Bible and Apocrypha. (Same as Comparative Literature M101.) Study of literary culture of ancient Israel through examination of principal compositional strategies of Hebrew Bible and Apocrypha (read in translation). P/NP or letter grading. 150B. Rabbinic Judaism. Topics include 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/NP or letter grading.

151A-151B. Modern Jewish Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading. 151A. Diaspora Literature. (Same as Comparative Literature M166.) 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 aspects of each work. 151B. Israeli Literature. Selections 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.


177. Variable Topics in Jewish Studies. (4) Lecture, three hours. Variable topics; consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit. P/NP or letter grading.

181. Topics in Jewish History. (4) (Same as History M181.) 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.

185C. American Jewish Experience. (4) (Same as History M184C) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of major social, economic, and political factors that shaped lives of Europe’s Jews from outbreak of First World War to the present. Emphasis on diverse Jewish communities of interwar Europe, fate of Jews under Nazism, and character of postwar Jewish community. P/NP or letter grading.

M182B. Between Crescent and Cross: Jewish Middle Ages. (4) (Same as History M182B) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of unfolding of Jewish history from rise of Christianity to expulsion of Jews from Spain in 1492. P/NP or letter grading.

182C. Jewish History from Spanish Expulsion to 1850. (Same as History M182C) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of early modern Jewish history beginning with enormously repressive expulsion of Jews from Spain in 1492, followed by transformations in Jewish society and identity over five centuries in Europe and Middle East, and concluding with nationalism. P/NP or letter grading.

182D. European Jewry from 1851 to the Present. (4) (Same as History M182D) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of major social, economic, and political factors that shaped lives of Europe’s Jews from outbreak of First World War to the present. Emphasis on diverse Jewish communities of interwar Europe, fate of Jews under Nazism, and character of postwar Jewish community. P/NP or letter grading.

182E-182F. Jewish Intellectual History. (4) (Same as History M182E-182F) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

182G. Medieval Period. Examination of three intellectual worldviews that dominated for hegemony in medieval Jewish world — rabbinic Judaism, medieval rationalism as embodied in philosophy, and cabala. P/NP or letter grading.

182H. Modern Jewish Intellectual History. (4) (Same as History M182H) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of modern Jewish intellectual history from the 18th century to the present.

182I. Introduction to Jewish Folklore. (4) (Same as History M181A) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

181A. Jewish Civilization: Encounter with Great World Cultures. (4) (Same as History M181A) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of dynamic and millennia-old interaction of Jews with great world cultures. Creative adaptations that have lent Jewish culture its distinct and various forms. P/NP or letter grading.

181B. Early Judaism: The Bible. (4) (Same as History M181B) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of origins and historical development of Anti-Semitism. P/NP or letter grading.

181C. American Jewish Experience. (4) (Same as History M181C) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Experience of Jews in America, both historical and contemporary. P/NP or letter grading.

181D. History of State of Israel from 1948 to the Present. (4) (Same as History M181D) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of history of State of Israel from 1948 to the present. P/NP or letter grading.

181E. Holocaust in Literature. (4) (Same as Comparative Literature M165.) Lecture, three hours. Requisite: History M185C or M182F. 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.

191. Variable Topics Research Seminars: Jewish Studies. (4) Seminar, three hours. Research seminar on selected topics. Reading, discussion, and development of culminating project. May be repeated for credit. P/NP or letter grading.
Near Eastern Languages and Cultures / 479

197. Individual Studies in Jewish Studies. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individu-
al intensity study, with scheduled meetings to be ar-
anged between faculty member and student. As-
signed reading and tangible evidence of mastery of sub-
ject matter required. May be repeated for credit. Individ-
al contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Jew-
ish Studies. (2 to 4) Tutorial, one hour. Limited to ju-
niors/seniors. Supervised individual research or in-
vestigation under guidance of faculty mentor. Culmi-
nating paper or project required. May be repeated for 
credit. Individual contract required. P/NP or letter 
grading.

Near Eastern Languages

Lower Division Courses

M20. Visible Language: Study of Writing. (5) (Same as Asian M20, Indo-European Studies M20, Slavic M20, and Southeast Asian M20.) Lecture, three hours. 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 Sumer, Egypt, and Mesoamerica left little evidence of corresponding earliest develop-
ants, their antiquity and, in case of China and Meso-
america, 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 con-
ceptual basis of semiotic language representation. Or-
igns and development of early non-Western writing sys-
tems. How Greco-Roman alphabet arose in 1st Millenium B.C. and how it compares to other modern writing systems. P/NP or letter grading.

50A. First Civilizations. (5) Lecture, three hours; discussion, one hour. Survey of great civilizations of ancient Near East — Egypt, Israel, and Mesopotamia — with attention to emergence of writing, monothe-
ism, and urban societies. Letter grading.


50C. Modern Middle Eastern Cultures. (5) Lecture, three hours; discussion, one hour. Survey of modern Middle Eastern cultures through readings and films from Arab countries, Iran, Turkey, and Israel. Letter grading.

Upper Division Course

M101B. Egyptian Art and Archaeology of Middle and New Kingdoms. (4) (Same as Art History M101B.) Lecture, three hours. Requisite: Art History 50. Study of architecture, sculpture, painting, and mi-
nor arts during Middle and New Kingdoms. P/NP or letter grading.

Graduate Courses

200. Bibliography and Method of Near Eastern 
Languages and Literatures. (4) Lecture, two hours. Required for all doctoral students. Introduction to bibliogra-
phical resources and training in methods of research in various areas of specialization offered by department. May be repeated for credit.

201. Study of Religion: Theory and Method. (4) Seminar, three hours. Preparation: familiarity with at least two major world religions. Introduction to variety of theories and methods used in academic study of religion. In attempt to demonstrate importance that historical, critical, and social exigencies play in devel-
opment of religious traditions, discussion of theories comparatively and in their historical context, with fo-
cus on presuppositions and core concepts and impli-
cations of each theory. Letter grading.

205. Akkadian Literary Texts. (3-3) Lecture, three hours. Selected readings from Akkadian myths and epics, with introduction to historical tradition of the works and their literary structure. Letter grading.

217. Folklore and Mythology of Near East. (4) Lecture- 
two hours. S/U or letter grading.

219. Seminar: Paleography. (4) Seminar, three hours. Provides students with ability to cope with vari-
eties of manuscripts. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice per-
sonnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guid-
ance and supervision of regular faculty member re-
sponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate 
dean. May be repeated in courses taken under cooperative arrangements with USC. P/NP or letter 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

110. Neo-Aramaic. (4) Lecture, three hours. Gram-
mar and reading of selected texts (folktales, homilies, songs) in modern Aramaic dialects of the Jews and Christians of Kurdistan.


130. Biblical Aramaic. (4) Lecture, three hours. Requi-
sites: Hebrew 102A, 102B, 102C. Grammar of bibi-
lical Aramaic and reading of texts.

140A-140B. Elementary Akkadian. (4-4) Lecture, three hours. Elementary grammar and reading of texts in standard Babylonian.

141. Advanced Akkadian. (4) Lecture, three hours. Old Babylonian syntax; reading of basic Old Babylo-
nian texts.

142. Akkadian Literary Texts. (4) Lecture, three hours. Selected readings from Akkadian myths and epics, with introduction to historical tradition of the works and their literary structure.

197. Individual Studies in Semitics. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual in-
tensive study, with scheduled meetings to be ar-
anged 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 Semitic-
ics. (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

210. Ancient Aramaic Dialects. (4) Lecture, three hours. Requisite: course 130. Reading of surviving in-
scriptions and papyri. Texts include Old Aramaic in-
scriptions, Egyptian Aramaic texts, Qumran Aramaic, and Targumic Aramaic. May be repeated for credit. S/ 
U or letter grading.

215B. Syriac. (4) Lecture, two hours. Morphology 
and syntax of Syriac language; readings in Syriac translation of Bible and Syriac literature. May be repeated for credit. S/U or letter grading.

220A-220B. Ugaritic. (4-4) Lecture, two hours. Requi-
sites: Hebrew 102A, 102B, 102C. Study of Ugaritic lan-
guage and literature. Only course 220B may be re-
peated for credit. S/U or letter grading.

225. Phoenician. (4) Lecture, two hours. Requisites: Hebrew 102A, 102B, 102C. Study of Phoenician lan-
guage and inscriptions. May be repeated for credit. S/U or letter grading.

230. Seminar: Northwest Semitic Languages and 
Literatures. (4) Seminar, two hours. May be repeated for credit. S/U or letter grading.

240X. Seminar: Akkadian Language. (1) 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.

240Y. Seminar: Akkadian Language. (2) Seminar, two hours. Readings of texts from various dialects of Akkadian; 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. May be repeated for credit. S/U or letter grading.

290A-290B-290C. Seminars: Comparative Semitic-
ics. (4-4-4) Seminar, two hours. S/U or letter grading.

596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


Turkic Languages

Upper Division Courses

101A-101B-101C. Elementary Turkish. (5-5-5) Le-
cture, five hours. Course 101A is requisite to 101B, 
which is requisite to 101C. Grammar, reading, conver-
sation, and elementary composition drills. P/NP or let-
ter grading.

102A-102B-102C. Advanced Turkish. (4-4-4) Le-
cture, five hours. Requisites: courses 101A, 101B, 
101C. Continuing study of grammar, conversation, 
and composition. Readings in modern literature and social science texts.

111A-111B-111C. Elementary Uzbek. (4-4-4) Le-
cture, three hours; laboratory, two hours. Elementary 
grammar, reading, and composition exercises; ele-
mentary conversation.

112A-112B-112C. Advanced Uzbek. (4-4-4) Le-
cture, three hours; laboratory, two hours. Descriptive Uzbek grammar, reading, and analysis of Uzbek liter-
ary and folkloric texts. High-style composition and conversation.

114A-114B-114C. Bashkir. (4-4-4) Lecture, three 
hours. Requisite: course 102A. Grammar, reading of 
literary and folkloric texts.

115A-115B-115C. Elementary Azeri. (4-4-4) Knowl-
dge of Russian, Turkish and Persian helpful. Gram-
matical competence at elementary level; knowledge of basic facts of Azeri grammar; reading competence with help of dictionary; ability to write simple composi-
tions; basic conversational skill.

120A-120B-120C. Descriptive Grammar of Modern Literary Uzbek. (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 literary Uzbek, official language of the newly independent Republic of Uzbekistan. Phonemics, morphology, syntax, paremiology, 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 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 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 students of history, literature, and religion of the Balkans, Near East, and Central Asia. Topics include Arabic script as applied to Ottoman; Arabic and Persian elements in grammar and vocabulary. Readings of historical and literary texts.


235A-235B. Middle Turkic: Karakhanid, Khazaranc, Manamuk, Kipchak, and Old Anatolian. (4-4) Lecture, three hours. Requisite: course 180. Survey of Middle Turkic documents. Textual and linguistic analysis of Middle Turkic texts from various literary genres.

240A-240B-240C. Advanced Ottoman. (4-4-4) Lecture, three hours. Requisites: courses 210A, 210B, and 210C. Emphasis on different genres of Ottoman writing, 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.


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.

290A-290B. Seminars: Classical Turkic Literature — Ottoman, Chagatay, and Azeri. (4-4) Seminar, two hours. Requisites: courses 210A, 210B, and 210C, and/or 220A, 220B, and 220C. Survey of Islamic literatures of the Turks in classical period. Readings of Ottoman, Chagatay, and Azeri texts from various literary genres. Discussion of stylistic, prosodic, and linguistic characteristics.

596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


PhD. Dissertation Research and Preparation. (2 to 8) Tutorial, to be arranged. S/U grading.

NEUROBIOLOGY

David Geffen School of Medicine
UCLA
73-235 Center for the Health Sciences
Box 951763
Los Angeles, CA 90095-1763
(310) 825-9553, 206-7625
e-mail: neurobio@mednet.ucla.edu
http://www.neurobio.ucla.edu/nb/

Marie-Françoise Chesselet, M.D., Ph.D., Chair
Nicholas C. Brecha, Ph.D., Vice Chair
Professors
Dean Bok, Ph.D. (Dolly Green Professor of Ophthalmology)
Nicholas C. Brecha, Ph.D.
Marie-Françoise Chesselet, M.D., Ph.D. (Charles H. Markham Professor of Neurology)
Carmine D. Clemente, Ph.D.
Edwin L. Cooper, Ph.D.
Jean S. de Vellis, Ph.D. (Dr. George Tarjan Professor of Mental Retardation), in Residence
V. Reggie Edgerton, Ph.D.
Jerome Engel, Jr., M.D., Ph.D. (Jonathan Sinyay Professor of Epilepsy)
Jack L. Feldman, Ph.D.
Robin S. Fisher, Ph.D. (Medical History Division)

Scope and Objectives

The Department of Neurobiology offers advanced training leading to the Ph.D. degree. Graduates can anticipate an academic career at the college or university level or as a basic science researcher at a research institute or biotechnology company. In accord with this the department strives to produce graduates soundly qualified both for teaching at the college or university level and for the conduct of original research in neurobiology.

The overall objective of the Ph.D. program is to provide a strong theoretical and practical foundation in the area of cellular and systems neurobiology, with the goal to develop a better understanding of normal and pathological brain function and behavior. The graduate program provides (1) basic and advanced instruction in the fundamentals of neuroscience, (2) advanced independent research training in the areas of cellular, structural, and systems neurobiology, and (3) teaching experience in undergraduate, graduate, and professional (dental and medical) courses in neuroscience. The program is targeted toward highly qualified and
self-motivated doctoral students who take advantage of a flexible curriculum characterized by extensive informal and formal interactions with faculty in small groups and on an individual tutorial basis. The curriculum is structured to allow students extensive opportunities for critical examination of contemporary neuroscience literature and research and for the development of oral and written communication skills.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/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 Neurobiology offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Neurobiology.

Medical History

Upper Division Courses

107A-107B. Historical Development of Medical Sciences. (4-4) Lecture, three hours. Major contributions of medicine and medical personalities from earliest times. P/NP or letter grading. 107A. Contributions of medicine and medical personalities from earliest times through 1650. 107B. Subject in the period from 1650 through the 19th century. Illustrated lectures, class discussion, and required readings from selected texts.

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 era through latter 20th century. Emphasis on fundamental nerve functions, cell communication, and technological, conceptual, and cultural influences that have shaped understanding of brain and nervous system. P/NP or letter grading.

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.

199. Directed Research in Neurobiology. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Studies in anatomy and related subject areas appropriate for training of particular students, which includes reading assignments or laboratory work leading to final oral or written report. May be repeated for maximum of 16 units. Individual contract required. P/NP or letter grading.

Graduate Courses

M200A. Synapses, Cells, and Circuits. (4) (Same as Neuroscience M204.) Lecture, three hours; laboratory, two hours. Neuronal transmission, neurotransmitters, synaptic development, neuroendocrine and reproductive organs, with emphasis on spermatogenesis and menstruation. S/U grading.

M200B. Cell, Developmental, and Molecular Neurobiology. (6) (Same as Molecular, Cell, and Developmental Biology CM220 and Neuroscience M201.) Lecture, six hours. Fundamental topics concerning cellular development and development of neurobiology, including intracellular signaling, cell-cell communication, neural development, and the mechanisms underlying development of nervous system. P/NP or letter grading.

M200C. Sensory Systems Neurobiology. (4) (Same as Neuroscience M221.) Lecture, two hours; discussion, two hours. Fundamental topics in sensory systems neurobiology, including sensory transduction, taste and olfaction, audition, vision, and somatosensory system. Letter grading.

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, water intake and body fluids, neuroendocrine systems, circadian timing, sleep and dreaming, psychosexual development, motivation, reward and addiction, cognitive development, object, face, and spatial recognition, learning and memory, language and communication, and thinking and problem solving. Letter grading.

M200F. Cellular Neurophysiology. (4) (Same as Neuroscience M202 and Physiological Science M202.) Lecture, three hours; discussion, two hours. Required of Molecular, Cell, and Developmental Biology 171 or Physiological Science 166, and Physiological Science 111A or M180A or Physics 6B. Advanced course in cellular physiology of neurons. Action and modulation of membrane potentials, channels and ionic blockers, gates, ion pumps and neuronal homeostasis, synaptic receptors, drug-receptor interactions, transmitter release, modulation of 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 M228.) 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 underlies these interactions. Examination of current literature on computational models that take advantage of novel ground-breaking models. Letter grading.

211. Cellular Basis of Learned Behavior. (2) Lecture/discussion, one two-hour session; laboratory, to be arranged. Preparation: microscopic anatomy, mammalian systems, neuroanatomy and physiology of cerebral processes in alerting, learning, focusing attention, and memory. S/U or letter grading.

220. Structural Neurobiology. (2) Lecture, two hours; discussion, two hours; laboratory, two hours. Investigations to decipher structure of chemical, electrical, and mixed synapses as determined by imaging methods such as electron tomography. Comprehensive review of current principles governing synaptic transmission and balanced account of some of most topical areas of field, such as hemifusion, 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, to address any questions or difficulties that may arise from laboratory and lectures. S/U 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 and reproductive organs, with emphasis on feedback regulation, actions, both hormonal and neural. Structure and function of hypothalamic-pituitary and gonadal functions and on functional integration of neuroendocrine-reproductive axis at cellular and molecular levels. Letter grading.

M229. Oral Embryology and Histology. (4) (Same as Oral Biology M203.) Lecture, four hours. Lectures and laboratory instruction in development and histological structure of facial region and oral and peri-oral organs and tissues. Letter grading.

M234. Seminar: Developmental Neuroendocrinimunology. (2) (Same as Oral Biology M234.) Seminar, two hours. Designed for graduate students. Psychological and physiological processes intertwined, and one important aspect of psychoneuroimmunological research is characterization of mechanisms that underlie these interactions. Examination of current literature on immune system interaction from a development perspective. S/U grading.


Scope and Objectives

Neurology is the medical science dealing with the normal and diseased nervous system. Neurological disorders are often associated with significant disability, morbidity, and mortality. Their higher incidence in association with greater longevity of the population, increased awareness, improved diagnostic methods, and other factors place neurological disorders among the major medical problems today. The Department of Neurology and the Reed Neurological Research Center provide means for a coordinated basic science and clinical research approach to neurological disorders, patient care, and neurological education.

The department instructs medical students throughout the four years. Emphasis in the first year is on basic aspects of neuroanatomy, chemistry, and physiology; in the second year, neurological history taking and neurological examination of afflicted patients are stressed. The third year consists of a clerkship, and the fourth year provides electives in neurology, including an advanced clinical clerkship.

Graduate students and postdoctoral candidates are trained in 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

College of Letters and Science

UCLA

1506D Gonda Center

Box 951761

Los Angeles, CA 90095-1761

(310) 206-2349

fax: (310) 206-5855

http://www.neurosci.ucla.edu

Scott H. Chandler, Ph.D., Chair

Faculty Advisory Committee

Scott H. Chandler, Ph.D. (Physiological Science)
Carlos V. Grijalva, Ph.D. (Psychology)
Patricia E. Phelps, Ph.D. (Physiological Science)
Joseph B. Watson, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences)

Scope and Objectives

Neuroscience seeks to understand the brain in health and in disease. Topics of fundamental interest include perception, cognition, learning, memory, motor control, and regulation of body function. The undergraduate interdepartmental program seeks to explore the principles and concepts of this broad range of nervous system function at different levels of analysis, including molecular, cellular, synaptic, network, computational, and behavioral.

Undergraduate Study

Neuroscience B.S.

Preparation for the Major

Life Sciences Core Curriculum

Required: Life Sciences 1, 2, 3, 4; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4AL, and 4BL, or 6A, 6B, and 6C; one course from Statistics 10 or 13.

Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving grades below C– in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

Transfer Students

Transfer applicants to the Neuroscience major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2, one year of calculus, one year of general chemistry with laboratory for majors, one semester of organic chemistry with laboratory, and one statistics course. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

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

The Major

The following 12 courses are required for the Neuroscience major. Consult respective departmental or program listings for course descriptions:

Group 1: Neuroscience M101A, M101B, M101C, 102, Chemistry and Biochemistry 153A, 153L

Group 2: Three electives (one from each area) as follows:

Honors at graduation. Students must submit the application before beginning and at http://www.neurosci.ucla.edu. Students able in the Neuroscience Undergraduate Office applications and program requirements are avail-

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.

Group 3: One research-related course from the following: Neuroscience 101L (one term) or 199 (two terms) or 198A and 198B (one term in each course) or Psychology M181A and M181B with approval of the neuroscience curriculum committee before start of project; one term in each course. All majors who elect to do two terms (one term applies toward Group 3 and one toward Group 4) of Neuroscience 198A and 198B or Psychology M181A and M181B must do one term of Neuroscience 99 in the same laboratory. In addition, they must submit a poster to the neuroscience undergraduate poster session or the curriculum committee prior to graduation.

Group 4: Two additional elective courses from the Group 2 or 3 list or from Neurobiology/Medical History M169 or Physiological Science 135. Students who select two terms of Neuroscience 198A and 198B or 199 or Psychology M181A and M181B must select only one additional elective to satisfy Group 4.

Psychology 115 cannot be substituted for Neuroscience M101A; however, Physiological Science 111A can be substituted.

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 required and elective course must be taken for a letter grade, and a C average must be maintained in all upper division courses taken for the major.

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, life sciences, and physics 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 102 and from Groups 2, 3, and 4 as listed under the Neuroscience major.

No more than two courses may be applied toward both this minor and a major or minor in another department or program. Each minor course must be taken for a letter grade, with 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 Course

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. General overview and introduction to most exciting and fundamental topics encompassing field of neuroscience. P/NP or letter grading.

Upper Division Courses

- M101A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A, 111P, 111S, 112B, 120A, 120B, or Psychology M117A, M117B, M117C. Lecture, four hours; discussion, 90 minutes. P/NP or letter grading:
- M101B. Molecular and Developmental Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 115, Life Sciences 3, 4. Molecular biology of channels and receptors: focus on voltage-dependent channels and neurotransmitter receptors. Molecular biology of supramolecular mechanisms: synaptic transmission, axonal transport, cytoskeleton, and muscles in classical experiments and modern molecular approaches in developmental neurobiology. P/NP or letter grading.
- M101C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisite: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A) or Physiological Science 111A or Psychology 115. Neural mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.

101L. Neuroscience Laboratory. (4) Lecture, two hours; laboratory, three hours. Requisites: courses M101A, M101B (M101B may be taken concurrently). Not open for credit to students with credit for Psychology 116. Introduction to laboratory methods in neuroscience. Laboratory exercises range from molecular and cell biological to behavioral. Hands-on experience with important methodology and experimental approaches in neuroscience.


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 functions. P/NP or letter grading.

M119N. The Visual System. (4) (Same as Psychology M119N.) Lecture, three hours. Requisite: course M119L or Molecular, Cell, and Developmental Biology 171A or Psychobiology 111A or Psychology 115. The ability to image and analyze the visual world is a truly remarkable feat. Coverage of anatomy and physiology of visual processing from the retina to visual cortex through lectures, extensive reading, and discussions.

M130. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Biology M181, Physiological Science M181, Psychiatry M181, and Psychology M117L.) 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 disorders, obsessive-compulsive disorder. Provides basic understanding of brain dysfunctions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.

M145. Neural Mechanisms Controlling Movement. (5) (Same as Physiological Science M145.) Lecture, four hours. 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.
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 Molecular Cell and Developmental Biology 171 or Physiological Science 111A or Psychology 115. Strongly recommended: course 102. Theory, methods, applications, assumptions, and limitations of neuroimaging. Techniques, biological questions, and results. Brain structure, brain function, and their relationship discussed with regard to imaging. Concurrently scheduled with course CM277. Letter grading.

C177. Drugs of Abuse from Neurobiology to Policy and Education. (4) Lecture, four hours. Enforced requisite: course M101A. Course ranges from synapse to society. Provides intensive didactic on current neuroscientific basis for understanding substance abuse and addiction, and 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 CM277. 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 2. Emphasis on human electroencephalogram (EEG) and various forms of sensory-evoked potentials to human brain explored in mental 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 requisites: courses M101A, M101B. Not open for credit to students with credit for course 191C, seminar 1. In-depth study of genetic, molecular, and genomic approaches to studying nervous system development and disease. Overview of current technologies used to generate mouse models for genetic and phenotypic analysis. Review of techniques for studying development and disease. Integrative genomic approaches for identifying and characterizing gene(s) involved in these processes. Emphasis on mouse models, but other model organisms considered as well. Letter grading.

181. Cellular and Molecular Mechanisms of Learning and Memory. (4) Seminar, four hours. Enforced requisite: course M101A. Not open for credit to students with credit for course 191C, seminar 2. Cellular models of learning: Genetic and molecular approaches to learning and memory. Learning and memory deficits in neuropsychiatric diseases. LTP and LTD models. Letter grading.


M148. Neuronal Signaling in Brain. (4) Same as Physiological Science M148.) Lecture, three hours; discussion one hour. Requisites: courses M101A (or Physiological Science M101A, M101B or Physiological Science M180B or Chemistry 153A). Consideration of brain function, with focus on cellular physiology and functional neuroanatomy. Topics include neurotransmitter and synaptic transmission and function of specific neuronal circuits in auditory pathway, basal ganglia, cerebellum, hippocampus, and neocortex.

191A-191B-191C. Variable Topics Research Seminars: Neuroscience. (4-4-4) Seminar, three hours. Topics on one or more aspects of neuroscience. Reading, discussion, and development of culminating project. May be applied as elective only in specific area of group 2. Each course may be repeated once for credit. P/NP or letter grading. 191A. Behavioral and Cognitive Neuroscience. Requisite: course M101A or Physiological Science 111A. 191B. Systems and Integrative Neuroscience. Requisite: course M101A or Physiological Science 111A. 191C. Molecular, Cellular, and Developmental Neuroscience. Enforced requisite: course M101B.

191H. Honors Seminars: Neuroscience. (4) Seminar, four hours. Preparation: one statistics course (Statistics 10 or equivalent). Limited to neuroscience honors program students. Introduction in principles of scientific method, ethics, and written and oral communication; critique of current journal articles and research projects. Presentation of individual research. May not be applied toward elective requirements for major. Must be taken during Winter Quarter of academic year that students enroll in courses 198A and 198B. Letter grading.

192. Practicum in Neuroanatomy for Undergraduate Assistants. (2) Seminar, three hours; laboratory, one hour. Requisites: courses M101A and 102, with grades of A. Limited to senior Neuroscience majors. Transitioned supervised practicum in neuroanatomy and neuroimaging. Techniques, biological questions, and research that culminate in report under direct supervision of faculty mentor. May not be applied toward major requirement. May be repeated for credit. P/NP or letter grading.


195. Community or Corporate Internships in Neuroscience. (4) Tutorial, one hour; fieldwork, eight hours. Limited to juniors/seniors. Internship course to be supervised by Center for Community Learning, internship supervisor, and faculty advisor. Consult Undergraduate Advising Office for more information. Students meet on regular basis with internship supervisor and provide periodic reports of their experience. May not be applied toward major requirements. May be repeated twice for credit. Individual contracting with supervising faculty member required. 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) (Formerly numbered 199.) 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. Culminating paper or project required. Maximum of 8 units of courses 198A, 198B, 199A, 199B may be applied toward major. Individual contract required. Letter grading.

199B. Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum. Enforced requisite: course 199A. Limited to junior/senior Neuroscience majors and minors with grades of B (3.0) or better. Continued supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. Maximum of 8 units of courses 198A, 198B, 199A, 199B may be applied toward major. Individual contract required. 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
UCLA
1506D Gonda Center
Box 951761
Los Angeles, CA 90095-1761

(310) 825-8153, 825-3390
fax: (310) 206-5855
e-mail: neurophd@mednet.ucla.edu
http://www.neuroscience.ucla.edu

Michael S. Levine, Ph.D., Chair
Faculty Advisory Committee
Ellen M. Carpenter, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences)
Scott H. Chandler, Ph.D. (Molecular Biology)
Marie-Francoise Chesnai, M.D., Ph.D. (Neurobiology, Neurology)
Christopher J. Evans, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences)
David L. Glanzman, Ph.D. (Neurobiology, Physiological Science)
Volker Hartenstein, Ph.D. (Molecular, Cell, and Developmental Biology)
Jack W. Judy, Ph.D. (Electrical Engineering)
Franklin B. Krasne, Ph.D. (Psychology)
Michael S. Levine, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences)
Kelsey C. Martin, M.D., Ph.D. (Biological Chemistry, Psychiatry and Biobehavioral Sciences)
Paul E. Mickey, Ph.D. (Neurobiology)
Richard W. Olsen, Ph.D. (Molecular and Medical Pharmacology)
Diane M. Papazian, Ph.D. (Psychology)
Elizabeth R. Sowell, Ph.D. (Neurology)
Eric J.N. Vilain, M.D., Ph.D. (Human Genetics)
Harry V. Vinters, M.D. (Pathology and Laboratory Medicine)

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, sys-
tems, and/or behavioral biology, as well as qua-
titative approaches from the fields of mathemat-
ics, physics, and engineering. Stu-
dents 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 dis-
ease. Students select their research mentor from
the list of all neuroscience faculty at UCLA.

Graduate Study

Official, specific degree requirements are de-
tailed in Program Requirements for UCLA
Graduate Degrees, available at the Graduate
Division website, http://www.gdnet.ucla.edu/
gasablibrary/pgmrintro.htm. In many cases,
more detailed guidelines may be outlined in an-
nouncements, other publications, and websites
of the schools, departments, and programs.

Graduate Degree

The Neuroscience Program offers the Doctor
of Philosophy (Ph.D.) degree in Neuroscience.

Neuroscience

Graduate Courses

M201. Cell, Developmental, and Molecular Neuro-
biology. (6) (Same as Molecular, Cell, and Develop-
tmental Biology CM201.) Lecture, six hours. Fundamen-
tal topics concerning cellular, developmental, and molecular neurobiology, including intracellular signaling, cell-cell communica-
tion, neurogenesis and migration, synapse formation and elimination, programmed neuronal death, and neurotropic factors. Letter grading.

M202. Cellular Neurophysiology. (4) (Same as
Neurobiology M200F and Physiological Science M202.) Lecture, three hours; discussion, two hours. Requisites: Molecular, Cell, and Developmental Biolo-
gy 171 or Physiological Science 166, and Physiologi-
ical Science 111A or 11B0A or Physics 6B. Advanced
course in cellular electrophysiology of neurons. Action and membrane potentials, channels and channel block-
ers, gates, ion pumps and neuronal homeostasis,
synaptic receptors, drug-receptor interactions, trans-
mitter release, modulation by second messengers,
and sensory transduction. Letter grading.

M203. Neuroanatomy: Structure and Function of
Nervous System. (4) (Same as Biomedical Engi-
neering M285.) Lecture, three hours; discussion/labo-
ratory, three hours. Anatomy of central and peripheral
nervous system at cellular histological and regional
systems level, with emphasis on contemporary exper-
imental approaches to morphological study of ner-
vous system in discussions of circuitry and neuro-
chemical anatomy of major brain regions. Consider-
ation of representative vertebrate and invertebrate
nervous systems. Letter grading.

M204. Synapses, Cells, and Circuits. (4) (Same
as Neurobiology M200A.) Lecture, three hours; laborato-
ry, two hours. Fundamental topics concerning subcel-
ular, cellular, and structural organization of nervous
system. Letter grading. Includes environmental ultra-
structure, cellular neurobiology, neuroanatomy, neural
ircuitry, and imaging. Letter grading.

M205. Systems Neuroscience. (4) Lecture/discus-
sion, four hours. Introduction to fundamentals of sys-
tems neuroscience, with emphasis on integration of
molecular mechanisms, cellular processes, anatomical
circuits, and behavioral analysis to understand function of nervous systems. Letter grading.

M206. Neuroengineering. (4) (Same as Biomedical Engineering M256 and Electrical Engineering M255.) Lecture, four hours; laboratory, two hours, four hours. Requisites: Mathematics 32A, Phys-
ics 1B or 6B. Introduction to principles and technolo-
gies of bioelectricity and neural signal recording, pro-
cessing, and stimulation. Topics include bioelectricity,
electrophysiology (action potentials, local field poten-
tials, EEG, ECoG), intracellular and extracellular re-
cording, microelectrode technology, neural signal pro-
cessing (neural signal frequency bands, filtering, s-
pike detection, spike sorting, stimulation artifact re-
moval), brain-computer interfaces, deep-brain stimu-
lation, and prosthetics. Letter grading.

207. Integrity of Scientific Investigation: Educa-
tion, Research, and Career Implications. (2) Dis-
cussion, two hours. Designed for graduate students.
Debate on topics related to ethical conduct of scientif-
ic investigation, with emphasis on critical thinking.
Topics include scientific misconduct, mentoring, data
ownership, authorship, peer review, use of animals and
humans in biomedical research, conflicts of inter-
est, technology, and scientific integrity. S/U grading.

210A-210B-210C. Introduction to Current Litera-
ture in Neuroscience. (2-2-2) Discussion, two hours.
Critical discussion of current research literature relat-
ed to topics of the five core courses in neuroscience
graduate curriculum. S/U grading.

211A-211B-211C. Evaluation of Research Litera-
ture in Neuroscience. (2-2-2) Discussion, two hours.
Advanced critical analysis of current research in neu-
roscience. S/U grading.

M212A-M212B-M212C. Evaluation of Research Lit-
erature in Neuroengineering. (2-2-2) Discussion, two hours.
Critical discussion and analysis of current literature related to
research areas in neuroengineering. S/U grading.

M220. Biology of Learning and Memory. (4) (Same
as Molecular, Cellular, and Integrative Physiology
M200G, Neurobiology M200G, and Physiology M208.) Lecture, four hours. Molecular, cellular, circuit,
systems, neuroanatomy, theory, and models of learn-
ing and memory. Cross-disciplinary focus on learning and memory to provide integrative view of subject
that emphasizes emerging findings that take advantage of
novel groundbreaking models. Letter grading.

M221. Sensory Systems Neurobiology. (4) (Same
as Neurobiology M200C.) Lecture, two hours; discus-
sion, one hour. Fundamental topics covering sys-
tems neuroscience, including sensory transduction,
taste and olfaction, audition, vision, and somatosens-
ory system. Letter grading.

M230. Molecular and Cellular Mechanisms of Neu-
ral Integration. (5) (Same as Physiological Science
M210 and Physiology M210.) Lecture, four hours; dis-
cussion, one hour. Requisite: course M202. Introduc-
tion 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 integra-
tion in sensory perception and learning, neural nets
and oscillators, and molecular events in development and
sexual differentiation. Letter grading.

M233. Mechanisms and Relief of Pain. (2) (Same
as Oral Biology M204.) Advanced treatment of neuro-
anatomical, neurophysiological, and biochemical bas-
ses of pain perception. Topics include classical pain
theories, pain receptors and pathways, endogenous
dependent mechanisms of pain modulation, and pharmaco-
logical basis for treatment of pain disorders.

240. Phenotypic Measurement of Complex Traits. (4)
Lecture, three hours. Preparation: background in human genetics helpful. Integrative approach to un-
derstanding gene to behavior pathways through examina-
tion of levels of phenotype expression across systems
(cell, brain, organism), across species (invertebrate,
fly, mouse, human), and throughout development across varying environments (including exam-
amples from human disorders such as schizophrenia
and Alzheimer's disease, linking these diverse ap-
proaches to understand genetic root causes in an inte-
grative system of understanding basis of complex human be-
havior. Emphasis on basic understanding of methods
used at each level of phenotype analysis, along with
major resources that can be accessed to gain insight into
gene-behavioral linkage. S/U or letter grading.

255. Functional Organization of Behavior. (2) Lec-
ture, two hours. Changes in neuronal properties sup-
porting 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 potenti-
ization of neurotransmission. S/U or letter grading.

M260. Neuromuscular Factors in Movement Regu-
lation. (Same as Physiological Science M260.) Requir-
ese: Physiological Science 138. Interaction of
neural and muscular factors in regulation of muscle fi-
ter properties and importance of these properties in
neural strategies of movement regulation. S/U or let-
ter grading.

M263. Neuronal Mechanisms Controlling Rhyth-
mic Movements. (4) (Same as Physiological
Science M263.) Requisite: Physiological Science M145.
Advanced topics on brain mechanisms respon-
bible for controlling cyclic and stereotypic movements
such as mastication and locomotion. Emphasis on
neural neurophysiology and interaction between
neuronal networks. Introduction to primary literature
and techniques used in these areas. Students expect-
ed to critically evaluate data and conclusions drawn.

M265A-M265B-M265C. Seminars: Cellular Neuro-
science. (2 to 4 each) (Same as Physiological
Science M295A-M295B-M295C.) Seminar, two to four
hours. Requisite: course M202. Selected topics in
sensory transduction, cellular integration, synaptic
processing, central nervous system function, and
learning. Students required to present two-hour semi-
rar. S/U or letter grading.

M267. Advanced Magnetic Resonance Imaging. (4)
(Same as Biomedical Physics M256 and Psychia-
try M257.) Lecture, four hours; discussion with basic
principles, presentation of physical basis of magnetic
resonance imaging (MRI), with emphasis on develop-
ing advanced applications in biomedical imaging, in-
cluding both structural and functional studies. Instruc-
tion more intuitive than mathematical. Letter grading.

CM272. Neuroimaging and Brain Mapping. (4)
(Same as Physiological Science M272 and Psycholo-
gy M213.) Lecture, three hours. Requisites: courses
M201, M202. Theory, methods, applications, assump-
tions, and limitations of neuroimaging. Techniques, bi-
ological questions, and results. Brain structure, brain
function, and their relationship discussed with regard to
imaging. Concurrently scheduled with course
C172. Letter grading.

M273. Neural Basis of Memory. (4) (Same as Psy-
chiatry M270.) Lecture, two hours; discussion, one
hour. Anatomical, physiological, and neurological
data integrated into models for how behavioral phe-
nomena of memory arise. Discussion of invertebrate
memory, cortical conditioning, hippocampus and de-
clarative memory, and frontal lobes and primary
memory.

274. Computational Neuroscience. (4) Lecture, 90
minutes; discussion, 90 minutes. Requisites: courses
M201, M202. Systematic introduction to computa-
tional neuroscience and hands-on experience in neural
simulations. Computational models at synaptic, neu-
nal, and network levels. Sensory, motor, memory,
and attentional systems and some higher cognitive
functions, including language and consciousness. S/U
or letter grading.
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 pathologic processes that modify the function or activity of the nervous system, including the hypophysial axis, (3) 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://www.neurosurgery.ucla.edu.

Upper Division Course
199. Directed Research in Neurosurgery. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

NURSING
School of Nursing
UCLA
2-151 Factor Building
Box 951702
Los Angeles, CA 90095-1702
(310) 289-7181
fax: (310) 206-6242
http://www.nursing.ucla.edu

Courtney H. Lyder, N.D., G.N.P., F.A.A.N., Dean
Adeline M. Nyamathi, A.N.P., Ph.D., F.A.A.N., Associate Dean for Academic Affairs
Suzette Cardin, R.N., D.N.Sc., F.A.A.N., Assistant Dean for Student Affairs

Professors
Lynn V. Doering, R.N., D.N.Sc., F.A.A.N.
Joyce A. Newman Giger, R.N., Ed.D., F.A.A.N. (Lulu Wolf Hassepng Professor of Nursing)
Felicia S. Hodge, Dr.P.H.
Mary A. Lewis, R.N., Ph.D., A.N.P.-C., F.A.A.N.
Courtney H. Lyder, N.D., G.N.P., F.A.A.N.
Adeline M. Nyamathi, A.N.P., Ph.D., F.A.A.N. (Audrienne H. Moseley Professor of Community Health Research)
Linda R. Phillips, R.N., Ph.D., F.G.S.A., F.A.A.N. (Audrienne H. Moseley Professor of Nursing)
Linda P. Sama, R.N., D.N.Sc., F.A.A.N.

Mary A. Woo, R.N., D.N.Sc., F.A.A.N.
Professors Emeriti
Nancy L.R. Anderson, R.N., Ph.D., P.N.-C., A.O.C.N., F.A.A.N.
Linda K. Badr, R.N., D.N.Sc., P.N.-P., F.A.A.N.
Olive Y. Burner, R.N., Ph.D.
Betty L. Chang, R.N., D.N.Sc., F.P.N.-P., F.A.A.N.
Barbara A. Davis, R.N., Ed.D.
Kathleen Dracup, R.N., Ph.D., F.A.A.N.
Jacquelyn H. Flaskerud, R.N., Ph.D., F.A.A.N.
Charles E. Lewis, M.D., Sc.D.
Donna K. McNeese-Smith, R.N., Ed.D., C.N.A.
Sheron J. Reeder, R.N., Ph.D., F.A.A.N.
Maria W. Seraydarian, Ph.D.
Gwen M. Van Servellen, R.N., Ph.D., F.A.A.N.
Donna F. Ver Steeg, R.N., Ph.D., F.A.A.N.
Donna L. Vredenbost, Ph.D.
Frances M. Wiley, R.N., M.N.

Associate Professors
Jill P. Berg, R.N., Ph.D.
Margaret A. Compton, R.N., Ph.D., F.A.A.N.
Karen H. Gylys, R.N., Ph.D.
Mary Sue V. Helleman, R.N., Ph.D.
Janet C. Mentes, R.N., Ph.D., G.N.P.
Wendie A. Robbins, R.N., Ph.D., N.P., F.A.A.N. (Audrienne H. Moseley Professor of Biological Nursing Science)
Dorothy J. Wiley, R.N., Ph.D.

Assistant Professors
Barbara Bates-Jensen, R.N., Ph.D.
Jo-Ann O. Eastwood, R.N., Ph.D.
Lorraine S. Evangelista, R.N., Ph.D.
Leah FitzGerald, R.N., Ph.D., C-F.P.N.P.
Marie N. Fongwa, R.N., Ph.D.
Angela L. Hudson, R.N., Ph.D., F.N.P.
Evelnia Jacob, R.N., Ph.D.
Linda Searle Leach, R.N., Ph.D., C.N.A.A.
Paul M. Macey, Ph.D. in Gerontology
Sally L. Malinski, R.N., Ph.D.
 Aurelia M. O’Connell, R.N., Ph.D., A.C.N.P., B.C., C.C.R.N.
Carol L. Pavlish, R.N., Ph.D.
Vaida V. Upenieks, R.N., Ph.D.
D. Lynn Woods, R.N., Ph.D., G.N.P., F.A.A.N.
Kynna N. Wright, R.N., Ph.D., M.S.N., M.P.H., C.P.N.P.

Lecturers
Jody Adams-Renteria, R.N., M.N., F.N.P.
Theresa L. Brums, R.N., M.S., F.N.P.
Nilofer Makherji Cainglit, R.N., M.S.N., N.P.
Mary M. Canobbio, R.N., M.N., F.A.A.N.
Lori A. Cutter, R.N., M.N., C-F.N.P.
Maggie Dewan-Smith, R.N., M.S.N., N.P.
Mirasol Fajardo, R.N., Ph.N., C.P.N.P.
Jan M. Fredrickson, R.N., M.N., C.P.N.P.
Mary E. Kingston, R.N., M.N., C.P.H.O.
Young Kee Markham, R.N., M.N., G.N.P.-C.
Marguerite McCormick, R.N., M.S.N., A.C.N.P.
Nancy E. McGrath, R.N., M.N., C.P.N.P.
Josephine D. Ortiz, R.N., M.S.N., F.N.P.
Deborah A. Rice, R.N., M.N., F.N.P.-C.
Joan Schleper, R.N., M.S.N., G.N.P.

Adjunct Professors
Mary P. Cadogan, R.N., Ph.D., G.N.P.

Adjunct Associate Professor
Colleen K. Keenan, R.N., Ph.D., W.H.C.N.P.

Scope and Objectives
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, other major medical centers, or in selected community sites. At the generic bachelor's level, nurses are prepared as generalists with special skills in pri-
mary, secondary, and tertiary prevention and care within a population-based context, leadership, and evidence-based practice. A program designed for associate degree or diploma nurses provides an opportunity to learn about community-based nursing care while providing a foundation for entering the advanced practice nurse master's degree program. At the master's level, nurses are prepared as generalists in hospital-based care or for advanced nursing practice as nurse practitioners, clinical specialists, or administrators in a variety of settings and specialized areas of healthcare. The Ph.D. program prepares scholars who do original research, generate new theories, and build the scientific basis for professional nursing practice. Research is both basic and applied.

Undergraduate Study

Nursing B.S.

Two undergraduate programs are offered: Nursing B.S. (Generic/Prelicensure) for non-nurses and Nursing B.S. (R.N. to B.S./Postlicensure) for registered nurses.

Generic/Prelicensure

The focus of the generic/prelicensure program is on the preparation of nurse generalists with special skills in primary, secondary, and tertiary prevention and care within an individual-and population-based context while developing the basics for a strong leadership role. Students learn the art and science of nursing using the latest research findings to guide their practice.

Admission

The School of Nursing strives to attract a culturally and ethnically diverse student population. Admission is designed for freshman students and transfer students at the junior level beginning Fall Quarter 2008. 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, 4, Microbiology, Immunology, and Molecular Genetics 6, Nursing 10, 20, 50, 54A, 54B, Physiological Science 3, 13, Psychology 10.

Transfer Students

Transfer applicants to the Nursing major with 90 or more units must complete the following introductory courses prior to admission to UCLA: communications, genetics, human anatomy, human physiology, inorganic and organic chemistry, cells, tissues, and organs, molecular biology, and psychology.

The Major


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– grades are not acceptable).

R.N. to B.S./Postlicensure

The focus of the R.N. to B.S./postlicensure program is on community-based nursing care and cultural and human diversity. The curriculum is designed to assist registered nurses in gaining new knowledge needed for professional nursing in a changing society and to build on their earlier associate degree or diploma education. The program also provides a bridge for students who may wish to prepare for advanced practice study at the graduate level.

Emphasis is placed, throughout the curriculum, on concepts related to (1) contributing to the visibility of academic health centers through responsiveness to community needs, (2) improving care of the underserved in community clinics in inner-city urban and rural settings, and (3) redesigning the role of public (community) healthcare through community outreach, home-based health services, and population-based health promotion.

Admission

The School of Nursing strives to attract a culturally and ethnically diverse student population. Admission, beginning in the junior year, requires licensure as a registered nurse and a minimum of one year of full-time experience as an R.N. within the past five years, completion of requisite courses, scholarship, and attainment of a passing score on four Excelsior College Examinations. Students must have a grade of C or better in each requisite course and an overall grade-point average of 3.0 or better prior to admission.

Three recommendation forms and a written statement of purpose are also required. Diverse life experiences, including previous employment, volunteer work, and community service that reflect leadership, responsibility, multicultural involvement, multilingual abilities, and other unusual skills and knowledge are evaluated for all applicants. Consideration is also given to students who are socially, economically, and educationally disadvantaged. Completed applications should reflect clearly identified career goals and documentation of potential in advanced practice nursing.

Transcripts of all high school and college work must be submitted to the UCLA Office of Undergraduate Admissions and Relations with Schools and the School of Nursing. Applicants already enrolled at UCLA need to submit transcripts to the School of Nursing.

Preparation for the Major

Required: Completion of each University and school requirement course with a grade of C or better (C– grades are not acceptable) prior to admission as follows: human anatomy (one course), sociocultural anthropology (one course), humanities (one or more courses), introductory or general microbiology with laboratory (one course), introductory physics (one course or one year of high school physics with laboratory with a grade of B or better), human physiology (one course), introductory psychology (one course), introductory sociology (one course).

The Major

Required: Completion of 76 to 85 units of lower and upper division coursework, including Biostatistics 100A, Chemistry and Biochemistry 14A, 14B, 14C, Epidemiology 100, Life Sciences 2, 3, Nursing 102, 170, 171A through 171D, 172, 173, 174, 200, 220, and one or more courses from 213A, 214F, 216F, 219A, 232F, and three 4-unit electives related to nursing to be selected with consent of the adviser, depending on student interest and area of concentration.

The curriculum at UCLA must be completed with a minimum overall grade-point average of 2.0 (C) or better in all courses taken while a student in the School of Nursing.

Each required nursing course in the school must be completed with a grade of C or better (C– grades are not acceptable).

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gndnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.
Graduate Degrees
The School of Nursing offers the Master of Science in Nursing (M.S.N.) degree and the Doctor of Philosophy (Ph.D.) degree in Nursing. A concurrent degree program (Nursing M.S.N./Management M.B.A.) is also offered.

Nursing

Lower Division Courses

10. Introduction to Nursing and Social Justice I. (2) Lecture, two hours. Within context of history of nursing, introduction to practice of nurses, including role of advocacy. Discussion of effective use of self as professional resource and use of ethics, cultural competence, and human dignity. Introduction to ethical principles (justice, autonomy, veracity, beneficence, confidentiality) and professional values (altruism, autonomy, human dignity, integrity, and social justice) in relation to nursing practice throughout history in health/illness and end-of-life contexts. Letter grading.

20. Introduction to Nursing and Social Justice II. (2) Lecture, two hours. Discussion, on history of nursing, with focus on role of contemporary nurses 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. (2) Lecture, two hours. Preparation: human physiology course taken within past five years. Designed to provide students with basic understanding of pathophysiological changes that occur with disease 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 provides as rationale for nursing diagnosis and therapeutic interventions. Letter grading.

Upper Division Courses

102. Professional Nursing in Culturally Diverse Communities. (5) Lecture, four hours; community experience, three hours. Introductory course to assist registered nurses in transition to professional nursing in context of complex and dynamic healthcare systems. Analyses include individual and population-based approaches to healthcare in dynamic multicultural communities. Letter grading.

105. Human Physiology. (4) Lecture, three hours; discussion, one hour. Designed for nursing students. Lecture and discussion, with emphasis on correlating approach to anatomy and physiology of human body. P/NP or letter grading.


150A. Fundamentals of Professional Nursing. (4) (Formerly numbered 150.) Lecture, four hours. Introduction to practice of professional nursing as theory-based goal-directed method for assisting patients to meet basic human needs at various levels of health continuums. Concepts of communication, interdisciplinarity, and collaboration, interprofessional relationships, ethics, and critical decision-making strategies to essential practice of professional nursing. Essentials of nutrition. Characteristics and roles of professional nursing. Development of competency in care of caregiver, teacher, and collaborator roles in learning experiences in nursing skills laboratory and clinical settings. Letter grading.

152. Human Development/Health Promotion in Cultural, Diagnosis, and Treatment. (5) of remaining five hours. Introduction to primary prevention strategies as they pertain to health and wellness across lifespan, using population-based approach to nursing care of diverse populations. Vaccine-preventable illnesses; priorities in reproductive health, including issues related to contraception and parenting; well-child care, school-age health, and chronic illness prevention strategies for young- and middle-aged adults; elderly who live independently in communities or with in institutions. Analysis of influence of overarching political, societal, and governmental systems within U.S. Letter grading.

153. Healthcare Policy and Professional Nursing. (4) Lecture, four hours. Issues that shape healthcare delivery and their impact on delivery of nursing care, with emphasis on role of professional nursing within legal, ethical, political, economic, and organizational domains of healthcare system. Letter grading.

155. Mental Health/Illness. (3) Lecture, three hours. Behavioral and biologic theories and research of mental health/illness and psychopathology. Theoretical knowledge development and skill assessment needed to promote mental health of individuals and communities. Exploration of research underlying assessment, intervention, and treatment strategies for selected acute and emergent problems of patients' clients across lifespan, with emphasis on social, cultural, and developmental influences. Building on prior knowledge and experience, integration of basic knowledge of pathophysiology, pharmacology, medical and surgical interventions, and communication concepts as applied to care of child-bearing families and medical and surgical clients across lifespan (pediatrics to geriatrics). Discussion of application of nursing process, evidenced-based practice, and problem-solving strategies. Concurrently scheduled with course C265. Letter grading.

156. Informatics. (2) Lecture, one hour; discussion, three hours. State-of-art view of information systems of import to nursing and healthcare delivery systems, including contemporary topics such as database searching, management, and simple analysis of data. Introduction to knowledge and skills pertaining to development and use of electronic health records in contemporary healthcare systems. Analysis of influence of overarching ethical, political, and social influences on information systems developed for personal and public healthcare delivery in the U.S. Concurrently scheduled with course C265. Letter grading.

157. Research Utilization. (2) Lecture, two hours. Preparation of entry-level nurse clinicians for evaluation of research from variety of disciplines that have relevance for nursing practice. Topics include critiquing research reports and focused planning for research utilization, with emphasis on quality of study designs; reproducibility, validity, and generalizability of findings; and practicality of implementing particular findings. Introduction to current systems, approach to gathering and evaluating bodies of literature and examining feasibility of research findings for application of evidence-based findings to clinical practice. Examination of standard research concepts in depth; control of variables, data analysis, interpretation of results, and research application in clinical settings. Interrelationship of theoretical frameworks, design, sample, instruments, and data analysis. Letter grading.

M158. Culture, Illness, and Healing. (4) (Same as Anthropology M168.) Lecture, four hours. Medical anthropological is organized exploration of ways in which health, illness, and medical practices are socially and culturally mediated. Topics include comparing illness experiences, understandings about health and illness, patterns of care seeking, therapeutic practices, and medical authority, and discussing role of different social and cultural settings, including our own. P/NP or letter grading.

C160. Secondary Prevention. (4) Lecture, four hours. Requisite: course 152. Corequisite: course 161. Screening and early detection of illness to prevent chronic or acutely deteriorating illness. Expanding on concepts of health and human development and using aspects of assessment to enable role of primary prevention strategies as they pertain to health and wellness across lifespan, using population-based approach to nursing care of diverse populations. Vaccine-preventable illnesses; priorities in reproductive health, including issues related to contraception and parenting; well-child care, school-age health, and chronic illness prevention strategies for young- and middle-aged adults; elderly who live independently in communities or with in institutions. Analysis of influence of overarching political, societal, and governmental systems within U.S. Letter grading.


C165. Tertiary Prevention and Care II. (7) Lecture, seven hours. Requisites: courses C162, 163. Corequisite: course 166. Second course in two-course sequence. Examination of pathophysiological and psychosocial aspects of assessment and management for selected acute and emergent problems of patients/clients across lifespan, with emphasis on social, cultural, and developmental influences. Building on prior knowledge and experience, integration of basic knowledge of pathophysiology, pharmacology, medical and surgical interventions, and communication concepts as applied to care of medical and surgical clients across lifespan (pediatrics to geriatrics). Discussion of application of nursing process, research problem solving, and critical thinking. Concurrently scheduled with course C265. Letter grading.

201. Health-Related Quality of Life. (2) Lecture, two hours. Examination of nursing's historical influence on socio- cultural theory and human belief systems associated with di- rection in nursing and contextual issues that continue to influence development of nursing knowledge and nursing science. Application of skills fundamental to development of theory in nursing and integral to use of theory in nursing research. Letter grading.

202. Philosophy of Nursing Science. (4) Lecture, four hours. Exploration of concepts of importance re- lated to history of philosophy, history of science, and philosophy of science as context for study of philos- ophy of nursing science. Philosophical tenets and gene- alogies of thought that underlie key theoretical con- cepts in nursing science and domains of nursing (per- son, environment, health, and nursing). Letter grading.

203. History of Nursing Thought. (2) Lecture, two hours. Historical review of evolution of nursing science, focus on traditional grounded theory analysis procedures by collection and analysis of qualitative data. Expansion of conceptual formulation (or grounded theory) of student-selected phenomenon based on pilot study data collected and analyzed as part of course. Letter grading.

205A. Introduction to Qualitative Methods in Re- search. (4) Formerly numbered 205.) Lecture, four hours. Requisite: course 202. Introduction to qualita- tive research design in nursing science. Examination of major methodologies that guide qualitative re- search in relation to various strategies for data collec- tion (interviews, participant observation, focus groups), data analysis, and data interpretation. Scien- tific rigor and ethical concerns for research with hu- man participants critically examined. Letter grading.
210B. Interdependence of Theory and Research Questions in Nursing Science. (4) (Formerly numbered 247.) Lecture, four hours. With focus on state of science in nursing research, analysis of critical interdependence of philosophical assumptions, theoretical conceptualizations of phenomena for study, and formation of research questions for guiding nursing knowledge development. Emphasis on trajectory of entire programs of research for phenomena of interest to nursing science in areas of biologic, biobehavioral, health services, and vulnerable populations. Letter grading.

210C. Nursing Intervention and Program Research. (4) (Formerly numbered 249A.) Lecture, four hours. State of science of nursing intervention and program initiative research. Critical review of research supporting interventions and programs to enhance nursing practice and quality of care for individuals and families across lifespan. Examination of philosophical assumptions as well as analytical processes for evaluating effectiveness of interventions and programs. Consideration of nursing interventions and programs from perspective of biologic, biobehavioral, health services, and vulnerable populations research strands. Letter grading.

211. Theoretical Foundations of Women's Health Care During Reproductive Years. (4) Lecture, three hours; discussion, one hour. Theory and research on assessment and management of women’s health issues during reproductive years. Clinical topics include gynecology, family planning, pregnancy, and postpartum care, with emphasis on health promotion of women during reproductive years in primary 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 families considering cross-cultural views of families as well. Identification of limitations of current theory and research related to family study and applicability of current knowledge to problems encountered in care of families. Letter grading.

213A. Occupational Health Nursing Role and Theory. (4) Lecture, four hours. Introduction to multidisciplinary occupational health environment, including work setting, occupational health nursing scope and standards of practice, and legal and regulatory issues that affect occupational health nursing. Letter grading.


217F. Human Responses to Critical Illness. (4) Lecture, three hours; discussion, one hour. Requisite: course 216F. Builds on pathophysiologic concepts and nursing management of acutely and critically ill adults presented in course 216F. Emphasis on synthesis of research, theory, and experiential knowledge and skills to provide advanced preparation for acute care advanced practice nurses. Letter grading.


218C. Nursing Administration Theory. (4) Lecture, four hours. Requisite: course 218B. Project management, organizational communication, governance, development and change, diverse relationships within organizations, risk management, liability, and ethics of administration decision making. Emphasis on issues affecting local, national, and international healthcare management. Letter grading.


219A. Essentials of Accounting and Budgeting in Healthcare Organizations. (4) Lecture, four hours. Theories of management, organization, and administration presented in relation to techniques of accounting, budgeting, finance, and healthcare economics. Focus on definition of terms and concepts, followed by practical applications within variety of healthcare settings. Letter grading.


220. Theories of Instruction and Learning in Nursing. (3) Lecture, two hours. Theories of learning, curriculum and program development, and principles and techniques of evaluation and instruction. Consideration of role of advanced practice nurse in variety of settings and with diverse cultural and socioeconomic groups. Opportunities provided for skill development in use of computer-based information systems and development of instructional aids. Letter grading.

M221. Qualitative Research Design and Methodology for Indigenous Communities. (5) (Same as American Indian Studies M222 and Health Services M220.) 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, and special populations, 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.

222. Immunosuppression and Patient Care. (2) Lecture, two hours. Research related to immunosuppression, its causes, clinical manifestations, and modifiers. Special emphasis on physiologic and pathophysiologic mechanisms of immunosuppression as a basis for information used in patient education and clinical decisions, and supportive treatments and modifiers. Letter grading.


225A. Advanced Pharmacology I. (3) (Formerly numbered 225B.) Lecture, two hours. Course 225A is enforced requisite to 225B. Basic pharmacological principles in addition to clinical knowledge and skills necessary for care of clients/patients with stable acute or chronic conditions. Focus on major drug classes and their mechanisms of action, pharmacokinetics, adverse effects, and clinical uses. Letter grading.

225B. Advanced Pharmacology II. (2) Lecture, two hours. Enforced 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. (2) Seminar, two hours. Preparation: completion of first-year course work. 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 and to examine state of science in the focus. Core faculty from all specialty areas participate in discussions. S/U grading.
227. Ethnicgeriatric 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 viewed as culturally competent practice that is both client centered and research focused. Exploration of difference between Eurocentric lens and ethnoscience in aging when providing nursing care to ethnically and racially diverse elders. In-depth examination of issues related to conducting research with frail elders, including use of assessment tools 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 morality 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.

229. Biologic/Psychologic Interface in Health and Illness. (2) Lecture, two hours. Interaction of physiologic, behavioral, and psychosocial factors in illness, and theory and research underlying these factors, including differential influence of gender, ethnicity, and culture. Letter grading.

230A-230B. Advanced Pathophysiology I, II. (2-2) (Formerly numbered 230.) Lecture, two hours. Requisite: course 105 or equivalent taken within past five years. Course 230A is requisite to 230B. 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.


232. Human Responses to Aging and Chronic Illness. (4) Lecture/discussion, four hours. Pathophysiologic 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 gerontologic nursing. Letter grading.

233. Human Responses to Aging and Chronic Illness. (4) Lecture/discussion, four hours. Pathophysiologic 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 gerontologic nursing. Letter grading.

234. Biologic/Psychologic Interface in Health and Illness. (2) Lecture, two hours. Interaction of physiologic, behavioral, and psychosocial factors in illness, and theory and research underlying these factors, including differential influence of gender, ethnicity, and culture. Letter grading.

235. Biologic/Psychologic Interface in Health and Illness. (2) Lecture, two hours. Interaction of physiologic, behavioral, and psychosocial factors in illness, and theory and research underlying these factors, including differential influence of gender, ethnicity, and culture. Letter grading.

236. Essential Theoretical Foundations of Primary Care of Children. (4) Lecture, four hours. Requisite: course 237B. Psychiatric Nursing. To assume responsibility for health promotion and illness prevention, and maintenance and management of common developmental, behavioral, acute, and chronic health problems of infants, children, and adolescents and psychosocial effects resulting from illness processes. Emphasis on condition or disease, etiology and incidence, clinical findings, differential diagnosis, pharmacologic and therapeutic management, complications, and potential and patient education measures. Examination of primary child health delivery model related on evidence-based knowledge, practice protocols, consultation, referral, and community resources. Letter grading.


239A. Biobehavioral Foundations of Acute and Chronic Illnesses. (4) Lecture, four hours. Requisites: courses 239A, 239B. Organ systems approach to acute and chronic illness and syndromes related to respiratory, cardiovascular, dermatologic, and genitourinary or systems and selected content in oncology. First of three-course sequence in diagnosis and management of complex chronic illnesses. Theory and research emphasize physiological basis for complex disease entities; evaluation of alternative therapies in research literature also emphasized. Letter grading.


242. Biobehavioral Foundations of Nursing of Children. (2) Lecture, two hours. Interaction of physiologic, behavioral, and psychosocial factors in illness, and theory and research underlying these factors, including differential influence of gender, ethnicity, and culture. Letter grading.


244. Theoretical Foundations of Complementary Health Care II. (4) Lecture, four hours. Specifics of alternative therapies, body-mind principles, and traditional Chinese medicine assessment and diagnosis provided within framework of theory and research. Major emphasis on understanding integration of these complementary therapies with Western clinical practice. Letter grading.

245. Theoretical Foundations of Complementary Health Care II. (4) Lecture, four hours. Specifics of alternative therapies, body-mind principles, and traditional Chinese medicine assessment and diagnosis provided within framework of theory and research. Major emphasis on understanding integration of these complementary therapies with Western clinical practice. Letter grading.

246. Theoretical Foundations of Complementary Health Care II. (4) Lecture, four hours. Specifics of alternative therapies, body-mind principles, and traditional Chinese medicine assessment and diagnosis provided within framework of theory and research. Major emphasis on understanding integration of these complementary therapies with Western clinical practice. Letter grading.


249. Theoretical Foundations of Complementary Health Care II. (4) Lecture, four hours. Specifics of alternative therapies, body-mind principles, and traditional Chinese medicine assessment and diagnosis provided within framework of theory and research. Major emphasis on understanding integration of these complementary therapies with Western clinical practice. Letter grading.

250. Ethical Issues, Social Justice, and History of Nursing. (4) Lecture, four hours. Social, cultural, and political forces in the U.S. form background for study of ethical issues related to role of nurses as advocates for social justice in contemporary society today. Analysis situated within context of history of nursing, with emphasis on human rights, civil rights, and patient rights. Discussion of evolution of professional nursing within healthcare arenas in relation to ethical principles, independent competence, and human diversity. Letter grading.
250. Secondary Prevention. (4) Lecture, four hours. Requisite: course 252. Corequisites: course 225A. Screening and early detection of illness to prevent chronic or acutely 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 premature mortality. Examination of health problems of individuals within context of 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 and acute care settings, community agencies, rehabilitation units, outpatient specialty clinics and surgical units, and home and community settings. Concurrently scheduled with course C160. Letter grading.

252. Tertiary Prevention and Care I. (7) Lecture, seven hours. Requisites: courses C260, 461. First course in two-course sequence. Examination of pathophysiological and psychosocial aspects of assessment and management for selected acute and emergent problems of patients/clients across lifespan, with emphasis on social, cultural, and developmental influences. Building on prior knowledge and experience, integration of basic knowledge of pathophysiology, diagnostics, pharmacology, therapeutic interventions, and communication concepts as applied to care of child-bearing families and medical and surgical clients across lifespan (pediatrics to geriatrics). Discussion of application of nursing process, evidenced-based practice, and problem solving. Concurrently scheduled with course C162. Letter grading.

264. Professional Issues in Nursing. (3) Lecture, three hours. Requisite: course 418A or 438A or 439A. Assessment of organizational, legal, ethical, and healthcare policy issues in relation to delivery of healthcare services by advanced practice nurses in evolving healthcare systems. Letter grading.

265. Tertiary Prevention and Care II. (7) Lecture, seven hours. Requisites: courses C262, 463. Corequisites: courses 464, 465. Second course in two-course sequence. Examination of pathophysiological and psychosocial aspects of assessment and management for selected acute and emergent problems of patients/clients across lifespan, with emphasis on social, cultural, and developmental influences. Building on prior knowledge and experience, integration of basic knowledge of pathophysiology, diagnostics, pharmacology, therapeutic interventions, and communication concepts as applied to care of child-bearing families and medical and surgical clients across lifespan (pediatrics to geriatrics). Discussion of application of nursing process, research, problem solving, and critical thinking. Concurrently scheduled with course C165. Letter grading.

266. Healthcare Systems/Organizations. (4) Lecture, four hours. Development of understanding of ways healthcare is organized and delivered. Discussion of totality of healthcare systems, including establishment of private and public healthcare plans and delivery systems, development of managed care systems, common characteristics shared by HMOs/PPPs, and impact of managed care on nursing. Delivery of patient care through healthcare systems and on continuum of healthcare. Application of basic economic elements and financial concepts to nursing and healthcare organizations. Letter grading.

267. Healthcare Policy. (3) Lecture, three hours. Requisite: course 266. Analysis of healthcare policies and how they impact clinical practice and healthcare delivery. Discussion of how healthcare delivery impacts policy-making, specifically how to formulate healthcare policy, how to affect political process, and stakeholder involvement in policy development and implementation. Development of understanding of increasing levels of public, governmental, and third-party participation in and scrutiny of shape and direction of healthcare systems. Overview of healthcare and managed care bills and their effect on nursing. Concepts associated with escalating healthcare costs and cost containment efforts instituted by private and government sectors, as well as by individual healthcare institutions. Letter grading.

268. Systems (Hospital Unit): Individual Level. (4) Lecture, four hours. Requisite: course 267. Discussion of use of systems theory approach in providing patient-centered and value-added care. Functioning within systems, individual healthcare practitioners learn to use critical thinking and decision making to coordinate and deliver quality and cost-effective patient care. Development of understanding of different modes of organizing nursing care within unit environment, managing care within multidisciplinary team framework, and promoting effective teamwork that enhances patient outcomes, improves staff vitality, and reduces costs. Emphasis on concepts related to systems theory, problem solving and decision making, nursing care delivery models, delegation, and team strategies. Letter grading.

259. Quality Improvement and Population-Based Quality of Practice. (4) Lecture, four hours. Requisite: course 268. Principal elements related to quality improvement theories and ways in which quality management impacts delivery of patient-centered and value-driven care, including improved system performance and efficient use of fiscal resources, quality improvement, and patient-population quality practice at organizational level. Review of individual methods to improve patient-care outcomes such as organizational support, effective teamwork, and quality-improvement concepts in workplace. Emphasis on quality management, adverse outcomes, evidence-based clinical and cost-control decision making, patient safety and risk reduction, resource management, and external impacts on quality control. Letter grading.

M273. Advanced Seminar: Medical Anthropology. (2 to 4) (Same as Anthropology M263Q, Community Health Sciences M224, and Psychiatry M273.) Seminar, three hours. Limited to 15 students. Examination of interdisciplinary relationships between culture, ecology, and health, and illness. Bases for written critical analysis and class discussion provided through key theoretical works. S/U or letter grading.


295A. Nursing Science Seminar. (1) Seminar, one hour. Introduction to nursing research methods, activities, and programs within specialty strands at UCLA School of Nursing: biobehavioral sciences, biologic sciences, health disparities/vulnerable populations, and health services. Exemplar work of UCLA nurse scholars highlighted. Overview of nursing research at UCLA and potential research opportunities for doctoral study. S/U grading.
295B-295C. Nursing Science Seminars. (1-1) Seminar, one hour. Requisite: course 295A. Introduction to grant writing, with focus on preparing applications for National Institutes of Health grants. Discussion of requirements of various extramural and specialty organization funding sources, and evaluation criteria identified. Role of external funding to facilitate doctoral and postdoctoral research, research activities, and professional development. S/U grading.

M298. Interdisciplinary Response to Infectious Disease Emergencies: Nursing Perspective. (4) (Formerly numbered 298L) Lecture, three hours; discussion, one hour. Designed to instill in professional students ideas of common emergency health problems and coordinated response, with specific attention to bioterrorism. Examination of tools to help students prevent, detect, and intervene in infectious disease emergencies. Interdisciplinary sessions also attended by students in Schools of Dentistry, Medicine, and 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 research and protection of research subjects. S/U grading.

299B-299C. Nursing Research/Laboratory Experiences. (4-4) Seminar/discussion, one hour; research/laboratory, three hours, Requisites: courses 202, 203, 205. Seminar and laboratory experiences designed 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. Requisites: courses 206, 207, 208, 220. Seminar to assist students to prepare for careers in academic settings, with focus on teaching. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: 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.

418A. Nursing Administration Practicum. (3 or 4) Clinical practicum, eight or 11 hours; conference, one hour. Requisites: courses 219A, 219B. Synthesis, evaluation, and practical application of organizational theory in practice setting, with emphasis on content presented in course 218A, including organizational structure, processes, and outcomes. Letter grading.

418B. Nursing Administration Practicum. (3 or 4) Clinical practicum, eight or 11 hours; clinical conference, one hour. Requisites: courses 219B, 418A. Experience in organizational setting for synthesizing content from course 218B, including strategic planning and management, care delivery systems, resource management, decision making, management information systems, professional practice, and meeting accreditation and legal standards. Letter grading.

418C. Nursing Administration Practicum. (3 or 4) Clinical practicum, eight or 11 hours; clinical conference, one hour. Requisites: courses 219C, 418A. Experience in organizational setting for synthesizing and evaluating content from course 218C, including processes of project management, organizational communication, governance, development and change, diverse relationships within organization, risk management, liability, and ethics of administration decision making. Letter grading.

418D. Nursing Administration Residency. (12) Clinical practicum, 23 hours; clinical conference, one hour. Requisites: courses 218C, 418C. Experience in organization setting as students assume leadership role in planning, managing, and evaluating administrative practices of content from course 218D, including assessing community healthcare needs, marketing, media, and political action and healthcare policy. Letter grading.


439B. Advanced Practice Nursing: Clinical Practicum. (4) Clinical practicum, 12 hours. Corequisite: course 239B. Continuation of course 439A for advanced practice nurses, with emphasis on nursing management of acute and chronic health problems in selected populations. Developmental needs of clients in relation to family, social, and cultural structures. Letter grading.

439C. Advanced Practice Nursing: Clinical Practicum. (8) Clinical practicum, 18 hours. Corequisite: course 239C. Third clinical practicum course for advanced practice nurses, with focus on nursing management of acute and chronic health problems in selected populations. Developmental needs of clients in relation to family, social, and cultural structures. Letter grading.


441. Neuropsychiatric Subspecialty Clinical Seminar. (1 to 2) Clinical seminar, one hour; self-study, two hours. Requisites: courses 241F, 242F. Designed for advanced practice nurses in any nurse practitioner specialty. Neuropsychiatric assessment, treatment, and case presentations in selected populations with addictive, affective, and cognitive dysfunctions in relation to neurophysiology and psychopathology as it to family, social, and cultural structures. S/U grading.


450. Advanced Practice Nursing: Clinical Elective Independent Study. (2 to 8) Clinical practicum, eight hours. Clinical elective designed to enhance skills and competencies in student-selected advanced practice specialty or related practice dimension, with emphasis on critical thinking and evidenced-based practice knowledge. S/U grading.


For further details on the Department of Obstetrics and Gynecology, see http://www.uclaobgyn.com.

**Upper Division Course**

199. Directed Research in Obstetrics and Gynecology. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

---

**ORAL BIOLOGY**

**School of Dentistry**

UCLA
13-089 Dentistry
Box 951668
Los Angeles, CA 90095-1668
(310) 825-1955
tel: (310) 794-7109
e-mail: pmudee@dentistry.ucla.edu
http://uclascodent.ucla.edu/divisions/index.asp?id=26

Cun-Yu Wang, Ph.D., D.D.S., Chair
Francesco Chiapelli, Ph.D., Vice Chair

**Professors**

Carol A. Bibb, Ph.D., D.D.S.
Francesco Chiapelli, Ph.D.
Robert H. Chiu, Ph.D.
Diana Messadi, D.D.S., Ph.D.
Wenyuan Shi, Ph.D.
Igor Spigelman, Ph.D.
Sotirios Tzidas, Ph.D., D.D.S.
Lawrence E. Wollinsky, D.M.D., Ph.D.
Cun-Yu Wang, Ph.D., D.D.S.

**Professors Emeriti**

George W. Bernard, D.D.S., Ph.D.
Douglas Junge, Ph.D.
Bernard G. Sarnat, M.D., M.S., D.D.S.

**Associate Professors**

Anahid Hewett, M.P.H., Ph.D.

**Assistant Professors**

Bradley Henson, D.D.S., Ph.D., in Residence
Clarice Law, D.M.D., M.S.
Jeanne Nervina, Ph.D., D.M.D., M.S.

**Adjunct Associate Professors**

Shen Hu, Ph.D.
Shen Pang, Ph.D.
Ki-Hyuk Shin, Ph.D., M.S.
Craig D. Woods, D.D.S.

**Adjunct Assistant Professors**

Yong Kim, Ph.D.
Renata Lui, Ph.D.
Jun Song, Ph.D., M.D., M.S.
Ting-Ting Wu, Ph.D.

**Scope and Objectives**

Ooral biology is the area of knowledge that deals with the development, structure, and function of the oral tissues and their interrelationships with other organ systems in normal and disease states. It is a multidisciplinary field that includes cell biology, morphology, molecular biology, biochemistry, neuroscience, immunology, microbiology, and virology. The objective of the graduate program is to provide students with a sound foundation in these areas in order to pursue an academic or research career.
Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gassau/library/gpmgrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Section of Oral Biology in the School of Dentistry offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Oral Biology. A combined D.D.S./Oral Biology M.S. or Ph.D. or advanced certificate training/Oral Biology M.S. or Ph.D. is also offered.

Oral Biology

Graduate Courses

201A-201B-201C. Advanced Oral Biology. (3-2-3) Lecture, three hours; discussion, three hours.

201A. Orthogenisis. (3) Lecture, three hours. Evolutionary perspective of cellular development from simple molecules that were formed during the first billion years of the Earth to development of cells, tissues, and organs of invertebrates and vertebrates. Development of vertebrate feeding apparatus from a comparative anatomical and physiological point of view, followed by embryogenesis of orofacial and dental structures of humans. S/U or letter grading.

201B. Homeostasis in Oral Systems. (2) Lecture, two hours. Normal regulatory functions of various oral systems. Topics include mechanisms of salivary secretion and nonspecific salivary protective mechanisms; integrative action of oral sensory systems such as touch, pain, and taste; normal control of movements in jaw and face. Letter grading.

201C. Pathobiology. (3) Lecture, three hours. Molecular basis for pathogenic processes in tissues of the oral cavity. Topics include microbially mediated de-mineralization of hard tissues, soft tissue infections, carcinogenesis, colonization of mucosal substrates by opportunistic, etc. S/U or letter grading.

M203. Oral Embryology and Histology. (4) Same as Neurobiology M229L. Lecture, four hours. Lectures and laboratory instruction in development and histological structure of facial region and oral and peri-oral organs and tissues. Letter grading.

M204. Mechanisms and Relief of Pain. (2) Same as Neuroscience M233L. Advanced treatment of neuromaotical, neurophysiological, and biochemical bases of pain perception. Topics include classical pain theories, pain receptors and pathways, endogenous mechanisms of pain modulation, and pharmacological basis for treatment of pain disorders.

205A. Methodology in Research Design and Data Analysis. (2) Formerly numbered 205L. 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.

206. Current Topics in Oral Immunology. (2) Lecture, two hours. Preparation: basic immunology. Discussion and analysis of current research dealing with immunological issues related to oral health, including HIV, opportunistic oral infections, periodontal pathology, oral immunopathology, caries immunology, endodontic immunology, etc. Letter grading.

209. Scientific Ethics. (2) Lecture, one hour; laboratory, one hour. Required course in scientific ethics for graduate students in Oral Biology M.S. and Ph.D. programs and for NRS4 trainees in School of Dentistry. Letter grading.

211. Biology of the Temporomandibular Joint. (2) 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.

212. Proseminar: Oral Biology Research. (2) Seminar, one hour. Introductory course for graduate M.S. students. Guest seminars on topics of research in oral biology (pain pathways, immunology, bone biology, microbiology, cancer, and salivary genomics), followed by discussions led by course chair. Letter grading.

215A. Fundamentals of Immunology. (2) Formerly numbered 215L. Lecture, two hours. Basic cellular and molecular mechanisms involved in responses mediated by immune effectors, with emphasis on immunopathology involved in autoimmunity, cancer, and immunodeficiency syndromes. Letter grading.

226. Craniofacial Growth and Development. (2) Formerly numbered 226. Lecture, two hours. Preparation: strong background in histology and embryology. Students acquire from scientific literature discussed in lecture/seminar format, advanced knowledge of craniofacial growth and development. Students are required to present seminars on animal models that aid their understanding and analysis of tissue systems that have application to specific professional fields. Letter grading.

227. Dental Embryology and Histology. (2) Description and interpretation of important stages in development of the orofacial apparatus and histological features of its component tissues. Critique of scientific literature relevant to course content and analysis of current state of knowledge about selected features of the orofacial structures which are of significance to clinical dental specialists.

228. Dental Pharmacology and Therapeutics. (2) Lecture, three hours. Survey of pharmacology, with particular emphasis on how drugs interact with dentistry. General principles of drug action and drug effects on autonomic and central nervous systems.

229A. Culture, Ethnicity, and Health: Implications for Oral Biology and Medicine. (2) Seminar, one hour; discussion, one hour. Examination of the impact of cultural, biological, and linguistic anthropological knowledge on students factors that influence health and well-being, experience and distribution of illness, prevention and treatment of sickness, and social and cultural factors.Letter grading.

229B. Anthropological Perspectives on Global Health: Implications for Oral Biology and Medicine. (2) Seminar, one hour; discussion, one hour. Examination of sociocultural, biological, and linguistic anthropological knowledge on understand factors that influence health and well-being, experience and distribution of illness, prevention and treatment of sickness, and social and cultural factors. Letter grading.

M234. Seminar: Developmental Neuroendocrinology. (2) Formerly numbered 215L. Lecture, two hours. Preparation: basic course on mechanisms of endocrinology and applications to classic and current concepts of principles governing development and growth of craniofacial region. Students required to present seminars on assigned topics that aid their understanding and analysis of course content that has application to specific professional fields. Letter grading.

235. Research in Clinical Immunology and Lymphology. (2) Lecture, one hour; discussion, one hour. Forum for discussion of cutting-edge topics in immunology and lymphology from clinical perspective. Emphasis on immune surveillance and lymphatic drainage of oral pathways associated with AIDS and other diseases.

255. Molecular and Cell Biology for Oral Biology Graduate Students. (3) Lecture, two hours; literature review, one hour. Advanced course on prokaryotic and eukaryotic molecular and cell biology, with emphasis on applications in dental research.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. S/U or letter grading.


Orthopaedic Surgery

David Geffen School of Medicine

UCLA

8236 Reagan UCLA Medical Center Box 957430
Los Angeles, CA 90095-7430
(310) 794-7930
fax: (310) 825-1311
http://wwwortho.medsch.ucla.edu

Chair

Gerald A.M. Finerman, M.D.

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 arthritides 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 re-
PATHOLOGY AND LABORATORY MEDICINE
David Geffen School of Medicine

UCLA
13-222 Center for the Health Sciences
Box 915732
Los Angeles, CA 90095-1732
(310) 794-7953
fax: (310) 825-5674
e-mail: pathology@mednet.ucla.edu
http://www.pathology.ucla.edu

Jonathan Braun, M.D., Ph.D., Chair

Professors

Linda G. Baum, M.D., Ph.D.
Judith A. Berliner, Ph.D.
Sunita M. Bhuta, M.D.
Scott H. Binder, M.D. (Pritzker Family Endowed Term Professor of Pathology)
Jonathan Braun, M.D., Ph.D.
Anthony W. Butch, Ph.D.
Michael Cecka, Ph.D.
Alistair J. Cochran, M.D.
Kenneth Dorskind, Ph.D.
Thomas A. Drake, M.D.
Steven M. Dubinett, M.D.
Rita B. Effros, Ph.D.
Michael C. Fishbein, M.D.
Lawrence D. Petz, M.D.
Jerzy W. Kupiec-Weglinski, M.D., Ph.D. (Joan S. and Ralph N. Goldwyn Professor of Immunobiology)
Wayne W. Grody, M.D., Ph.D.
Oliver Hankinson, Ph.D.
Lee H. Hillborne, M.D.
Sharon L. Hirshowitz, M.D.
Paul Michel, M.D.
Cynthia Naust, M.D.
Scott D. Nelson, M.D.
Nagesh P. Rao, Ph.D.
Elaine F. Reed, Ph.D.
Nora Rozengurt, Ph.D.
Jonathan Said, M.D.
Kathleen M. Sakamoto, M.D.
Robert H. Schiestl, M.D.
George S. Smith, M.D.
James G. Tidball, Ph.D.
Peter Tontonoz, M.D., Ph.D.
Harry V. Winters, M.D. (Daljit S. and Elaine Sarkaria Endowed Professor of Diagnostic Medicine)
Elizabeth A. Wagner, M.D.
Anna Wu, Ph.D.

Professors Emeriti

Anthony Adinolfi, Ph.D.
Marcel A. Baluda, Ph.D.
David A. Bruckner, Sc.D.
John Campbell, Ph.D.
Carmine D. Clemente, Ph.D.
Walter Coulson, M.D.
Donald E. Paglia, M.D.
Lawrence D. Petz, M.D.
David D. Porter, M.D.
Julien L. Van Lancker, M.D.
M. Anthony Verity, M.D.

Associate Professors

Sophia K. Apple, M.D.
David Chia, Ph.D.
Lee Goodglick, Ph.D.
Kathleen A. Kelly, Ph.D.
Charles Lassman, M.D., Ph.D.
Shaleen Metten, Ph.D.
Jian-Yu Rao, M.D.
M. Elena Stark, M.D., Ph.D.
Michael A. Teitell, Ph.D.
Robert Trelease, Ph.D.
William H. Yong, M.D.

Assistant Professors

Tamar Baruch-Oren, M.D.
David S. Cassarino, M.D., Ph.D.
Galén Cortina, M.D., Ph.D.
David Dawson, M.D., Ph.D.
Nicole Dawson, M.D.
Sarah M. Dry, M.D.
Samuel French, M.D.
Dean Harvey, M.D.
Joseph D. Hillman, M.D.
Chi Lai, M.D.
Benhur Lee, M.D.
Xin Liu, M.D., Ph.D.
Qun Lu, M.D.
Joseph H. Miller, Ph.D.
Neda Moatamed, M.D.
Shejea Pullarkat, M.D.
Fabiola Quintero-Rivera, M.D.
Lenko R. Suk, M.D.
Benjamin Maini, M.D.
Raja Rajalingham, Ph.D.
Sheeja Pullarkat, M.D.
Neda Moatamed, M.D.
Joseph H. Miller, Ph.D.

Scope and Objectives

Pathology is the branch of medicine concerned with the causes and development of disease. The goal of the cellular and molecular pathology (CMP) graduate program is to provide students with the knowledge to integrate findings at the molecular, cellular, and systemic levels to understand the causes and progression of disease.

Coursework is designed so that students gain an in-depth knowledge of cell and molecular biology, genetics, and disease mechanisms. Didactic instruction is complemented by participation in seminars and training in the design and execution of original laboratory research. As a result, graduates obtain the expertise to translate and answer questions defined in the clinical area to the laboratory bench and vice versa.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.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 Pathology and Laboratory Medicine offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Cellular and Molecular Pathology.

Pathology and Laboratory Medicine
Upper Division Course

199. Directed Research in Orthopaedic Surgery. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.


M229. Molecular Mechanisms of Host/Pathogen Interaction. (4) Same as Microbiology M229.) Lecture, two hours; discussion, two hours. Requisite: Biological Chemistry CM253. Molecular mechanisms of microbial interactions with eukaryotic host cells that result in disease or pathogen survival. Topics include pathogenesis of common viruses, bacteria, fungi, and parasites, basis of toxin-mediated cellular damage, and immune suppression of microbial tissue damage. Letter grading.

M237. Cellular and Molecular Basis of Disease. (4) (Same as Biological Chemistry M237.) Lecture, two hours; discussion, two hours. Preparation: one course each in molecular biology, cell biology, and biophysical 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. S/U or 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 by light microscopy. Letter grading.

240. Transplantation Immunology from Benchside to Bedside. (4) Lecture, three hours; laboratory, one hour. Preparation: knowledge of basic immunology. Limited to graduate students. New developments in organ transplantation, updates on basic science of immune mechanisms, integration of basic science principles with clinical practice. Letter grading.
M255. Mapping and Mining Human Genome. (3) (Formerly numbered 255.) (Same as Human Genetics M255.) Lecture, three hours. Basic molecular genetic and cytogenetic techniques of gene mapping. Selective regions of human genomic map scrutinized in detail, particularly gene families and clusters of genes that have remained linked from mouse to human. Discussion of localizations of disease genes. S/U or letter grading.

256. Seminar: Viral Oncology. (2) Seminar, two hours. Advanced research seminar designed to consider current developments in field. Selection of current subjects and publications dealing with tumor viruses, oncopogenesis, development, and cellular regulation. S/U or letter grading.

M257. Introduction to Toxicology. (4) (Same as Pharmacology M257.) Requisite: Pharmacology M241. Biochemical and systemic toxicology, basic mechanisms of toxicology, and interaction of toxic agents with specific organ systems.

M258. Pathologic Changes in Toxicology. (4) (Same as Pharmacology M258.) Designed to give students experience in learning 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).

260. Immunopathology. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: Microbiology 261. Advanced information for graduate and advanced undergraduate students regarding immune system anatomy, lymphocytic development, acute and chronic inflammation, hypersensitivity, and autoimmunity. Letter grading.

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. Pediatric hematologic disorders provide important paradigm to study other developmental systems. Subjects include hematopoiesis, basic stem cell biology, angiogenesis, alternative models to study developmental hematology (zebrafish and Drosophila), basic physiology of normal and abnormal red cells, platelets, and white cells, leukemogenesis and novel therapeutics to treat leukemia, basic and clinical stem cell transplantation, state-of-the-art methods in developmental hematology (genomics, proteomics, and gene therapy, design of clinical trials, and biomathematical modeling and statistics in developmental hematology. Letter grading.

M272. Stem Cell Biology and Regenerative Medicine. (4) (Same as Molecular, Cell, and Developmental Biology M272.) Lecture, two hours; discussion, two hours. Designed for graduate students. Presentation of current knowledge of embryonic and adult stem cells and factors that 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.


296. Research Topics in Pathology. (1 to 2) Research 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 member teaching course. May be repeated for credit. S/U grading.


596. Directed Individual Study or Research. (4 to 12) Tutorial, to be arranged. Preparation: Individual research with members of the staff or of other departments, the latter for purpose of supplementing programs available in department. S/U grading.


PEDIATRICS

David Geffen School of Medicine

UCLA
22-412A Marion Davies Children’s Center
Box 951752
Los Angeles, CA 90095-1752
(310) 825-4125
fax: (310) 206-4584
http://www.mattel.ucla.edu/index.htm

Chairs
Edward R.B. McCabe, M.D., Ph.D. (Mattel Executive Endowed Professor of Pediatrics), Executive Chair
Sherin Devasarkar, M.D., Executive Vice Chair
Judith E. Brill, M.D., Vice Chair, Clinical Affairs
Thomas S. Kitzner, M.D., Ph.D. (Jack H. Skirball Professor of Pediatric Cardiology), Vice Chair, Academic Affairs
Lee T. Miller, M.D., Vice Chair, Medical Education
Kathleen M. Sakamoto, M.D., Vice Chair, Translational Research
Richard Findlay, M.D., Interim Chair, King/Harbor Adam J. Jonas, M.D., Chair, Harbor-UCLA
Mohammed Malekzadneh, M.D., Chair, Olive View-UCLA
Charles F. Simmons, Jr., M.D., Chair, Cedars-Sinai

Scope and Objectives

The Department of Pediatrics encompasses four teaching hospitals: Mattel Children’s Hospital UCLA and Olive View-UCLA, Harbor-UCLA, and Cedars-Sinai Medical Centers. The clinical program and teaching activities of the UCLA Medical Center are integrated with the Olive View-UCLA Medical Center. In the fundamentals of clinical medicine course, medical students receive detailed instruction in the techniques of the clinical examination of pediatric patients.

The required six-week clinical clerkship in pediatrics can be taken in any of four programs (Mattel/Olive View-UCLA, Cedars-Sinai, Harbor-UCLA, Kaiser Los Angeles). In-depth electives in the Department of Pediatrics are listed in the School of Medicine Handbook of Clinical Courses, as are the advanced clinical clerkships.

For further details on the Department of Pediatrics and a listing of the courses offered, see http://www.mattel.ucla.edu/index.htm.

Pediatrics

Upper Division Course

199. Directed Research in Pediatrics. (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 Course

M215. Interdepartmental Course: Tropical Medicine. (2) (Same as Medicine M215 and Pathology M215.) Lecture, two and one-half hours. Preparation: basic courses in microbiology and parasitology of infectious diseases in School of Medicine or Public Health. Study of current knowledge about diseases prevalent in tropical areas of the world. Major emphasis on infectious diseases, with coverage of problems in nutrition and exotic noninfectious diseases. Syllabus supplements topics covered in classroom. S/U grading.

PHARMACOLOGY

See Molecular and Medical Pharmacology

PHILOSOPHY

College of Letters and Science

UCLA
321 Dodd Hall
Box 951451
Los Angeles, CA 90095-1451
(310) 825-4641
fax: (310) 825-6040
e-mail: alaven@humnet.ucla.edu
http://www.humnet.ucla.edu/humnet/phil/

Donald A. Martin, Ph.D., Chair

Professors

Joseph Almog, D.Phil.
Tyler Burge, Ph.D.
John P. Carriero, Ph.D.
Brian P. Copenhaver, Ph.D.
Barbara Herman, Ph.D. (Gloria and Paul Griffin Professor of Philosophy)
David B. Kaplan, Ph.D. (Hans Reichenbach Professor of Scientific Philosophy)
Gavin Lawrence, D.Phil.
Donald A. Martin, Ph.D.
Calvin G. Normore, Ph.D.
Terence D. Parsons, Ph.D.
Seena Shiffman, D.Phil., J.D.

Professors Emeriti

Miriam McCord Adams, Ph.D.
Robert Merritt Adams, Ph.D.
Keith S. Donnellan, Ph.D.
Philippe R. Foot, M.A.
Herbert Morris, Ph.D.

Associate Professors

Pamela Hieronymy, Ph.D.
Sean A. Kelsey, Ph.D.
Required:
Preparation for the Major
Philosophy B.A.
Undergraduate Study

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 upper-graduate and graduate courses are divided, in the following manner: two courses in each of three of the groups and one course in the remaining group.

Courses listed under Special Studies may be applied toward the major but not toward a group requirement. A maximum of 8 units of course 199 may be applied toward the major but not toward a group requirement. Courses 100A, 100B, 100C may not be applied toward any group requirement. No course used to satisfy the major or preparation requirements may be taken on a P/NP basis.

Students intending to do graduate work in philosophy should consult both the graduate and undergraduate advisers.

Honors Program
Admission
To be admitted to the honors program, students must have taken at least three upper division philosophy lecture or seminar courses at UCLA with an overall grade-point average of 3.7.

Requirements
To be awarded honors in philosophy at graduation, Philosophy majors must (1) have a 3.7 grade-point average in UCLA philosophy courses and a 3.7 GPA in upper division UCLA philosophy courses; (2) satisfy the honors directed study requirement by taking Philosophy 198A and 198B in conjunction (usually, but not necessarily concurrently) with two different regular upper division philosophy courses supervised by the instructors of those courses; and (3) receive a grade of A– or better in any course applied toward satisfaction of the honors requirement.

Students may substitute Philosophy 191 for either course 198A or 198B or, alternatively, may complete up to two philosophy graduate seminars in lieu of courses 198A and/or 198B. For an undergraduate or graduate seminar to be applied toward the honors directed study requirement, the consent of both the seminar instructor and the faculty honors adviser is required in advance. Students may also substitute up to one 4-unit Philosophy 198C or 199 course in which they produce a substantial paper that represents an original piece of research or its equivalent.

Exceptional work done to satisfy the honors requirement may be submitted to the department chair for consideration for highest honors.

Philosophy Minor
To enter the Philosophy minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (8 units): Philosophy 7 or 21, and 22 or 31.

Required Upper Division Courses (24 units): Five courses, including at least one from each of three of the four groups into which the undergraduate and graduate courses are divided (Philosophy 100A, 100B, 100C apply toward Group I); one additional upper or lower division philosophy course.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Department of Philosophy offers Bachelor of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Philosophy. A concurrent degree program (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 Socrates and some earlier works of Plato in last few weeks. P/NP or letter grading.

2. Introduction to Philosophy of Religion. (4) Lecture, three hours; discussion, one hour. Introductory study of such topics as nature and grounds of religious belief, relation between religion and ethics, nature and existence of God, problem of evil, and what can be learned from religious experience.

3. Historical Introduction to Philosophy. (5) Lecture, three hours; discussion, two hours. Historical introduction to Western philosophy based on classical texts dealing with major problems, related thematically and studied in chronological order: properties of rational argument, existence of God, problem of knowledge, 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.
Upper Division Courses

100A. History of Greek Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Survey of origins of Greek metaphysics from pre-Socratics through Plato and Aristotle. 100B. Medieval and Early Modern Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Strongly recommended requisite: course 100A. Survey of development and transformation of Greek metaphysics and epistemology with emphasis on philosophy of science, and transition from medieval to early modern period. Special empha-
sis on Augustine, Aquinas, Ainus, and Descartes.

100C. History of Modern Philosophy, 1650 to 1800. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Strongly recom-

mended requisite: course 100B. Courses 100A, 100B, and 100C should be taken in immediately suc-
tive terms if possible. Survey of development of metaphysics and theory of knowledge from 1650 to 1800, including Locke and/or Berkeley, Malebranche and/or Leibniz, and culminating in Hume and Kant. Topics may include views of these (and perhaps oth-

er) philosophers of mind and body, causality, existence of God, skepticism, empiricism, limits of human knowledge, and philosophical foundations of modern science.

Group I: History of Philosophy

M101A. Plato — Earlier Dialogues. (4) (Same as Classics M146A.) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected topics in early and middle dialogues of Plato. P/NP or letter grading.

M101B. Plato — Later Dialogues. (4) (Same as Classics M146B.) Lecture, three hours; discussion, one hour. Preparation: 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. Study of selected works of Aristotle. P/NP or letter grading.

M103A. Ancient Greek and Roman Philosophy. (4) (Same as Classics M145A.) Lecture, three hours. Study of some major Greek and Roman philosophical texts, including those of pre-Socratics, Plato, Aristotle, and Hellenistic philosophers, with emphasis on historical and cultural setting of texts, their literary form, in-

terrelations, 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: course from 1, 100A, M101B, M102, or M103A. Study of some major texts in Greek philoso-

phy 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 philoso-

phy in its great age (from Kindo to Averroes, 850 to 1200), considered in connection with Muslim theology and mysticism.

105. Medieval Philosophy from Augustine to Maimonides. (4) Preparation: one philosophy course. Development of early medieval philosophy within framework of Judeo-Christian theology and its assimila-
tion of classical and ancient philosophical heritage. Focus on problem of universal, existence and nature of God, problem of evil, and doctrines of the Trinity and atonement. Selected writings from Augustine through Maimonides.

106. Later Medieval Philosophy. (4) Preparation: one philosophy course. Metaphysics, theory of knowl-

edge, 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) Preparation: one philosophy course. Recommended requisite: course 105 or 106. Study of philosophy and theo-

logy of one medieval philosopher such as Augustine, Anselm, Abelard, Aquinas, Scotus, or Ockham, or study of a single area such as logic or theory of knowledge in several medieval philosophers. Topic announced each term. May be repeated for credit with consent of instructor.

C108. Hobbes. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Hob-

bes’ political philosophy, especially Leviathan, with at-
tention to its relevance to contemporary political phi-

losophy. May be concurrently scheduled with course C206. P/NP or letter grading.

C109. Descartes. (4) Lecture, four hours. Requisites: course 21 or two philosophy courses. Study of works of Descartes, with discussion of issues such as problem of skepticism, foundations of knowledge, exis-
tence of God, relation between mind and body, and connection between science and metaphysics. May be concurrently scheduled with course C209. P/NP or letter grading.

C110. Spinoza. (4) Lecture, three hours; discussion, one hour. Requisite: course 21. Study of philosophy of Spinoza. May be concurrently scheduled with course C210, in which case there is weekly discus-
sion meeting, plus fewer readings and shorter papers for undergraduates. Limited to 30 students when con-
currently scheduled. P/NP or letter grading.

C111. Leibniz. (4) Lecture, three hours; discussion, one hour. Requisite: course 21. Study of philosophy of Leibniz. May be concurrently scheduled with course C211, in which case there is weekly discus-
sion meeting, plus fewer readings and shorter papers for undergraduates. Limited to 30 students when con-
currently scheduled. P/NP or letter grading.

C112. Locke and Berkeley. (4) Lecture, four hours. Preparation: one philosophy course. Study of philos-
ophies of Locke and Berkeley, with emphasis in some cases on one or the other. Limited to 30 students when concurrently scheduled with course C212. P/NP or letter grading.

C114. Hume. (4) Lecture, four hours. Preparation: one philosophy course. Selected topics from meta-

physical, epistemological, and ethical writings of Hume. Limited to 40 students when concurrently scheduled with course C214. P/NP or letter grading.

C115. Kant. (4) (Formerly numbered 115.) Lecture, three hours; discussion, one hour. Requisite: course 21 or 22. Study of Kant’s views on related topics in three areas of philosophy: ethics, metaphysics, and epistemology. May be repeated for credit with consent of instructor. Concur-
rently scheduled with course C215. P/NP or letter grading.

116. 19th-Century Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philoso-

phy course. Selected topics in 19th-century thought.

117. Late 19th- and Early 20th-Century Philoso-

phy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Selected topics in work of one or more of the following philosophers: Bolt-
zano, Frege, Husserl, Meinong, G. Moore, early Rus-
sell, and Wittgenstein. May be repeated for credit with consent of instructor.

C118. Kierkegaard. (4) Preparation: one philosophy course. Philosophical study of some major works of Kierkegaard, with emphasis on interpretation of the texts.

C119. Topics in Modern Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Selected topics in one or more philosophies of early modern period, or study in sin-
gle 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 31 or 124. Introduction to contemporary philosophy of science, focusing on problems of central importance. May be repeated for credit with consent of instructor.

126. Philosophy of Science: Social Sciences. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Discussion of topics in philosophy of social sciences (e.g., methods of social sciences in relation to physical sciences, value-bias in social inquiry, concept formation, theory construction, explanation and prediction, nature of social laws).

127A. Philosophy of Language. (4) Lecture, three hours; discussion, one hour. Requisite: course 31. Syntax, semantics, conceptual aspect of truth, sense and denotation, synonymy and analyticity, modalities and tenses, indirect discourse, indexical terms, semantical paradoxes. May be repeated for credit with consent of instructor. P/NP or letter grading.

127B. Philosophy of Language. (4) Lecture, three hours; discussion, one hour. Requisite: course 31. Course 127A is not requisite to 127B. Selected topics similar to those considered in course 127A, but at more advanced and technical level. May be repeated for credit with consent of instructor. P/NP or letter grading.

128A. Philosophy of Mathematics. (4) Lecture, four hours. Requisites: courses 31, 32, and preferably one additional logic course. Philosophy of mathematics; logicism of Frege and Russell, arithmetic reduced to logic; ramified type theory and impredicative definition (Russell, Poincaré, early Weyl). P/NP or letter grading.


129. Philosophy of Psychology. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Philosophical implications of modern physical and psychological theories. May be repeated for credit with consent of instructor. P/NP or letter grading.

130. Philosophy of Space and Time. (4) Lecture, four hours; discussion, one hour. Preparation: two philosophy courses or one philosophy course and one physics course. Selected philosophical problems concerning nature of space and time. Philosophical implications of space-time theories, such as those of Newton and Einstein. Topics may include nature of geometry, conventionalism, absolutist versus relationalist views of space and time, philosophical impact of relativity theory.

131. Science and Metaphysics. (4) Lecture, four hours. Preparation: two philosophy courses. Recommended: some background in basic calculus and physics. Intensive study of one or two metaphysical topics on which results of modern science have been thought to bear. Topics may include nature of causation, reality and direction of time, time-travel, backward causation, realism, determinism, alternate view of space, etc. May be repeated for credit with consent of instructor. P/NP or letter grading.

132. Philosophy of Biology. (4) Lecture, four hours. Preparation: one philosophy course. Intensive study of one or two current topics in philosophy of biology, which may include structure of evolutionary theory, fitness, taxonomy, reductionism, concept of biological species, and biological explanation. P/NP or letter grading.

133. Topics in Logic and Semantics. (4) Lecture, four hours. Requisite: course 32. Possible topics include formal theories, definitions, alternative theories of descriptions, many-valued logics, deviant logics. P/NP or letter grading.

134. Introduction to Set Theory. (4) Same as Mathematics M114S.) Lecture, three hours; discussion, one hour. Preparation: one of courses 31, 110A or 113A. Axiomatic set theory as framework for mathematical concepts; relations and functions, numbers, cardinality, axiom of choice, transfinite numbers. P/NP or 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, modal logics, and other topics in modal logic. May be repeated for credit with consent of instructor. P/NP or letter grading.

151A-C. Philosophy of Ethics. (4) Lecture, four hours; discussion, one hour. Requisites: courses 31, 32, and preferably one additional logic course. Topics in ethical theory covering issues in moral and social topics. 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-C151C. Philosophy of Ethics: Normative Ethics. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Each course may be repeated. Topics in normative ethics. May be repeated for credit with consent of instructor. P/NP or letter grading.

152A. Topics in Ethical Theory: Metaethics. (4) Formerly numbered 153B.) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Intensive investigation of ethical theories, focusing on ethical language, formal deductive systems, and models. May be repeated for credit with consent of instructor.

172. Philosophy of Language and Communication. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses or linguistics courses. Theories of meaning and communication; how words refer to things; limits of meaningfulness; analysis of speech acts; relation of everyday language to scientific discovery. P/NP or letter grading.

174. Topics in Theory of Knowledge. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Intensive investigation of one or two 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. Preparation: course 21 or 22. Intensive investigation of one or 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.

176. Metaphysics of Modality. (4) Preparation: courses 31, 32. Highy recommended: course 136. Second course in two-term sequence (also see course 136). Metaphysical foundations of modal logic and philosophical basis of model theory of modal logic. What is a possible world? What is “accessibility” relation? Is modal logic a logic or a theory? Is it focus logical or metaphysical necessity? Are the two notions really distinct? How metaphysically involved is (quantified) modal logic? What is its connection to doctrines of (1) “Haeckelism” and (2) “Aristotelian Essentialism”? P/NP or letter grading.

155. Medical Ethics. (4) Lecture, three hours; discussion, one hour. Examination of philosophical issues raised by problems of medical ethics, such as abortion, euthanasia, and medical experimentation. P/NP or letter grading.

157A-157B. History of Political Philosophy. (4-4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. May be repeated for credit with consent of instructor. 157A. Reading and discussion of classic works in earlier political theories, especially those by Hobbes, Locke, Hume, and Rousseau. 157B. Reading and discussion of classic works in later political theory, especially those by Kant, Hegel, and Marx.

161. Topics in Aesthetic Theory. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Philosophical theories about nature and importance of art and art criticism, aesthetic experience, and aesthetic values. May be repeated for credit with consent of instructor.

166. Philosophy of Law. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Examination, through study of recent philosophical writings, of such topics as nature of law, relationship of law and morality, punishment, and obligation to obey the law. P/NP or letter grading.

Group IV: Metaphysics and Epistemology

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. Preparation: two relevant philosophy courses. Theories of meaning and communication; how words refer to things; limits of meaningfulness; analysis of speech acts; relation of everyday language to scientific discovery. P/NP or letter grading.

174. Topics in Theory of Knowledge. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Intensive investigation of one or two 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. Preparation: course 21 or 22. Intensive investigation of one or 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.

176. Metaphysics of Modality. (4) Preparation: courses 31, 32. Highly recommended: course 136. Second course in two-term sequence (also see course 136). Metaphysical foundations of modal logic and philosophical basis of model theory of modal logic. What is a possible world? What is “accessibility” relation? Is modal logic a logic or a theory? Is it focus logical or metaphysical necessity? Are the two notions really distinct? How metaphysically involved is (quantified) modal logic? What is its connection to doctrines of (1) “Haeckelism” and (2) “Aristotelian Essentialism”? P/NP or letter grading.
177A. Existentialism. (4) Lecture, three hours; dis-
cussion, one hour. Preparation: one philosophy course.
Analysis of methods, problems, and views of some of the fol-
lowing: Kierkegaard, Nietzsche, Heidegger, Jaspers, Buber, Sartre, or Camus. Em-
phasis on explication and interpretation of the texts. May be repeated for credit with consent of instructor.

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. Em-
phasis on explication and interpretation of the texts. May be repeated for credit with consent of instructor.

178. Phenomenology. (4) Lecture, three hours; dis-
cussion, one hour. Preparation: two philosophy cours-
es. Introduction to phenomenological method of ap-
proaching philosophical problems via works of some of the following: Brentano, Husserl, Heidegger, Schel-
er, Sartre, Merleau-Ponty, Ricoeur. Topics include on-
tology, epistemology, and particularly philosophy of
mind.

179. Asian Philosophy. (4) Lecture, three hours; dis-
cussion, one hour. Examination of central concepts and
arguments in Buddhist or Chinese philosophy. Appro-
priate philosophical concepts and 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. Prepar-
a tion: 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.

181. Philosophy of Perception. (4) Lecture, four
hours. Preparation: two philosophy courses. Critical
study of main philosophical theories of perception and
arguments used to establish them. P/NP or letter grading.

182. Elements of Metaphysics. (4) Lecture, three
hours; discussion, one hour. Requisite: course 21. Study of basic
metaphysical questions: nature of physical
world, of minds, and of universals; and an-
ter, Russell, Wittgenstein, Carnap, Quine). May be
repeated for credit with consent of instructor. P/NP or letter grading.

185. Major Philosophers of 20th Century. (4) Le-
cature, three hours; discussion, one hour. Preparation: two
philosophy courses. Study of writings of one or
more major modern philosophers (e.g., Russell,

186. Topics in Metaphysics. (4) Lecture, three
hours; discussion, one hour. Requisite: course 21. In-
tensive study of two to three topics in
metaphysics, such as personal identity, nature of dis-
positions, 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.

188. Group I. History of Philosophy
201. Plato. (4) Seminar, four hours. Study of later
dialogues. S/U or letter grading.

202. Aristotle. (4) Lecture, four hours. Analysis of
major problems in Aristotle's philosophy based on
reading, exposition, and critical discussion of relevant
texts in English. S/U or letter grading.

203. Seminar: History of Ancient Philosophy. (4)
Seminar, four hours. Selected problems and philoso-

204. Seminar: History of Medieval Philosophy. (4)
Seminar, four hours. Study of philosophy and theology of one or
several medieval philosophers such as Augustine,

205. Seminar: History of Medieval and Renaiss-
ance Philosophy. (4) Seminar, four hours. Selected
problems and philosophers. May be repeated for credit with consent of instructor. S/U or letter grading.

207. Seminar: History of Jewish Philosophy. (4)
Seminar, four hours. Study of Jewish philosophy and
jewish thought of the post-biblical period. 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. Hob-

209. Descartes. (4) Lecture, four hours. Study of

210. Seminar: History of Jewish Philosophy. (4) Seminar,

211. Seminar: History of Jewish Philosophy. (4) Seminar, four hours. Development of concept of

212. Gödel Theory. (4-4-4) Lecture, four hours. Study of

212A. Topics in Set Theory. (4) Lecture, three hours. Requisite: Mathematics M112. Sets, relations,

212B. History of Set Theory. (4) Lecture, four hours. Development of concept of set and axiomatic

tory by examining selected writings of Frege, Cantor,

213. Seminar: History of Jewish Philosophy. (4) Seminar, four hours. Study of Jewish philosophy and

214. Hume. (4) Lecture, four hours. Study of

215. Kant. (4) (Formerly numbered 215.) Lecture, three hours; discussion, one hour. Requisite: course 21 or 22. Study of Kant's views on related topics in theory
of knowledge, ethics, and metaphysics. May be repeated for credit with consent 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
repeated for credit with consent of instructor. S/U or let-
ter grading.

217. Critical Theory. (4) Seminar, four hours. Study of

218. Group II. Logic, Semantics, and

219. Philosophy of Science
221A. Topics in Set Theory. (4) Lecture, three hours. Requisite: Mathematics M112. Sets, relations,

221B. History of Set Theory. (4) Lecture, four hours. Development of concept of set and axiomatic set

tory by examining selected writings of Frege, Cantor,

222A-222B-222C. Gödel Theory. (4-4-4) Lecture, four
hours. Study of set theory and Gödel's incompleteness theorem. May be repeated for credit with consent of instructor. S/U or letter grading.

224. Philosophy of Physics. (4) Seminar, three hours. Selected philosophical topics related to physical theory, depending on interests and background of participants, including space and time; observation in quantum mechanics; foundations of statistical mechanics. 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 M112. Topics may include interpretations of probability, Bayesian and non-Bayesian confirmation theory, paradoxes, ideas of confirmation, coherence, and conditioning. S/U or letter grading.

226. Topics in Mathematical Logic. (4) Lecture, four hours. Content varies from term to term. May be repeated for credit with consent of instructor. S/U or letter grading.

227. Philosophy of Social Science. (4) Lecture, four hours. Examination of philosophical problems concerning concepts and methods used in social sciences. Topics may include relationship between social processes and individual psychology, logic of explanation in social sciences, determinism and spontaneity in history, interpretation of cultures radically different from one's own. Students with primary interest in history, interpretation of cultures radically different from one's own. May be repeated for credit with consent of instructor. S/U or letter grading.

228. Philosophy of Language. (4) Seminar, four hours. Selected topics in philosophy of language. May be repeated for credit with consent of instructor. S/U or letter grading.

231. Seminar: Intensional Logic. (4) Seminar, four hours. Topics may include logic of sense and denotation, modal logic, logic of demonstratives, epistemic logic, intensional logic of Principia Mathematica, possible worlds semantics. May be repeated for credit with consent of instructor. S/U or letter grading.

232. Philosophy of Science. (4) Seminar, three hours. Selected topics in philosophy of science. May be repeated for credit with consent of instructor. S/U or letter grading.

233. Seminar: Philosophy of Physics. (4) Seminar, four hours. May be repeated for credit with consent of instructor. S/U or letter grading.

Group 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; determinism and freedom; nature of explanations 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 psychoanalytic conception of human nature. S/U or letter grading.

286. Philosophy of Psychology. (4) Seminar, four hours. Relevance of computer simulation to accounts of thinking and meaning; relations between 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.

PHYSICS AND ASTRONOMY

College of Letters and Science

UCLA
2-707 Physics and Astronomy Building
Box 951547
Los Angeles, CA 90095-1547
(310) 206-0864
http://www.physics.ucla.edu

Ferdinand V. Coroniti, Ph.D., Chair
Charles D. Buchanan, Ph.D., Vice Chair, Academic Affairs
Mark R. Morris, Ph.D., Vice Chair, Astronomy
E. Brown, Ph.D., Vice Chair, Resources
Physics and Astronomy / 503

Professors
Katsushi Arisaka, Ph.D.
Maha Ashour-Abdalla, Ph.D.
Zvi Bern, Ph.D.
Stuart E. Brown, Ph.D.
Robini F. Bruinisma, Ph.D.
Charles D. Buchanan, Ph.D.
Sidip Chakravarty, Ph.D.
David B. Cline, Ph.D.
Ferdinand V. Coroniti, Ph.D.
Robert D. Cousins, Ph.D.
Steven C. Cowley, Ph.D.
Eric D’Hoker, Ph.D.
Sergio Ferrara, Ph.D.
Christian Frandsen, Ph.D.
Walter N. Gekelman, Ph.D.
Graciela B. Gelmini, Ph.D.
Andrea M. Ghez, Ph.D.
George Gruner, Ph.D.
Jay Hauser, Ph.D.
Károly Holczer, Ph.D.
Huan Z. Huang, Ph.D.
Hong Wen Jiang, Ph.D.
Michael A. Jura, Ph.D.
Alexander Kusenko, Ph.D.
James E. Larkin, Ph.D.
Matthew A. Malkan, Ph.D.
Ian S. McLean, Ph.D.
George J. Morales, Ph.D.
Warren B. Mori, Ph.D.
Mark R. Morris, Ph.D.
Bernard M.K. Nefkens, Ph.D.
William I. Newman, Ph.D.
Rene A. Ong, Ph.D.
C. Kumar N. Patel, Ph.D.
Roberto Peccci, Ph.D.
Claudio Pellegrini, Ph.D.
Seth J. Putterman, Ph.D.
James Rosenzweig, Ph.D.
Joseph A. Rudnick, Ph.D.
David Saltzberg, Ph.D.
Reiner L. Stenzel, Ph.D.
E.T. Tomboulis, Ph.D.
Jean L. Turner, Ph.D.
Roger K. Ulrich, Ph.D.
Charles A. Whitten, Jr., Ph.D.
Gary A. Williams, Ph.D.
Edward L. Wright, Ph.D.

Professors Emeriti
Ernest S. Abresch, Ph.D.
Eric E. Becklin, Ph.D.
Rubin Brauneish, Ph.D.
Nina Byers, Ph.D.
Marvin Chester, Ph.D.
W. Gilbert Clark, Ph.D.
John M. Cornwall, Ph.D.
Robert J. Finkelstein, Ph.D.
Roy P. Haddock, Ph.D.
George J. Igo, Ph.D.
Leon Knopoff, Ph.D.
Steven A. Moszkowski, Ph.D.
Richard E. Norton, Ph.D.
William E. Slater, Ph.D.
Alfred Y. Wong, Ph.D.
Chun Wa Wong, Ph.D.
Eugene Y. Wong, Ph.D.
Byron T. Wright, Ph.D.
Benjamin Zuckerman, Ph.D.

Associate Professors
Troy A. Carter, Ph.D.
Michael Gutperle, Ph.D.
Bradley M. Hansen, Ph.D.
Per J. Kraus, Ph.D.
Thomas G. Mason, Ph.D.
Jianwei Miao, Ph.D.
Alice E. Shapely, Ph.D.
Rainer S. Walny, Ph.D.
Giovanni Zocchi, Ph.D.

Assistant Professors
Dolores Bozovic, Ph.D.
Steven R. Furlanetto, Ph.D.
Pietro Musumeci, Ph.D.
Christopher Niemann, Ph.D.
Brian C. Regan, Ph.D.
Yaroslav Tserkovnyak, Ph.D.
Vladimir V. Vassiliou, Ph.D.

Adjunct Professors
Viktor Decyk, Ph.D.
Phillip Pritchett, Ph.D.

Scope and Objectives
Since the time of the ancient Greeks, a natural affinity has existed between astronomy and physics, and the intellectual development of the two disciplines has often proceeded synergistically. Newton's discovery of the laws of mechanics and universal gravitation not only explained motion on Earth, but brought the heavens and Earth into a single quantitative framework in which both are governed by the same laws. The revolutionary discoveries of twentieth-century physics — quantum mechanics and nuclear physics — were rapidly adopted by astronomers to interpret the spectroscopic observations of the stars and to construct accurate models of stellar structure. Einstein's general theory of relativity predicted the expansion of the universe and that most awe-inspiring compaction of matter — the black hole.

Today astronomers study the accretion of matter onto supermassive black holes in quasars and search the most distant regions of the universe to learn about the exotic physical conditions that existed when the universe's expansion was only fractions of a second old. By measuring the gravitational interactions on distance scales from galaxies to the vast superclusters of galaxies, astronomers have concluded that most of the universe's matter is dark or nonluminous; physicists have speculated that this dark matter may consist of yet undiscovered exotic particles that are predicted by the most advanced theories of elementary particle physics.

Department of Physics and Astronomy faculty members and students are able to study the universe in the holistic manner which is demanded by the breadth of these two disciplines.

Undergraduate Study
The Department of Physics and Astronomy offers a choice of four undergraduate majors: the B.S. degree program in Astrophysics, the B.S. degree program in Biophysics, the B.S. degree program in Physics, and the B.A. degree program in Physics. Each course taken to fulfill any of the requirements for the majors must be taken for a letter grade.

Astronomy Courses
The department offers general courses to all University students, including those who are not science oriented.

Astronomy 3 is the fundamental one-term course for students who do not major in physical sciences and should be taken in the first or second year.

Astronomy 4, 5, and 6 develop the topics covered in course 3 to somewhat greater depths but are still aimed at nonscience majors. Course 4 discusses stellar and supermassive black holes; course 5 concentrates on the problem of life in the universe; course 6 discusses the structure and evolution of the universe.

Astronomy 81 and 82 are general survey courses recommended for science majors in their second year. They systematically introduce astrophysics and require a good background in physics and mathematics (at least two terms of the Physics 1 series and two terms of the Mathematics 31 and 32 series). Students of junior and senior standing in physics or related sciences are invited to select any of these courses: Astronomy 115, 117, 127, 140, 180.

Physics Courses
Students who wish to use physics to satisfy part of the general education requirements in the physical sciences and who have no mathematics background beyond the high school mathematics required for admission to UCLA may take Physics 10.

Physics 1Q is intended for entering freshmen Physics majors and other interested students. Although it is not a required course or a part of or requisite to any general physics sequence of courses, its purpose is to indicate the nature of current research problems in physics on a level intended to be attractive to entering students with a good high school science and mathematics background.

Physics 1A, 1B, and 1C, or 1AH, 1BH, and 1CH form sequences of courses in general physics for majors in Physics. The department takes into account prior preparation in physics. If students feel their background would permit acceleration, they may be exempted from one course in the 1A, 1B, 1C sequence by taking the final examination with a class at the end of any term. This serves as a placement examination. A satisfactory score on one or both parts of the College Board Advanced Placement Physics C Test may also serve as a placement examination, but placement is not automatic. Students should discuss such possibilities with their departmental advisor.

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, 44L, 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. Recommended: Chemistry and Biochemistry 20A.

Transfer Students
Transfer applicants to the Astrophysics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two astrophysics courses, two years of calculus, one and one half years of calculus-based physics with laboratory for majors, and one programming course.

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

The Major

Honors Program
Senior majors in Astrophysics with a 3.5 grade-point average in all astronomy, mathematics, and physics courses are eligible for the honors program in astrophysics. In addition to completing all courses required for the major, students must complete two terms of Astronomy 199. To receive honors and highest honors at graduation, the grade-point average must remain at 3.5 and 3.75 or better, respectively, and work in course 199 must reflect original research and be accepted by the departmental honors committee.

Biophysics B.S.
The goal of the Biophysics major is to provide students with the undergraduate background to enable them to enter very good graduate programs in biophysics, molecular biology, and physics. As the molecular biophysics field emerges as an important and rapidly developing area of scientific research and knowledge, the major is designed to provide both the scientific/technical training and the immersion in physics and molecular biology necessary to enable students to understand and integrate these fields intellectually and to have the opportunity to become leaders in bringing the analytical and experimental techniques of both fields to bear on the complicated behavioral of microbiological macromolecular systems.

Preparation for the Major
Required: Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, 4BL, 17, 18L; Chemistry and Biochemistry 20A; 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 Biophysics B.S. major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of calculus, one and one half years of calculus-based physics with laboratory for majors, one year of general biology with laboratory for majors, and one year of general chemistry with laboratory for majors.

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

The Major
Required: Physics 105A, 110A, 110B, 115A, 115B, 131, M180G, 191; Chemistry and Biochemistry 110A, 153A; Molecular, Cell, and Developmental Biology 100, 104. Recommended: Molecular, Cell, and Developmental Biology 171, Physics 108, 117, 140B, C185, guided research in chemistry and biochemistry, molecular, cell, and developmental biology, or physics. An overall 2.0 grade-point average in all upper division courses is required.

Physics B.S.
The Physics B.S. major should be taken if students intend to continue toward the Ph.D. in Physics.

Preparation for the Major
Required: Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, 4BL, 17, 18L; Chemistry and Biochemistry 20A; Mathematics 31A, 31B, 32A, 32B, 33A, 33B. A detailed brochure on the major is available from the Undergraduate Office, 1-707A Physics and Astronomy Building.

Transfer Students
Transfer applicants to the Physics B.S. major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of calculus, one and one half years of calculus-based physics with laboratory for majors, and one general chemistry course for majors.

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

The Major
Required: Physics 105A, 105B, 110A, 110B, 112, 115A, 115B, 115C, 131. The remainder of the course of study consists of a plan, to be worked out by students in consultation with their designated departmental adviser, that details which courses they take to complete the degree. There are four overall requirements: (1) the plan must be worked out five terms before students expect to graduate; (2) the plan must include at least two courses from the Physics 180 series, which should be taken in the senior year; (3) there must be three additional upper division courses in the plan, preferably selected from Physics 108, 114, 117, M122, 123, 124, 126, 132, 140A, 140B; (4) there must be written rationale for the plan. Except for the Physics 180 laboratories, the courses need not be in the Physics and Astronomy Department. However, it is expected that the courses fit into a coherent structure. It is important that the structure and rationale are thought out carefully, as the plan must be endorsed by the designated adviser and be approved by the departmental academic affairs committee. Preapproved plans of study are available from the undergraduate advisers. A C average is required in all courses taken to satisfy the major requirements.

Students preparing for graduate school should take additional courses in physics and mathematics. Physics 108, 114, 117, M122, 123, 124, 126, 132, 140A, and 140B are recommended.

Honors Programs
The department offers three honors programs leading to graduation with honors or highest honors in physics. Students are eligible after completing the preparation for the major and four upper division physics courses with an overall grade-point average of 3.0 and a 3.5 GPA in upper division physics and mathematics courses. Contact the Undergraduate Office for a complete description of the programs and an application.

Physics B.A.
The Physics B.A. major is intended to provide a strong background in physics, yet allow students flexibility to study other fields as well. It should be of particular interest to students who want to double major or who want to teach science. Students who intend to continue work toward the Ph.D. in Physics are advised to work for the B.S. in Physics as described earlier.

Preparation for the Major
Required: Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, 4BL, 17, 18L; Chemistry and Biochemistry 20A; Mathematics 31A, 31B, 32A, 32B, 33A, 33B. A detailed brochure on the major is available from the Undergraduate Office, 1-707A Physics and Astronomy Building.

Transfer Students
Transfer applicants to the Physics B.A. major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of calculus, one and one half years of calculus-based physics with laboratory for majors, and one general chemistry course for majors.

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

The Major
Required: Physics 105A, 105B, 110A, 110B, 112, 115A, 115B, 131, 132B, 140A, 140B. 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 at least two additional upper division courses in the plan, preferably selected from Physics 108, 114, 117, M122, 123, 124, 126, 132, 140A, 140B; (4) there must be written rationale for the plan. Except for the Physics 180 laboratories, the courses need not be in the Physics and Astronomy Department. However, it is expected that the courses fit into a coherent structure. It is important that the structure and rationale are thought out carefully, as the plan must be endorsed by the designated adviser and be approved by the departmental academic affairs committee. Preapproved plans of study are available from the undergraduate advisers. A C average is required in all courses taken to satisfy the major requirements.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate
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 or former course 3H. 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, to develop an understanding 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 the Universe. (4) Lecture, four hours; discussion, one hour. Preparation: prior introduction to astronomy. Life on Earth and prospects for life elsewhere in context of evolution of universe from simple to complex. Course development early from astronomy and biology but includes some chemistry, geology, and physics. Selected topics treated in some depth, but with little or no formal mathematics. P/NP or letter grading.


7. Astronomy and Media. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Designed to help nonmajors develop skills to continually learn about science through media. Detailed study of research currently in media, including meteor impacts, greenhouse effect, NASA, cosmology, and extraterrestrial life. Investigation of forces that influence science reporting. P/NP or letter grading.

81. Astrophysics I: Stars and Nebulae. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 31A, 31B, and Physics 1A or 1AH. Open to qualified sophomore and upper division students. Survey of our knowledge about stars: their distances, masses, luminosities, temperatures, and interrelations between these parameters. Methods and importance for astrophysics. Variable stars. Planetary and gaseous 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. Recommended: course 81, Physics 1B and 1C (or 1BH and 1CH). Open to qualified sophomore and upper division students. Basic principles of stellar structure and evolution. Red giant stars, white dwarfs, novae, supernovae, neutron stars, and black holes. Pulsars and galactic X-ray sources. Milky Way galaxy and interstellar medium. Extragalactic astronomy, galaxy clustering, active galactic nuclei, and quasars. Introduction to cosmology: Hubble law, thermal history of Big Bang, and earliest moments of universe. P/NP or letter grading.

Upper Division Courses

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). Partial differential equations and applications of complex variables. 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 photometry. 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 undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Astrophysics. (1) Research group meeting, one hour. Designed for undergraduates who are part of research group/laboratory. Discussion of research of faculty members or students with regard to understanding methodology in field and/or laboratory equipment. May be repeated for credit. P/NP grading.

196. Research Apprenticeship in Astrophysics. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors with overall 3.0 grade-point average. Entry-level research apprenticeship for upper division students under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP grading.

197. Individual Studies in Astronomy. (2 to 4) Tutorial, four hours. Limited to seniors in individual intensive study, with scheduled meetings to be arranged between faculty member and student. As signed reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. Letter grading.

198. Honors Research in Astrophysics. (2 to 4) Tutorial, 12 hours. Limited to juniors/seniors with minimum overall 3.0 grade-point average. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Astronomy. (2 to 4) Tutorial, two hours. Limited to junior seniors in Astrophysics and Physics majors. Supervised individual research or investigation under guidance of faculty mentor. Submitting paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


274. Galaxies. (4) Lecture, three hours. Galaxy properties: kinematics, mass, morphology, stellar populations; stellar orbits and spiral structure; galaxy formation; galaxy clusters, collisions, and mergers; observations and theory of quasars and active galactic nuclei. Letter grading.


277A-277B. Astronomy Research Project. (6-6) Tu- torial, to be arranged. Designed for second-year gradu- ate astronomy 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 seminar/sem- inar format, focusing on one of set of specific topics in astronomy. S/U (2-unit course) or letter (4-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 study students. Quantum mechanical topics in areas of interest for astrophysics applications. Hydrogen atom, radiative transitions, complex atoms, molecular spectroscopy including electronic, vibrational, and rotational transition, nuclear reaction theory. Letter grading.

M285. Origin and Evolution of Solar System. (4) (Same as Earth and Space Sciences M285.) Lecture, four hours. Dynamical problems of solar system; chemical evolution, meteorites, comets, and solar atmosphere; nucleosynthesis; solar origin, evolution, and termination; solar nebula, hydromagnetic processes, formation of planets and satellite systems. Content varies from year to year. May be repeated for credit. S/U grading.

296. Research Topics in Astronomy. (2) Discuss- sion, two hours. Advanced study and analysis of cur- rent topics in astronomy. Discussion of current re- search and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

M297. Research Tutorial: Astroparticle Physics. (2 or 4) Seminar, 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.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice person- nel employment as teaching assistant, associate, or fellow. Teaching 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.

S96A. Directed Individual Studies. (4 to 10) Tutori- al, to be arranged. May be repeated at discretion of department. S/U grading.

S96L. Advanced Study and Research at Lick Ob- servatory. (4 to 12) Tutorial, to be arranged. De- signed for graduate students who require observa- tional experience, as well as those working on obser- vational problems for their thesis. May be repeated at discretion of department. S/U grading.

595. Ph.D. Research and Writing. (10 to 12) Tutori- al, to be arranged. May be repeated at discretion of department. S/U grading.

Physics

Lower Division Courses


1B. Physics for Scientists and Engineers: Oscilla- tions, Waves, Electric and Magnetic Fields. (5) Lecture/demonstration, four hours; discussion, one hour. Enforced requisites: course 1A, Mathematics 31B. Enforced corequisite: Mathematics 31B. Recommended corequisite: Mathematics 32A. Enriched preparation for upper division physics courses. Same material as course 1A but in greater depth; recommended for Physics majors and other students de- siring such coverage. P/NP or letter grading.

1BH. Physics for Scientists and Engineers: Elec- tronics, Optics, and Special Relativity. (5) Lecture/demonstration, four hours; discussion, one hour. Enforced requisites: courses 1A, 1B, Mathematics 32A. Enforced corequisite: Mathematics 32B. Recommended corequisite: Mathematics 32A. 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: Elec- trodynamics, Optics, and Special Relativity. (5) Lecture/demonstration, four hours; discussion, one hour. Enforced requisites: courses 1A, 1B, Mathematics 32A. Enforced corequisite: Mathematics 32B. Recommended corequisite: Mathematics 33A. 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.

4AL. Physics Laboratory for Scientists and Engi- neers: Mechanics. (2) Laboratory, three hours. En- forced requisite: courses 1A or 1AH. Enforced corequi- site: course 1B or 1BH. Experiments on measuring gravity, accelerated motion, kinetic and potential ener- gy, impulse and momentum, damped and driven os- cillators, resonance and vibrating strings. Computer data acquisition and analysis. Introduction to error analysis, including distributions and least-squares fit- ting procedures. Letter grading.

4BL. Physics Laboratory for Scientists and Engi- neers: Electricity and Magnetism. (2) Laboratory, three hours. Enforced requisites: course 1A or 1AH. Enforced corequisite: course 1B or 1BH. Experiments on electric forces, fields, and potentials. Magnetic fields. Linear and nonlinear devices. Resistors, ca- pacitors, and inductors. Modern circuits. Geometrical and physical optics. Letter grading.

6A. Physics for Life Sciences Majors: Mechanics. (2) Lecture, three hours; discussion, one hour; labora- tory, two hours. Enforced requisites: Mathematics 3A, 3B. Enforced corequisite: Mathematics 3C. Not open for credit to students with credit for course 6AH. Mo- tion, Newton laws, energy, linear and angular momen- tum, rotation, equilibrium, gravity, biological applica- tions. P/NP or letter grading.

6BH. 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 6A. Statics and dynamics of forces, energy, and momentum, with applications to biologi- cal and biochemical systems. Physics of states of matter (solids, liquids, and gases) and of surfaces and interfaces as they apply to biological organisms. P/NP or letter grading.

6B. Physics for Life Sciences Majors: Waves, Electricity, and Magnetism. (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisite: course 6A or 6AH. Not open for credit to students with credit for course 6B. Mechanical waves, sound, electricity and magnetism, electro- magnetic waves, biological applications. P/NP or letter grading.

6BH. Physics for Life Sciences Majors: Sound, Light, and Hydrodynamics (Honors). (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisite: course 6B. Not open for credit to students with credit for course 6BH. Geomet- rical and physical optics, fluid statics and dyna- mics, thermodynamics. Selected topics from founda- tions of quantum mechanics; atoms, nuclear and particle physics; relativity; medical detectors, biologi- cal applications. P/NP or letter grading.

6CH. Physics for Life Sciences Majors: Electricity, Magnetism, and Transport (Honors). (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: course 6B. Not open for credit to students with credit for course 6CH. Electric-statics in vacuum and in water. Electric current with applications to electrophysiology. Magnetism, espe- cially 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, 5A, or 5AH. Special mathe- matical preparation beyond the necessary for admission to University in freshman standing not required. Topics include planetary motion, Newton 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.


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 radioactive activity, scattering, Planck constant, superconductivity, superfluidity. Letter grading.

87. Introduction to Biophysics. (Formerly numbered M88.) Seminar, three hours. Enforced requisites: courses 1A, 1B, and 1C, or 1AH, 1BH, and 1CH, 6A, 6B, and 6C. Physics 20A, 20B, 20L. Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32A, 32B, 32C. Specific examples of diverse biological design such as scaling of metabolic activity, bone and muscle mass, cell size, cell membranes and pumps, heart and blood circulation, swim bladder, insect vision, magnetic bacteria, etc., 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 a particular theme or topic based on current research. Consult Schedule of Classes for topics to be offered in a specific term. P/NP or letter grading.

98XA. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) (Formerly numbered 96A.) Laboratory, three hours. Corequisite: associated undergraduate lecture course in physics for physical sciences and engineering 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.

98XB. PEERS Collaborative Learning Workshops for Physical Sciences and Engineering Majors. (1) (Formerly numbered 91A.) Laboratory, three hours. Corequisite: associated undergraduate lecture course in physics for physical sciences and engineering 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 potential, calculus of variations, Lagrangian and Hamiltonian mechanics, central force motion, linear and nonlinear oscillations. P/NP or letter grading.

105B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 105A. Relativity with four vectors, nonrelativistic reference frames, dynamics of rigid bodies, coupled oscillators, normal modes of oscillation, vibrating strings, and wave propagation. P/NP or letter grading.

108. Optical Physics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 10B. Interaction of light with matter, electromagnetic waves, 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.

110A. Electricity and Magnetism. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 131, Mathematics 32B, 33A, 33B. Electrostatics and magnetostatics. P/NP or letter grading.


112. Thermodynamics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Statistical mechanics, including first, second, and third laws. Statistical mechanical point of view and its relation to thermodynamics. Some simple applications. P/NP or letter grading.

114. Mechanics of Wave Motion and Sound. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Vibration systems and wave propagation in gases, liquids, and solids, including elements of hydrodynamics and elasticity. Applications in ultrasonics, low-temperature physics, solid-state physics, architectural acoustics. P/NP or letter grading.

115A. Quantum Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Classical background. Basic ideas of quantum nature of light, wave-particle duality, Heisenberg uncertainty principle, Bohr atom, physical operations, Schrödinger equation. One-dimensional square well and harmonic oscillator problems. Boundary values. Classical correspondences. 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.

117. Electronics for Physics Measurement. (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 measurement and instrumentation, and applications of electronics from practical viewpoint, followed by examination of typical circuits for scientific instrumentation and study of methods of computer data acquisition and signal processing. P/NP or letter grading.

M122. Introduction to Plasma Electronics. (4) (Same as Electrical Engineering M185.) Lecture, three hours; discussion, one hour. Corequisite: course 110C. Senior-level introductory course on plasma science and technology, including topics related to dielectrics and plasmas and its applications to materials processing, generation of coherent radiation and particle beams, and renewable energy sources. Letter grading.

123. Atomic Structure. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Corequisite: course 115C. Theory of atomic structure. Interaction of radiation with matter. P/NP or letter grading.

124. Nuclear Physics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Corequisite: course 115C. Nuclear properties, nuclear forces, nuclear structure, nuclear decays, and nuclear reactions. P/NP or letter grading.

126. Elementary Particle Physics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Corequisite: course 115C. Introduction to physics of elementary particles. The four basic interactions: electromagnetic, weak, strong, and gravitational. Properties of baryons, mesons, quarks, and leptons; conservation laws, symmetries and broken symmetries; the Standard Model; experimental techniques; new physics at the new accelerators. P/NP or letter grading.

128. Cosmology and Particle Astrophysics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 115A, 115B, 126. 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. Letter grading.

131. Mathematical Methods of Physics. (4) Lecture, three hours; discussion, one hour. Corequisite: course 115C. Introduction to physics of elementary particles. The four basic interactions: electromagnetic, weak, strong, and gravitational. Properties of baryons, mesons, quarks, and leptons; conservation laws, symmetries and broken symmetries; the Standard Model; experimental techniques; new physics at the new accelerators. P/NP or letter grading.

132. Mathematical Methods of Physics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Vectors and fields in space, linear transformations, matrices, and operators; Fourier series and integrals, 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; cohesive energy; diffusion of electron, neutron, and electromagnetic waves in a lattice; reciprocal lattice; phonons and their interactions; free electron theory of metals; energy bands. Letter grading.

150. Physics of Charged-Particle and Laser Beams. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 110A, 110B, 115B. Physics of charged-particle and laser beams presented as a unified subject. Basic physics of charged-particle beams, covering relativistic particle motion in electromagnetic fields, transverse momentum mechanisms, linear and circular accelerators, and advanced topics. Some fundamentals of laser physics, including gain and broadening mechanisms, light tight 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 in policy formulation and macroeconomic stability. 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 kinds of questions modern-day physicists actually ask and how they go about answering them. May be repeated for credit. P/NP grading.

190. Research Colloquia in Physics. (2) Seminar, three hours. Limited to juniors/seniors. Train- ing and supervised practicum for advanced undergradu- ate students. Students assist in preparation of materi- als and development of innovative programs with guid- ance of faculty members in small course settings. May be repeated for credit. P/NP or letter grading.

193. Journal Club Seminars: Physics. (2) Semi- nar, 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 kinds 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 As- tronomy. (1) Research group meeting, one hour. De- signed for undergraduate students who are part of research group/lab/ course/project. Discussion of research of faculty members or students with regard to under- standing methodology in field and laboratory equip- ment. May be repeated for credit. P/NP grading.

196. Research Auxiliary Group Seminars. (2 to 4) Tutorial, three hours per week per unit. Limited to ju- nior/seniors with overall 3.0 grade-point average. En- try-level research apprenticeship for upper division students under guidance of faculty mentor. May be re- peated for credit. Individual contract required. P/NP grading.

197. Individual Studies in Physics. (2 to 4) Tutori- al, to be arranged. Limited to juniors/seniors. Individ- ual intensive study with scheduled meetings to be ar- ranged between faculty member and student. As- signed reading and tangible evidence of mastery of subject matter required. May be repeated for 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 Phys- ics. (2 to 4) Tutorial, two hours. Limited to junior/sen- iors. Supervised research or investigation under guidance of faculty mentor. Culumminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

201G. Modern Physics Research Areas. (2) Re- view of modern physics research areas, with empha- sis on those actively pursued at UCL. S/U grading.


213B. Advanced Atomic Structure. (4) Nj symbols, continuous groups, fractional parentage coefficients, electron systems.


220. Classical Mechanics. (4) Lecture, three hours. Hamilton/Jacobi theory, action-angle variables, classi- cal perturbation theory, and selected topics such as introduction to physics of continuous media and flu- id nonlinear phenomena.


223. Advanced Classical Mechanics. (4) Requi- site: course 220. Topics such as nonlinear mechan- ics, ergodic theory, mechanics of continuum media.

224. Introduction to the Strong Interaction. (4) Ev- idence concerning the strong interaction, particularly as exemplified in nucleon/nucleon and pion/nucleon systems. Isospin, scattering matrix, density matrix and polarization, properties of pions, one pion ex- change potential, phase shift analysis.


236E. Particle Astrophysics: Exploring Earliest and Extreme Universe. (4) Lecture, three and one half hours. Requisites: courses 210A, 210B, 221A, 221B. Recommended: course 226A. Introduction to high-energy astrophysics and discussion of latest developments in both experimentation and theory. Special emphasis on unified picture of universe that emerges from particle physics, astronomy, and cosmology. S/U or letter grading.


230D. Relativistic Quantum Theory. (6) Lecture, four hours. Requisites: courses 221A, 221B, 221C. Modern field theory, including quantum electrodynamics and quantum chromodynamics, renormalization group methods, path-integral quantization, and spontaneous symmetry breakdown. Advanced topics include instantons and other topological defects, large N methods, finite temperature field theory, lattice field theory, effective field theory methods, 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.


232A-232B. Relativity. (4-4) Special and general theories, with applications to elementary particles and astrophysics. S/U or letter grading.

232C. Special Topics in General Relativity. (4) Lecture, four hours. S/U or letter grading.


M236. Geometry and Physics. (4) (Same as Mathematics M217.) Lecture, three hours. Interdisciplinary course on topics at interface between physics quantum field theory, including quantum of differential and algebraic geometry. Topics include super-symmetry, Seiberg/Witten theory, conformal field theory, Calabi/Yau manifolds, mirror symmetry and duality, integrable systems. S/U grading.


237B. String Theory. (4) Lecture, four hours. Requisite: course 237A. Topics may include toroidal compactification, t-duality and d-branes, supersymmetry, strings, orbifolds, Calabi/Yau compactifications and physics in four dimensions, and strings at strong coupling and dualities. S/U or letter grading.


265. Seminar: Propagation of Waves in Fluids. (2 to 4) Seminar, three hours. S/U or letter grading.

266. Seminar: Spectroscopy. (2 to 4) Seminar, three hours. S/U or letter grading.

269A. Seminar: Nuclear Physics. (2 to 4) Seminar, three hours. S/U or letter grading.

269B. Seminar: Elementary Particle Physics. (2 to 4) Seminar, three hours. S/U or letter grading.


280E. Advanced Plasma Laboratory. (4) Lecture, two hours; laboratory, four hours. Requisites: courses M122, 180E. Laboratory experiments on behavior of plasma, magnetic field measurements of field of particle motions, distribution functions, and fluid dynamics. Plasma waves and nonlinear phenomena. Advanced probe, microwave and plasma diagnostics.


290. Research Tutorial: Plasma Physics. (2 or 4) Three terms required of each graduate student doing research in this field, ordinarily during second or third year. Seminar and discussion by staff and students directed toward problems of current research interest in plasma physics group, both experimental and theoretical. May be repeated for credit. S/U grading.

291. Research Tutorial: Elementary Particle Theory. (2 or 4) Requisites: courses 226A, 230A, 230B. Required of each graduate student doing research in this field, ordinarily during second or third year. Seminar and discussion by staff, postdoctoral fellows, and graduate students. May be repeated for credit. S/U grading.

292. Research Tutorial: Spectroscopy, Low-Temperature, and Solid-State Physics. (2 or 4) Required of each graduate student doing research in these fields, ordinarily during second or third year. Seminar and discussion by staff and students on problems of current research interest in spectroscopy, low-temperature, and solid-state physics. May be repeated for credit. S/U grading.

293. Research Tutorial: Current Topics in Physics. (2) Lecture, one hour. Seminar and discussion by faculty, postdoctoral fellows, and graduate students on problems of current interest in accelerator physics. May be repeated for credit. S/U grading.

295. Research Tutorial: Solid Earth Physics. (2 or 4) Required (or course 292 if appropriate) of each graduate student doing research in this field. Seminar and discussion by faculty, postdoctoral fellows, and graduate students on topics of current interest in solid earth physics. May be repeated for credit. S/U grading.

296. Research Topics in Physics. (2) Advanced study and analysis of current topics in physics. Discussion of current research and literature in research 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 on nuclear physics by staff and students, in both experimental and theory. May be repeated for credit. S/U grading.

M370A. Integrated Science Instruction Methods. (4) (Same as Chemistry M370A and Earth and Space Science M370A.) Lecture, two hours; discussion, one hour; laboratory, one hour. Preparation: one introductory lower division course (including laboratory) each of chemistry, life sciences, and physics and at least two Earth science courses. Designed as a student field experience. Classroom management, lesson design, assessment, history of science education, S/U or letter grading.

Physics and Astronomy / 509
M370B. Integrated Science Instruction Methods. (4) (Same as Chemistry M370B and Earth and Space Sciences M370B.) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: course M370A or Chemistry M370A or Earth and Space Sciences M370A. Application of learning theory to science instruction and classroom management, including use of technology, collaborative learning, laboratory safety, ethical issues, field experiences, and professional development. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching College Physics. (2) Seminar/discussion (five or more one-hour meetings during term, plus intensive training week at beginning of Fall Quarter). Required of all new teaching assistants. Special course for teaching assistants designed to deal with problems and techniques of teaching college physics. Ideas and techniques learned are applied and evaluated in the sections of each teaching assistant. May be repeated for credit. S/U grading.

596. Directed Individual Studies. (2 to 12) Tutorial, to be arranged. May be repeated 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 grading.

598. Master's Thesis Research and Writing. (4) Tutorial, to be arranged. May be repeated twice for credit. S/U or letter grading.

599. Ph.D. Research and Writing. (4 to 12) Tutorial, to be arranged. May be repeated for maximum of 16 units. S/U grading.

Scope and Objectives

The cornerstone of the physiological science curriculum is vertebrate physiology, with emphases on integrative functions. The research and educational programs focus on integrative physiology at several levels of organization from molecules to living organisms, microscopic structures to macroscopic organization, and cellular properties to organ functions. Students receive comprehensive instruction in all areas of physiological science, while elective courses reflect faculty research expertise, including developmental neurobiology, gene regulation/neural development, cellular neurobiology, molecular neurobiology, neuromuscular physiology, neuroendocrine physiology, cardiac physiology, diet and degenerative diseases, auditory and visual behavior, biomechanics of rehabilitative medicine, muscle cell biology, inflammatory cell biology, vascular biology, cardiac electrophysiology, neuromotor control, and social control of neuronal plasticity.

Applicants interested in pursuing graduate study may apply directly to the interdepartmental Molecular, Cellular, and Integrative Physiology Ph.D. Program (http://www.mcip.ucla.edu) or the interdepartmental Neuroscience Ph.D. Program (http://www.neuroscience.ucla.edu).

Undergraduate Study

Physiological Science B.S.

Preparation for the Major

Life Sciences Core Curriculum

Required: Life Sciences 1, 2, 3, 4; Chemistry and Biochemistry 1AA, 1AB, 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 4B, or 6A, 6B, and 6C, or 6AH, 6BH, and 6CH.

Each core curriculum course must be passed with a grade of C– or better, and all courses must be completed with an overall grade-point average of 2.0 or better. Students receiving a grade of D or F in two core curriculum courses, either in separate courses or repetitions of the same course, are subject to dismissal from the major.

Transfer Students

Transfer applicants to the Physiological Science major with 90 or more quarter units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. A second semester of organic chemistry or one year of calculus-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/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Physiological Science 107, 111A (or M180A), 111B, 111C, 111L, Chemistry and Biochemistry 153A, 153L.

A total of four upper division physiological science electives (16 units) is required. Either three units of course 199 and one letter-graded unit of course 193 OR four units of course 198 may be applied toward the elective requirement. Courses 189HC, 191H, 192, 195, 196, and graduate courses at the 300, 400, or 500 level may not be applied toward this requirement. One graduate course at the 200 level may be applied toward the elective requirement by petition.

Each required and elective course must be taken for a letter grade, and a C average must be maintained in all upper division courses taken for the major. Additionally, a grade of C– or better in each of the core courses (Physiological Science 107, 111A or M180A, 111B, 111C) is required to enroll in the next course in the series.

Honors Program

The honors program provides exceptional students with the opportunity for individual research culminating in an honors thesis. Requirements for admission include a 3.0 overall grade-point average and a 3.2 GPA in the life sciences core curriculum. After completion of all requirements and with the recommendation of the faculty adviser, the undergraduate affairs committee confers departmental honors at graduation.
Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gndt.ucla.edu/ graddiv/prr.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 Physiology offers the Master of Science (M.S.) degree in Physiological Science.

Physiological Science

Lower Division Courses

3. Introduction to Human Physiology, (5) Lecture, three hours; laboratory, two hours. Not open to Physiological Science majors. Courses 3 and 5 may be taken independently, concurrently, or in either sequence. Understanding of human body, its organization from molecular to cellular to tissues and organs, and how components function in integrated manner to permit life as we know it. P/NP or letter grading.

5. Issues in Human Physiology: Diet and Exercise, (5) Lecture, three hours; discussion, 30 minutes; laboratory, 90 minutes. Not open to Physiological Science majors. Basic introduction to principles of human biology, with special emphasis on roles that exercise and nutrition play in health, and prevention and management of such illnesses as hypertension, diabetes, and heart disease. P/NP or letter grading.


13. Introduction to Human Anatomy, (5) Lecture, four hours; laboratory, five hours. Not open to Physiological Science majors. Structural survey of human body components, including transport, neurological, and respiratory, digestive, and genitourinary systems. Laboratory includes examination of human cadaver specimens. Letter grading.

90. Introduction to Physiological Science, (2) Lecture, one hour; discussion, one hour. Limited to freshmen/sophomores. Introduction to current topics in physiological science by a team of departmental faculty members. P/NP grading.

Upper Division Courses

100. Experimental Statistics, (4) Formerly numbered C100. Lecture, four hours. Introduction to statistics with focus on computer simulation instead of formulas. Bootstrap and Monte Carlo methods used to analyze physiological data. P/NP or letter grading.

CM102. Basic Human Biology for Biomedical Engineers I, (4) (Same as Biomedical Engineering CM102.) Lecture, three hours; laboratory, two hours. Preparation: human molecular biology, biochemistry, and cell biology. Further credit to Physiological Science majors. Broad overview of basic biological activities and organization of human body in system (organ/tissue) to system basis, with particular emphasis on molecular basis. Modeling/simulation of functional aspect of biological system included. Actual demonstration of biomedical instruments, as well as visits to biomedical facilities. Concurrently scheduled with course CM204. Letter grading.

CM103. Basic Human Biology for Biomedical Engineers II, (4) (Same as Biomedical Engineering CM103.) Lecture, three hours; laboratory, two hours. Preparation: human biology, biochemistry, and cell biology. Further credit to Physiological Science majors. Molecular-level understanding of human anatomy and physiology in selected organ systems, with emphasis on nervous, endocrine, immune, reproductive systems. Functional basis of biomedical instrumentation (dialysis, artificial skin, pathogen detectors, ultrasound, birth-control drug delivery). 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 or 6AH. Students must receive a grade of C− or better to proceed to next course in series. Systems anatomy is primary systemically. Includes craniofacial, head, and neck. P/NP or letter grading.

111A-111B-111C. Foundations in Physiological Science, (6-6-6) Lecture, four hours; laboratory, two hours. Letter grading. Requisites: courses 107, Chemistry 14C or 50A, Life Sciences 1, 2, 3, 4, Physics 1B or 8B or credit to course 110A. Students must receive a grade of C− or better to proceed to next course in series. Principles of neurophysiology, cardiovascular, and pulmonary physiology. Control of body fluids, pH, and ion concentrations. P/NP or letter grading.

C111. Cellular Physiology Laboratory, (4) Lecture, four hours; research demonstration, one hour. Requisites: courses 111A, 111B. Students must receive a grade of C− or better to proceed to next course in series. Principles of cardiovascular, pulmonary, and gastrointestinal physiology. Control of body fluids, pH, and ion concentrations. P/NP grading.

C126. Biological Clocks, (4) Lecture, three hours; discussion, one hour. Requisites: courses 111A, 111B, and 111C, or courses 110A, 110B, and 110C. Preparation: life science or credit to Life Sciences 1, 2, 3, 4, and to Chemistry 14C or 50A. Students must receive a grade of C− or better to proceed to next course in series. Principles of cardiovascular, pulmonary, and gastrointestinal physiology. Control of body fluids, pH, and ion concentrations. P/NP grading.

C149. Mechanisms of Major Human Diseases, (4) Lecture, three hours. Requisites: courses 111A, 111B, and 111C. Preparation: life science or credit to Life Sciences 1, 2, 3, 4, and to Chemistry 14C or 50A. Students must receive a grade of C− or better to proceed to next course in series. Principles of cardiovascular, pulmonary, and gastrointestinal physiology. Control of body fluids, pH, and ion concentrations. P/NP grading.
153. Dissection Anatomy. (4) Lecture, two hours; laboratory, six hours. Prerequisite: 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 cyclic 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 scientific research articles used as basis for material presented. Students required to present journal article for discussion. Letter grading.

155. Development and Structure of Musculoskeletal System. (4) Prerequisite: course 111B. Development, 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 organization and physiological function of intact systems. Letter grading.

M158. Cell Biology. (6) (Same as Ecology and Evolutionary Biology M158.) Lecture, three hours; laboratory, six hours. Prerequisites: Chemistry 1A, 1B, and 1BL, or 20A, 20B, 20L, and 30A; Life Sciences 1, 2, 3, 4, Cell Biology, or equivalent. Emphasis on correlation of structure and function at molecular, organelar, and cellular levels. Letter grading.

156. Comparative Animal Physiology. (4) Lecture, three hours; discussion, one hour. Prerequisites: Life Sciences 1, 2, 3, Physiology. Response and function at molecular, cellular, system, and whole organism levels of variety of animals to range of environmental conditions. Major emphasis on neural and muscular structure and function, hormones, gas exchange, energetics, and thermoregulation. Examination of wide variety of vertebrates and invertebrates to understand how animals solve physiological challenges presented by physical environment. Letter grading.

156. Animal Physiology. (6) Lecture, three hours; laboratory, five hours. Prerequisites: Chemistry 14B and 14BL, or 20B and 30AL, 153A; Life Sciences 1, 2, 3, Physics 1C and 4BL, or 6C or 6CH. Not open for credit to students with credit for Physiology 111A. For physiological science majors only, a grade of C- or better is required to proceed to Physiological Science 111B. Open for credit to students with credit for Integrative Biology 170 or to Physiological Science majors. Requisite: course 111B or 111C. Physical application required. Study and dissection of vertebrates, with emphasis on brain, sensory systems, endocrinology, cardiovascular, renal, respiratory, and nervous systems. Lab grading.

M160B. Molecular and Developmental Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Prerequisites: courses 111A or 111B (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M117A or Psychology M117B or Psychology M117C). Lecture, four hours; discussion, 90 minutes. P/NP or letter grading.

M180A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Prerequisites: Chemistry 14C or 30A (14C may be taken concurrently); Life Sciences 2, Physics 1B or 1BH or 6B or 6BH. Not open for credit to students with credit for Physiology 111A. For physiological science majors only, a grade of C- or better is required to proceed to Physiological Science 111B. Open for credit to students with credit for Integrative Biology 170 or to Physiological Science majors. Requisite: course 111B or 111C. Physical application required. Study and dissection of vertebrates, with emphasis on brain, sensory systems, endocrinology, cardiovascular, renal, respiratory, and nervous systems. Lab grading.

M180C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Prerequisites: course 111A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M117A or Psychology M117B or Psychology M117C). Lecture, four hours; discussion, 90 minutes. P/NP or letter grading.

M181. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Biology M181, Neuroscience M130, Psychiatry M181, and Psychology M181.) Lecture, three hours. Prerequisites: courses 111A or 111B (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M117A or Psychology M117B or Psychology M117C). Physical application required. Study and dissection of vertebrates, with emphasis on brain, sensory systems, endocrinology, cardiovascular, renal, respiratory, and nervous systems. Lab grading.

191. Variable Topics Research Seminars: Physiology. (1) Seminar, one hour. Prerequisite: course 111A. Focused reading in single subdiscipline of physiology, with focus on critical analysis of primary research literature. Emphasis on understanding methods for research in physiology and interpretation of experimental results, and how they bear on concepts of physiology. Development of culminating paper. P/NP or letter grading.


192. Practicum in Systems Anatomy for Undergraduate Assistants. (3) Seminar, two hours; additional laboratory hours as required. May not be repeated for credit. Letter grading.

193. Directed Research or Senior Project in Physiological Science. (2) Tutorial, one hour; fieldwork, eight hours. Limited to seniors. Supervised field studies in specific careers related to physiological science. May not be repeated for credit and may not be toward elective requirements for major. Individual contract with supervising faculty member required. P/NP grading.

194. Research Group Seminars: Physiological Science. (2) Seminar, two hours. Required of undergraduate students in research traineeships such as MARC and UC Leads programs. Discussion of research methods and current literature in field or of research of faculty members or students. May be repeated for credit. Letter grading.

195. Field Studies in Physiological Science. (4) Tutorial, one hour; fieldwork, eight hours. Limited to seniors. Supervised field studies in specific careers related to physiological science. May not be repeated for credit and may not be toward elective requirements for major. Individual contract with supervising faculty member required. P/NP grading.

198A. Honors Research in Physiological Science. (4) Tutorial, 12 hours. Prerequisites: courses 111A, 111B. Corequisite: course 193. Limited to junior/senior physiological science honors program students. Directed independent research for departmental honors with faculty member, involving definition of research topic and extensive reading and research in field of proposed honors thesis. May be repeated for credit. Individual contract required. P/NP grading.


198C. Advanced Studies for Honors Research in Physiological Science. (4) Tutorial, 12 hours. Prerequisite: course 198B. Corequisite: course 193. Limited to junior/senior physiological science honors program students. Additional course to provide further research opportunities for departmental honors students. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Physiological Science. (2 to 4) Tutorial, 12 hours. Prerequisites: courses 111A, 111B. Corequisite: course 193. Limited to Physiological Science majors with advanced junior standing and 3.0 grade-point average in major, or seniors. Supervised individual research under guidance of faculty mentor. Culminating paper or project required. Course application must be submitted to and approved by the undergraduate office during first week of classes. Only 3 units of course 199 may be applied toward elective requirements for major. May be repeated for credit. Individual contract required. P/NP or letter grading.
Graduate Courses

M200. Advanced Experimental Statistics. (4) (Formerly numbered CM200.) (Same as Biostatistics M220.) Lecture, four hours. Introduction to statistics with focus on computer simulation instead of formulae. Bootstrap and Monte Carlo methods used to analyze physiological data. Letter grading.

M202. Cellular Neurophysiology. (4) (Same as Neurobiology M200F and Neuroscience M202.) Lecture, three hours; discussion, two hours. Requisites: course 111A or M180A or Physics 68. and course 166 or Molecular, Cell, and Developmental Biology 171. Advanced course in cellular physiology of neurons. Action and membrane potentials, channels and channel blockers, gates, ion pumps and neuronal homeostasis, synaptic receptors, drug-receptor interactions, transmitter release, modulation by second messengers, and sensory transduction. Letter grading.


CM204. Basic Human Biology for Biomedical Engineers I. (4) (Same as Biomedical Engineering CM202.) Lecture, three hours; laboratory, two hours. Preparation: human molecular biology, biochemistry, and cell biology. Not open for credit to Physiological Science majors. Broad overview of basic biological activities and organization of human body in system (organs) to organ (tissues) to organ (molecules) levels, with particular emphasis on molecular basis. Modeling/simulation of functional aspect of biological system included. Actual demonstration of biomedical instruments, as well as visits to biomedical facilities. Concurrently scheduled with course CM102. Letter grading.


211. Exercise Cardiovascular Physiology. (4) Attention to cardiovascular adaptations to acute exercise as well as adaptations associated with regular exercise training.

M215. Molecular and Cellular Foundations of Physiology. (5) (Formerly numbered CM215.) (Same as Molecular, Cellular, and Integrative Physiology 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 macromolecular. Letter grading.

C226. Biological Clocks. (4) Lecture, three hours; discussion, one hour. Requisites: courses 111A, 111B, and 111C, or M180A, M180B, and M180C. Most organisms, including humans, exhibit daily rhythms in physiology and behavior. In many cases these rhythms are entrained by light from within the environment and are called circadian rhythms. Biological basis of these daily rhythms or circadian oscillations. Exploration of molecular, cellular, and system-level organization of these rhythms. Temporal control of these variations in maintaining homeostatic mechanisms of body and function on nervous system. Concurrently scheduled with course C126. Letter grading.

M227. Neuroendocrinology of Reproduction. (4) (Same as Neuroscience M227.) Lecture, three hours; discussion, one hour. Requisites: course 111A or Neuroscience M220. and course 166 or Molecular, Cell, and Developmental Biology 171. Advanced course in cellular physiology of neural control systems and endocrine regulatory mechanisms. Emphasis on feedback regulatory mechanisms by hypothalamic-pituitary and autonomic functions and integration of neuroendocrine-reproductive axis at cellular and molecular levels. Letter grading.


241. Neural Plasticity and Repair. (4) Lecture, four hours. Requisites: course 111B or Biological Sciences 244. Progress in basic and clinical neuroscience provides new insight to understand mechanisms of cell repair and strategies to promote neural healing. Focus on physiological, molecular, and anatomical basis governing repair processes in brain and spinal cord and their clinical implications. Letter grading.

C244. Neural Control of Physiological Systems. (5) Lecture, four hours. Requisite: course 111B or M180B. Role of central nervous system in control of respiration, circulation, sexual function, and bladder control. Material for each section to be developed by combination of lecture and open discussion. Concurrently scheduled with course C144-

245. Neural Mechanisms Controlling Movement. (5) Lecture, four hours. Requisite: course 111A or M180A or Neuroscience M101A. Examination of central nervous system organization required for production of complex movements such as locomotion, mastication, and swallowing. Letter grading.

250A. Muscle Dynamics. (4) Lecture, four hours. In- tergrated study of electrical and dynamic parameters of muscle-action, including topics in length-tension and force-velocity interrelationships, critical analysis of electromyographic and digital computer techniques. Letter grading.

C250B. Musculoskeletal Mechanics. (5) Lecture, three hours. Requisites: course 111B or M180B. Introduction to biomechanical analysis of human musculoskeletal system. Examination of cinematographic, force platform, and digital computer techniques to characterize and evaluate kinematic and kinetic components of movement. Topics include biostatics, biodynamics, and modeling, and concurrently scheduled with course C150. Letter grading.

M260. Neuromuscular Factors in Movement Regulation. (4) (Same as Neuroscience M260.) Requisite: concurrent or prior course 111B. Introduction to one of the major factors in regulation of muscle fiber properties and importance of these properties in neural strategies of movement regulation. S/U or letter grading.

M263. Neural Mechanisms Controlling Rhythms and Movements. (5) (Same as Neuroscience M263.) Requisite: course M145. Advanced topics on brainstem mechanisms responsible for controlling cyclic and stereotypic movements such as mastication and locomotion. Emphasis on cellular neurophysiology and interaction between neuronal networks. Introduction to primary literature and techniques used in these areas. Students expected to critically evaluate data and conclusions drawn.

270A-270B-270C. Modern Concepts in Physiolo- gyy. (4-4-4) Lecture, two hours; discussion, two hours. Study and evaluation of primary research literature. Study of foundations of modern techniques in physiological research, analysis of research design. Letter grading. 270A. Requisite or corequisite: course 111A. Foundation for experimental study of organization and function of nervous system and cellular basis of neural control systems. 270B. Requisite or corequisite: course 111B. Foundation for experimental study of musculoskeletal, cardiovascular, and respiratory systems. 270C. Requisite or corequisite: course 111C. Foundation for experimental study of musculoskeletal, cardiovascular, and respiratory systems. Letter grading.

291A-291B-291C. Seminars: Cardiovascular Function and Adaptation. (2) (2) (2 each) Seminar, two to four hours. Selected topics on cardiovascular function and adaptation. Students required to present two-hour seminar letter grading.

292. Evolution and Development of Auditory System. (2 or 4) Seminar, two hours. Discussion of specific topics related to evolution, embryology, morphogenesis, cytodifferentiation, and onset of function of auditory system, with special attention to centrifugal pathways. Requirement: familiarity with primary literature sources as well as current methodological approaches. Two-hour seminar presentation required for 2 units; seminar paper and two-hour seminar presentation required for 4 units. S/U or letter grading.

293A-293B-293C. Seminars: Musculoskeletal Function and Adaptation. (2 to 4 each) Requisites: courses 138, M260. Selected topics on muscular determinants of movement, metabolic aspects of exercise, and mechanics of connective tissue. Students required to present two-hour seminar.

294. Recent Advances in Neurophysiology. (1) Seminar, one hour. Requisite: Life Sciences 2 or undergraduate degree in science. Critical examination and discussion of recent data and publications that focus on synaptic function. Student presentations, readings, and participation in discussions required. S/U or letter grading.

296. Research Seminar: Physiological Science. (2) Review of literature, discussion of original research, and analysis of current topics in physiological science. May not be applied toward M.S. or Ph.D. course requirements. May be repeated for credit. S/U grading.

297. Seminar: Muscle Cell Biology. (2 to 4) Seminar; two hours. Selected topics in muscle cell biology. Students required to present two-hour seminar. May be repeated for credit.

298. Seminar: Nervous System Development. (1 to 2) Seminar, two hours. Selected topics in developmental neurobiology, such as neuronal migration, axonal guidance, gene expression, and synaptogenesis. Weekly primary literature student presentations. One-hour seminar presentation on assigned weekly reading required of all students; students enrolled for 2 units must also complete written analysis of additional primary literature papers. May be repeated for credit. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of 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 S/U classes 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 12) Tutorial, to be arranged. 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.


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 Conference Board of the Associated Research Councils, UCLA’s Physiology Department was judged fourth best in the nation in terms of the quality of its faculty. The department offers postdoctoral training in research and welcomes students interested in articultated 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.

Physiology
Upper Division Courses
100. Elements of Human Physiology. (6) Designed for first-year dental students. Major organic body functions. With special supplementation, a suitable introduction to the field for graduate students for whom the 201A, 201B course sequence is too extensive.

199. Directed Research in Physiology. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses
M210. Molecular and Cellular Mechanisms of Neuronal Integration. (5) (Same as Neuroscience M230 and Biological Science M210.) Lecture, four hours; discussion, one hour. Requisite: Neuroscience M202. Introduction to mechanisms of synaptic processing. Selected problems of current interest, including regulation and modulation of transmitter release, molecular biology and physiology of receptors, cellular basis of integration in sensory perception and learning, neural nets and oscillators, and molecular events in development and sexual differentiation. Letter grading.

220. Methods in Cell Physiology. (6) Linear circuit analysis, including admittance, transfer admittance, transfer function, and filters using transform methods. Application of these concepts to electronic analog circuits in lectures and laboratory, with emphasis on operational amplifiers. Applications to electrophysiology include microelectrode amplifiers, voltage clamp and patch clamp techniques, with circuit analysis and noise considerations. Digital electronics cover logic gates, sequential circuits, and A/D and D/A conversion, with introduction to sampling theory.

221. Cell Physiology: Excitability. (6) Requisite: course 220. In-depth coverage of general properties of excitable cells, linear cable properties, nonlinear conductance changes, and generation and propagation of the nerve impulse. Voltage gating and gating currents, as well as relationship between macroscopic conductance and single channel properties discussed in analytical detail using original publications.

M223. Membrane Molecular Biology. (4) (Same as Biological Chemistry M223.) Lecture, two hours; discussion, two hours. Requisite: Biological Chemistry CM253. Advanced course in molecular aspects of membrane physiology and biochemistry covering lipid and physical chemistry of biological membranes; membrane biopsy and the targeting of proteins to membranes; pumps, carriers, and channels; receptors and transmembrane signaling. S/U or letter grading.

298. Current Topics in Physiology. (2 to 4) Lecture, one hour; discussion, one hour. Designed for graduate students. Students read primary literature in a specified area and conduct or participate in discussions on these papers. May be repeated for credit. S/U or letter grading.

POLITICAL SCIENCE
College of Letters and Science
UCLA
4289 Bunche Hall
Box 951722
Los Angeles, CA 90095-1472
(310) 825-4331
fax: (310) 825-0778
http://www.polisci.ucla.edu
Michael F. Lofchie, Ph.D., Chair

Professors
Joel D. Aberbach, Ph.D.
Richard D. Baum, Ph.D.
Leonard Binder, Ph.D.
James D. DeNardo, Ph.D.
Joshua F. Dienstag, Ph.D.
Barbara Goddes, Ph.D.
Franklin D. Gilliam, Jr., Ph.D.
Miriam A. Golden, Ph.D.
Timothy J. Groseclose, Ph.D. (Marvin Hoffenberg Professor of American Politics and Public Policy)
Edmond Keller, Ph.D.
Deborah W. Larson, Ph.D.
Michael F. Lofchie, Ph.D.
Suzanne Lohmann, Ph.D.
Barbara J. Nelson, Ph.D.
Barry O’Neill, Ph.D.
Gary A. Orfield, Ph.D.
Karen J. Orr, Ph.D.
Anthony R. Pagden, Ph.D.
Carole Pateman, D.Phil.
May be earned in the process of completing the graduate program leads to the Ph.D. degree. The graduate program is designed to serve the needs of the liberal arts 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.**

**Prepolitical Science Major**

All students intending to major in Political Science must enroll as Prepolitical Science majors. After completion of preparation for the major courses, they need to petition to enter the major in the Undergraduate Office, 4269A Bunche Hall.

**Preparation for the Major**

*Required:* Four lower division courses from Political Science 10, 20, 30, 40, 50. These lower division courses are requisites to upper division courses and are required in those fields designated as the concentration or distribution field. Students must also take Political Science 6 or 6R. Students who concentrate in Fields I, II, III, or IV may substitute Statistics 10 or 12 for course 6 or 6R.

Students must complete all premajor courses with a 2.0 grade-point average by the time they attain 135 units. Admission to the major is granted only after successful completion of all lower division requirements.

**Transfer Students**

Transfer applicants to the Political Science 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 also required to complete four upper division courses (16 units) in one or two of the following social sciences: anthropology, communication studies (only Communication Studies 160), economics, geography, history, management (only Management 150), psychology (except Psychology 115, 116), sociology. Each course must be 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 five fields: (I) political theory, (II) international relations, (III) American politics, (IV) comparative politics, and (V) methods and models.

In fulfilling the requirement of 10 upper division political science courses, students must satisfy the following:

1. A concentration in one field by completing the lower division course and at least four upper division courses in that field
2. A distribution of the lower division course and two upper division courses in each of two other fields (four upper division courses)
3. Two additional elective courses in political science to comprise the total of 10

**Field Concentration Requirements**

The lower division course is requisite to upper division courses in those fields designated as the concentration field and the two distribution fields for majors. Specific requirements for the field concentration are as follows:

I. **Political Theory:** Political Science 10 and any four courses in Field I

II. **International Relations:** Course 20 and any four courses in Field II. Courses 118 and 151C may also be applied toward concentration or distribution in Field II

III. **American Politics:** Course 40 and any four courses in Field III. Courses 114A through M114D, M115A, 120A, and 121A may also be applied toward concentration or distribution in Field III

IV. **Comparative Politics:** Course 50 and any four courses in Field IV. Courses 118, 124C, 128A, 128B, 131, 132A, M132B, and 135 may also be applied toward concentration or distribution in Field IV

V. **Methods and Models:** Courses 6 or 6R (Statistics 10 and related courses may not be substituted), 30, and any four courses from 104A, 104B, M105, M106, 124A, M114D, 149 (collective action; congress, institutions, and collective choice; legislative strategy), 153B, 156D, 166, 169 (political economy of development), 170A, 191B (international negotiation)

Courses 119, 139, 149, 169, and 179 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

Courses 191H, 198A, 198B, 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 (56 units) do not meet the upper division requirement of 60 units for graduation. Additional upper division units must be taken to reach the 60-unit total.

**Undergraduate Seminars**

Each term the department offers a series of seminars (Political Science 191A through 191E) in each field. The requisites are two upper division courses in the field in which the
The Department of Political Science offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Political Science.

### Political Science Minor

The Political Science minor introduces students to political processes and institutions.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in the Undergraduate Office, 4269A 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.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

### Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

### Graduate Degrees

The Department of Political Science offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Political Science.

### Upper Division Courses

#### 104A-104B. Introduction to Survey Research. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 6. Designed for juniors/seniors. Courses in fundamentals of survey research as a method. 104A. Sampling theory and methods, writing of questions, questionnaire construction, and interviewing. Attitudes, attitude measurement, and attitude change. Participation in formulation of research problem. 104B. Requisite: course 104A. Conducting a survey, development of survey questionnaire, designing a sample, collecting interview views, maintaining quality control, and coding interview views for machine tabulation. Performance of computer-aided analysis of some part of data and submission of written report of that research.

#### M105. Economic Models of Public Choice. (4) (Same as Economics M135.) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: any lower division political science course. Enforced requisite: Economics 11. Designed for juniors/seniors. Analysis of methods and consequences of arriving at collective decisions through political mechanisms. Topics include free-rider problem, voting, and majority rule, demand, evaluation, and political bargaining.


#### M107. Women and Politics. (4) (Same as Women's Studies M117.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to rapidly growing body of empirical and theoretical scholarship on women and politics in both national and international contexts. Topics may include women's movement in the U.S. and globally; women's electoral participation; representation of women in Congress and 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 the military; women, development, and globalization. May be applied toward Field I, III, or IV. 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 Medieval Political Theory from Plato to Machiavelli. (Same as Classics M212.). 111B. Early Modern Political Theory 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.

### Lower Division Courses

#### 6. Introduction to Data Analysis. (5) Lecture, three or four hours; discussion, one hour (when scheduled). Not open for credit to students with credit for course 6R. Introduction to collection and analysis of political data, with emphasis on application of statistical reasoning to study of relationships among political variables. Use of computer as aid in analyzing data from various fields of political science, among them comparative politics, international relations, American politics, and public administration. P/NP or letter grading.

#### 6R. Introduction to Data Analysis — Research Version. (5) Lecture, three or four hours; discussion, one hour (when scheduled). Corequisite: course 50R. Not open for credit to students with credit for course 6. Introduction to collection and analysis of political data, with emphasis on application of statistical reasoning to study of relationships among political variables. Use of computer as aid in analyzing data from comparative politics. P/NP or letter grading.

#### 10. Introduction to Political Theory. (5) Lecture, three hours; discussion, one hour. Exposition and analysis of selected political theorists and concepts from Plato to the present. P/NP or letter grading.

#### 20. World Politics. (5) Lecture, three hours; discussion, one hour. Required of all students concentrating in Field II. Introduction to problems of world politics. P/NP or letter grading.

#### 30. Politics and Strategy. (5) Lecture, three or four hours; discussion, one hour (when scheduled). Introduction to study of strategic interaction in political applications. Use of game theory and other formal modeling strategies to understand politics. P/NP or letter grading.

#### 40. Introduction to American Politics. (5) Lecture, three hours; discussion, one hour. Basic institutions and processes of democratic politics. Treatment of themes such as constitutionalism, representation, participation, and leadership coupled with particular emphasis on the American case. P/NP or letter grading.

#### 50. Introduction to Comparative Politics. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 50R. Comparative study of constitutional principles, governmental institutions, and political processes in selected countries. P/NP or letter grading.

#### 50R. Introduction to Comparative Politics — Research Version. (5) Lecture, three or four hours; discussion, one hour (when scheduled). Corequisite: course 6R. Not open for credit to students with credit for course 50. Comparative study of constitutional principles, governmental institutions, and political processes in selected countries, with emphasis on presentation and evaluation of quantitative evidence. P/NP or letter grading.

#### 88A-88D. Lower Division Seminars. (4 each) Seminar, three hours. Limited to freshmen/sophomores. Opportunity to enhance writing, verbal, and reasoning skills. General introduction to a subfield of a major area, or intensive exploration of a particular theme or topic. Variable topics; consult Schedule of Classes for topics to be offered in a specific term. May not be repeated for credit except by students who receive a grade of C−, D, or F. P/NP or letter grading. 88A. Political Theory; 88B. International Relations; 88C. Politics; 88D. Comparative Politics.
113A. Problems in 20th-Century Political Theory. (4) (Formerly numbered 113.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study and interpretation of works of political theorists who have focused their analyses on social and political problems of the 20th century. P/NP or letter grading.

113B. Politics, Theory, and Film. (4) Seminar, four hours. Recommended requisite: course 10. Designed for juniors/seniors. Intense 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 of the historical, psychological, and thematic interpretation of central works in American political thought. P/NP or letter grading.

114C. African American Political Thought. (4) (Same as Afro-American Studies M114C.) Lecture, three or four hours; discussion, one hour (when scheduled). Intensive introduction to African American political thought on major topics such as black radicalism, 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.

114D. African American Freedom Narratives. (4) (Same as Afro-American Studies M114D.) 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.

114E. Malcolm X and Black Liberation. (4) (Same as Afro-American Studies M114E.) 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.

115A. Ethics and Governance. (4) (Formerly numbered 115A.) (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? How do people reason about whether action X is morally right or wrong? How do governance strategies manage how people reason about whether action X is morally right or wrong? How can we design governance structures that encourage people to act ethically, contribute to public goods, and lead productive and fulfilled lives? May be applied toward Field I or III. P/NP or letter grading.

115B. Political Ethics. (4) (Same as Public Policy CM126.) Lecture, three or four hours; discussion, one hour (when scheduled). Course 115A is not requisite to course 115B. Designed for juniors/seniors. Study of major issues in morality, or lack thereof, of political life. Coverage of both readings in moral and political theory and real-world examples such as Watergate, terrorism, civil rights politics, and presidential campaigns. Topics include basic ethical theory, role-relative ethics, Machiavellian amorality, democratic responsibility and representation, ethics of compromise, “dirty hands” problems, international ethics. Letter grading.

115C. Citizenship and Public Service. (4) (Formerly numbered 115C.) (Same as Civic Engagement M115.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 10. Designed for juniors/seniors. Study of ways in which political thinkers have conceived of ideas of citizenship and public service, how these ideas have changed over time, and frameworks for thinking about citizenship in era of markets and globalization. P/NP or letter grading.

116A. Marxism. (4) (Formerly numbered 116A.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Critical analysis of origins, nature, and development of Marxist political theory. P/NP or letter grading.

116B. Continental Political Thought. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Development of law and legal systems; consideration of fundamental legal concepts; contributions and influence of modern schools of legal philosophy in relation to law and government. Letter grading.

117. Jurisprudence. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Development of law and legal systems; consideration of fundamental legal concepts; contributions and influence of modern schools of legal philosophy in relation to law and government. Letter grading.

118. Political Violence. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of one or several different uses of violence in revolutionary process: demonstrations, mass uprisings, coup d’état, assassination, and terrorism. May be applied toward Field II or IV.

119. Special Studies in Political Theory. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: one course in Field I. Requisite: course 10. Designed for juniors/seniors. Intensive examination of one or more special problems appropriate to political theory. Sections offered on regular basis, with topics announced in preceding term. Courses 119, 139, 149, 169, and 179 may be applied no more than twice toward field concentration requirement. No more than three of these courses may be applied toward major. P/NP or letter grading.

119A. Modern Receptions of Ancient Political Thought. (4) (Same as Classics M124.) Lecture, three hours. Designed for juniors/seniors. Study of how Western culture has conceived and reinterpreted political thought of ancient Greeks and Romans. Topics include examination of influential case(s) of modern reception of classical antiquity. P/NP or letter grading.

Field II: International Relations

120A. Foreign Relations of the U.S. (4) (Formerly numbered 120.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of factors and forces entering into formation and implementation of American foreign policy, with special emphasis on contemporary problems. P/NP or letter grading.

120B. World Politics and U.S. Foreign Policy after September 11. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Video lectures by leading scholars as well as live lectures and discussion on complex problems such as terrorism, nuclear proliferation, and Arab-Israeli conflict. P/NP or letter grading.

120C. U.S. Intelligence Agencies in Theory and Practice. (4) (Same as Public Policy M118.) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Examination of U.S. intelligence agencies from Cold War to present. Particularly in light of 9/11 and September 11, terrorist attacks. Letter grading.

121A. Studies in Formulation of American Foreign Policy. (4) (Formerly numbered 121.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of formulation 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. Crisis 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 120, 137A, 137B. In-depth discussion of U.S. foreign policy-making. Assessment of competing theories of international relations and application to specific case studies. Weekly role plays of foreign policymakers and final crisis simulation exercise. Letter grading.

122A. World Order. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Study of problems of international system seen as community capable of cooperation and development. P/NP or letter grading.

122B. Global Environment and World Politics. (4) (Same as Environment M161.) Lecture, three or four hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Study of environment and how it interacts with world politics. Recommended requisite: course 20. P/NP or letter grading.

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 political aspects of international economic issues. P/NP or letter grading.

124B. Comparative Foreign Economic Policy. (4) (Formerly numbered 123.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of foreign trade, monetary, and investment policies of U.S., Japan, France, and Federal Republic of Germany since 1945. P/NP or letter grading.

124C. Politics of Latin American Economic Development. (4) (Formerly numbered 130.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Interaction of international and domestic factors in political and economic evolution of Latin America. P/NP or letter grading.

125A. Arms Control and International Security. (4) (Formerly numbered 125.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Arms control in context of international security in nuclear age. Nuclear arms race; relationship between deterrence doctrines and nuclear war; roles of technology and ideology; nuclear proliferation; outer space. P/NP or letter grading.

125B. U.S. National Security Policy. (4) (Same as Public Policy CM123.) Lecture, three hours; outside study required. Limited to juniors/seniors. 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 policy, 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 (e.g., WMD proliferation) to regional security and economic challenges (Iraq, China), to humanitarian intervention and nation-building (Darfur, Afghanistan). Students will submit term papers, memos and deliver oral presentations on how to handle six current national security mini-cases. Provides overview of current challenges and hones student analytic skills to examine these challenges from strategic policy perspective. Letter grading.
126. Peace and War. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Theory and research on causes of war and conditions of peace.

127A-127B. Atlantic Area in World Politics. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of international relations of the United Kingdom, Germany, France, Italy, and other European nations of NATO, in regard to European security in context of the Atlantic Alliance. 127B. U.S. and Europe. Requisites: one hour (when scheduled). Designed for U.S. and Western European members of the Atlantic Alliance, in context of U.S./Soviet relations.


128B. International Relations of Post-Communist Russia. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 20, 128A. Designed for juniors/seniors. Survey of foreign policy of post-Communist Russia, with special emphasis on relationships with NATO and the former communist states of East Central Europe, China, and the Commonwealth of Independent States.

129. Diplomacy and War. (4) (Not same as course 129 prior to 1968 or 132B prior to 1968.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 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 settings, and theory and practice of deterrence and coercion. P/NP or letter grading.

130. 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 international relations and organization in recent decades.

132A-M132B. International Relations of Middle East. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/se-niors. P/NP or letter grading. 132A. Requisite: course 20. Contemporary regional issues and conflicts, with particular attention to inter-Arab politics, Arab-Israeli problem, and Persian Gulf area. M132B. (Formerly numbered 132B.) (Same as Honors Colloquium M157.) Role of great powers in Middle East, with emphasis on American, Soviet, and West European policies since 1945.

133. International Relations of Sub-Saharan Africa. (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; discussion, one hour (when scheduled). Requisite: course 20A. Designed for juniors/seniors. Contrasts purposive and process models of individual and group decision making. Importance of interactions and situational factors on foreign policy decision making. Implications for policy choice of tools of statecraft (i.e., threats/promises, military/economic/diplomacy). P/NP or letter grading.

135. International Relations of China. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Relations of China with its neighbors and the role of Chinese diplomacy in contemporary international interests and policies of China vis-à-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 Sec- ond 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 specific issues in international relations. Sections offered on regular basis, with topics announced in preceding term. Courses 119, 139, 149, 169, or 179 may be applied toward field courses as requirement. No more than three of these courses may be applied toward major. P/NP or letter grading.

139B. Nuclear Weapons: Critical Decisions. (4) (Same as Environment M165, Honors Colloquium M119, and Public Policy M116.) Lecture, three hours. Examination of critical decisions regarding nuclear weapons, starting with President Roosevelt's decision to build atomic bomb and ending with current policies on containing nuclear proliferation and on avoiding nuclear catastrophe. Letter grading.

Field III: American Politics

140A-140B-140C. National Institutions. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. 140A. Congress. Study of those factors which affect character of the legislative process and capacity of representative institutions to govern in contemporary society. 140B. The Presidency. Study of nature and problems of presidential leadership, management of public opinion, interest groups, and party system on the presidency and national policy-making. 140C. Supreme Court. Introduction to American constitutional development and role of Supreme Court as interpreter of the U.S. Constitution. Reading of Supreme Court cases as well as various historical and current commentaries.

141A-141E. Electoral Politics. (4-4) (Each) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

141A. Political Psychology. (4) (Same as Psycholo- gy 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 politi- cals, racial conflict, and psychological analysis of pub- lic opinion on these issues. P/NP or letter grading.

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 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 pub- lic 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 quantitative meth- ods in study of political behavior, especially in relation to voting patterns, political participation, and tech- niques of political action. Students conduct computer- aided analysis of issues presented in course 141B and similar courses. P/NP or letter grading.

M141D. Mass Media and Elections. (4) (Same as Communication Studies M140C) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Assessment of manner in which Americans' political beliefs, choices, and ac- tions are influenced by news media presentations, particularly during election campaigns. Topics include processes of political attitude formation and change, different types of media "effects," and role of the me- dia in the American political process. P/NP or letter grading.

141E. Elections, Media, and Strategy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 30. Designed for juniors/seniors. Analysis of the role of the media, including game-theoretic analysis, Downs spatial model of elections, valence characteristics in elections, cam- paign finance, endogeneity problems in social sciences, liberal bias in mass media and its impact on news industry, and effects of media on voter deci- sions. 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; discus- sion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. 142A. Political Par- ties. Organization and activities of political parties in the U.S. Attention to historical development of the parties, nature of party change, campaign functions and electoral role of the parties, membership problems and party activists, and mass media and policy formulation practices. 142B. Politics of Interest Groups. Systematic investigation of role of political in- terest groups in governmental process, with attention to internal organization, leadership, and politics of such groups to goals and functions of various types of groups and to strategy and tactics of influence. 142C. Government and Labor. Labor force and nature of trade unions; regulation of labor relations; policies to encourage full employment and to mitigate unemploy- ment; protective labor legislation.

M142D. Understanding Public Issue Life Cycle. (4) (Formerly numbered 142D) (Same as Public Poli- cy M127.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended prepara- tion: courses 10, 40, and one course from Economics 1, 2, 5, 11, 100, or 101. Examination of how public issues life cycle is shaped by (4) economic and political incentives of various actors — business, news media, mass public, organized interests, Congress, the presi- dent, regulatory agencies, and courts and (2) ideolo- gies, cognitive biases, and ethical reasoning. 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. Administration. Requisite: course 40. Examination of governments of states of federal union as major sources of public pol- icy in the U.S., with emphasis on one principal topic. 143B. Government of American Cities. Requisite: course 40. Examination of governments of states of federal union as major sources of public pol- icy in the U.S., with emphasis on one principal topic. 143C. Politics of Global Los Angeles in 21st Century – Globalization, Democracy, and Citizenship in Southern California Region. Study of political transforma- tion of Southern California region. Major topics 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 politi- cal structures and electoral politics.
114A-M144B. Ethnic Politics. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors.

144A. Anglo-American Legal System. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: one 140-level course or one upper division course on race or ethnicity from history, psychology, or sociology. Requisite: course 40. Designed for juniors/seniors. Introduction to political economy of racial domination in the U.S., concentrating on study of Mexican origin communities. Emphasis on identifying and explaining historical and political consequences of political status and changes in U.S. policy, with particular attention to legislation, executive and judicial agencies as well as local and state governments. Designed for juniors/seniors.

145A. Anglo-American Legal System. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Evolution of English common law courts and their legal system, with emphasis on development of basic concepts of law which were received from that system in U.S. and remain relevant today. 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.

145D. Jurisdiction and Bureaucracy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Legal controls of administration action. Substantive law and procedures for reviewing validity of bureaucratic actions. Requisite: course 40. Designed for juniors/seniors. Nature of bureaucracy in modern government, with emphasis on U.S.; on the nature of federalism and demography. Scheduling, discussion, one hour (when scheduled). Preparatory reading: one 140-level course or an upper division course in one of the following disciplines: political science, sociology, psychology, history, or any other approved field; or any other course authorized by the department. P/NP or letter grading.

146B. Bureaucracy and Public Management. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Nature of bureaucracy in modern government, with emphasis on U.S.; explanation of why government agencies behave as they do. Focus on mechanisms of bureaucratic theories, rules and evaluation of commonly proposed solutions for these problems. Examples from schools, armies, welfare bureaus, research, intelligence services, and others. P/NP or letter grading.

146C. Governing the Bureaucracy in the U.S. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of the administrative processes of the federal bureaucracy. Emphasis on understanding the bureaucratic role in Washington. P/NP or letter grading.

146D. Theories of Organizational Decision Making. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Relationship between elected officials and administrators in the U.S., especially efforts of elected and appointed officials to monitor and control behavior of those in “permanent government” (career bureaucrats). P/NP or letter grading.

146E. National Policy Development and Implementation. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of complex process of policy development and implementation in the U.S., including roles of federal, state, and local agencies as well as private organizations. Subsections offered on particular policy areas, with topics announced in preceding term. P/NP or letter grading.

146F. Politics, Ethics, and Business. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of political issues, interests, and institutions that impose constraints on and provide opportunities for business. Ethical issues that arise in external environment of business and its internal operations. Examples of topics include government regulation, product liability, affirmative action, lobbying Congress, exporting hazardous waste to developing countries. P/NP or letter grading.

146G. Social Life of Information. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Communication of information moves from those who have it to those who need it. Information flows in groups, organizations, and mass public. Analysis of how decision-making structures and roles shape design of information and how flow of information influences groups and organizational performance. How mass media create a “public issue life cycle.” P/NP or letter grading.

147A-147B-147C. American Political Development. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Continuity of patterns in American political development, with special attention to contemporary problems. P/NP or letter grading.

147B. Period Inquiry. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of one period in American political history. Critical features fostering stability and change. Discussion of contributions to structure and content of contemporary American politics. P/NP or letter grading.

147D. Institutional Development. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of one American political institution and its development over time, or interaction of American politics and some aspect of culture and society. Assessment of broader political environment of politics, including concepts of comparative political culture and change. Possible topics include party development, Constitution, business regulation, and politics and religion. P/NP or letter grading.

149. Special Topics in American Government and Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: course 40, two courses in Field III. Designed for juniors/seniors. Intensive examination of problem of institutions and processes appropriate to American politics. Sections offered on regular basis, with topics announced in preceding term. Courses 119, 139, 149, 169, and 179 may be applied no more than twice toward field concentration requirement. No more than three of these courses may be applied toward major. P/NP or letter grading.

Also see course 117

Field IV: Comparative Politics

151A-151B-151C. African Politics. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or 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 interactions of economic and political factors in African development, with special attention to economic and political systems appropriate to economic policy during early post-independence period and change toward a more appropriate economic strategy in recent times. Letter grading.

151C. Special Topics in African Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Consult Schedule of Classes for topics to be offered in a specific term. Letter grading.

152A-152B-152C. Government and Politics of Western Europe Countries. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of political and economic structures and political and social forces, and political institutions. Particular emphasis on study of three Western European countries — United Kingdom, France, and Federal Republic of Germany. Consideration of current topics 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. 154A. States of Middle America; 154B. States of South America.

M154C. Black Experience in Latin America and Caribbean. (4) (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.

155. Advanced Pluralist Democracies. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Main features and basic problems of economically advanced democracies, analyzed in comparative framework, topic by topic. Emphasis on cross-Atlantic comparisons, not only political but also sociological.

156A-156D. Government and Politics of Post-Communist States. (4 each) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisite: course 50. Designed for juniors/seniors. P/N or letter grading.

156A. Russia. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Intensive study of institutions and political development in Russia, with special attention to legacy of the Soviet Union. P/N or letter grading.

156B. Eastern Europe. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of institutions and political processes in selected post-Communist states of Eastern Europe. P/N or letter grading.

156C. Post-Soviet States. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Focus of study is interaction between transitions to democracy and the market in selected post-Communist countries, with emphasis on development of general theories of political and economic reform. P/N or letter grading.

157. Government and Politics in the Middle East. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 50. Designed for seniors/juniors. Survey of political environment in major non-Western countries. Use of comparative analysis to address major problems confronting region, including democratization, economic stability, trade, deforestation, and security threats. Letter grading.

159A-159B. Government and Politics of China. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors.

159A. Chinese Revolution and Age of Mao Zedong. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of modern Chinese politics from decline of Manchu dynasty and rise of Chinese revolutionary nationalism to death of Mao Zedong, with emphasis on socioeconomic foundations and political dynamics of revolution in modern China.

159B. China in Age of Reform. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Focus on China’s political and ideological transformation in post-Mao era. Assessment of impact of changing socioeconomic conditions on revolutionary policies and programs of Chinese Communist Party. Exploration of etiology of 1989 Tiananmen crisis and consequences for China of collapse of Communism in East Europe and the Soviet Union.

160. Government and Politics of Japan. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisite: course 50. Designed for juniors/seniors. Structure and operation of contemporary Japanese political system, with special attention to domestic politics and foreign policy issues.

164. Comparative History of Government from Earliest Times to Present Day. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 50. Designed for juniors/seniors. Historical diversity of forms of government: archetypal politics, great empires, major innovations, notable variants. P/N or letter grading.

165. Islam and Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisite: course 50. Designed for juniors/seniors. Comparative study of major institutions of Islamic legal and political traditions and legitimacy of contemporary and historical Islamic regimes, movements, and actors. Used as a model for strategists of Islamic activism. P/N or letter grading.

166. Comparative Analysis of Government Institutions. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparative study of major political and economic institutions in the world today. Relations between industrial and nonindustrial societies in light of current debate about imperialism. P/N or letter grading.

167A. Ideology and Development in World Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 50. Designed for juniors/seniors. Comparative study of major modes of political and economic development in the world today. 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. May be applied toward Field III, IV, or V. P/N or letter grading.

167B. Comparative Development and Administration. (4) Lecture, three or four hours; discussion, one hour (when scheduled). 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. May be applied toward Field III or V. P/N or letter grading.

167C. Comparative Political Analysis. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Major approaches to study of comparative politics. Concepts and methodology of comparative analysis. Letter grading.

168. Comparative Political Analysis. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisites: two courses in Field IV, or course 50 and one course in Field IV. Designed for juniors/seniors. Major approaches to study of comparative politics. Concepts and methodology of comparative analysis. Letter grading.

Field V: Methods and Models

170A. Studies in Statistical Analysis of Political Data. (4) (Formerly numbered 102.) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisite: course 6 or 6R. Designed for juniors/seniors. Use of statistical methods to interpret data and test theories from various fields in political science and use of quantitative evidence in construction of convincing and truthful arguments related to world political problems. Consult Schedule of Classes for topics to be offered in specific term. May be applied toward Field II, III, IV, or V. 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). Enforced requisite: 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. May be applied toward Field III, IV, or V. 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 rules 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. May be applied toward Field III or V. 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. Study of negotiation and bargaining in different contexts. Experiments with emphasis on various aspects of negotiation, including coalition formation, honesty, and role of agents. May be applied toward Field II or V. P/N or letter grading.

171D. Negotiation. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisite: course 30. Designed for juniors/seniors. Study of negotiation and bargaining in different contexts. Experiments with emphasis on various aspects of negotiation, including coalition formation, honesty, and role of agents. May be applied toward Field II or V. 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 seniors. Intermediate topics in game theory applied to political problems, with special attention to strategic consequences of incomplete information and information asymmetries. 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. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

190H. Honors Research Colloquia in Political Science. (1 Seminar, one hour. Designed to bring together students writing departmental honors theses in seminar setting with one or more faculty members to discuss their thesis work in progress. Led by one supervising faculty member. P/NP grading.

191A-191E. Variable Topics Research Seminars for Majors. (4 each) Seminar, three hours. Preparation: two upper division courses in field in which seminar is conducted. Limited to junior/senior Political Science majors with 3.25 grade-point average in upper division political science courses. Consult Schedule of Classes for topics to be offered in specific term. Reading, discussion, and development of culminating project. May be applied toward distribution or concentration requirement. May be repeated for credit. P/NP or letter grading. 191A. Political Theory; 191B. International Relations; 191C. Comparative Government; 191E. Methods and Models.

M191DC. CAPP Washington, DC, Research Seminars. (8) Same as History M191DC and Sociology M191DC. Seminar, three hours; laboratory, 24 hours. Limited to CAPP Program students. Seminars for undergraduate students in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

191H. Research Design Seminar for Honors Thesis. (4) Seminar, four hours. Preparation: one course in C191 series, 3.5 grade-point average in upper division political science courses, eligibility for Letters and Science honors. Required of all students who wish to write honors thesis. Students define their research topic, select suitable research method, determine appropriate sources of information, prepare research proposal, find thesis director, begin their research, and submit progress reports or preliminary drafts. Class sessions emphasize critical and constructive discussions of students’ topics, methods, and problems in research, as well as general consideration of political science research topics and methods of oral and written communication. May be repeated for credit. Letter grading.

193. Journal Club Seminars: Political Science. (1) Seminar, two hours. Limited to undergraduate students. Discussion of readings selected from current literature of field. Consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Political Science. (2 Seminar, three hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field of research of faculty members or students. May be repeated for credit. P/NP grading.

M194DC. CAPP Washington, DC, Research Seminars. (4) Same as History M194DC and Sociology M194DC. Seminar, limited to CAPP Program students in Winter Quarter. Seminars for undergraduate students in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

195. Community or Corporate Internships in Political Science. (2 or 4) Tutorial, to be arranged. Preparation: overall grade-point average of honors thesis to juniors/seniors. Supervised jointly by Center for Community Learning and undergraduate students committee faculty members. Further supervision to be provided by organization for which student is doing internship. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for maximum of 16 units. No more than 8 units may be applied toward major; units applied must be taken for letter grade. May not be applied toward concentration or distribution requirements. Individual contract with supervising faculty member required. P/NP or letter grading.

M195DC. CAPP Washington, DC, Internships. (4) Same as History M195DC and Sociology M195DC.) Tutorial, four hours. Limited to junior/senior CAPP Program students. Internships in Washington, DC, through Center for American Politics and Public Policy. Students meet on regular basis with instructor and provide periodic reports of their experience. Individual contract with supervising faculty member required. P/NP or letter grading.

198. Honors Research in Political Science. (1 to 4 (Formerly numbered 198A.) Tutorial, two hours. Preparation: course 191H. Limited to juniors/seniors. Development and completion of honors or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research in Political Science. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for maximum of 16 units. Individual contract required. P/NP or letter grading.

200. Directed Reading in Political Science. (2 to 8) Tutorial, to be arranged. Preparation: working knowledge of elementary calculus. Introduction to major topics in formal political economy. Investigation of models of regulation, trade protection, collective bargaining, and economic growth as time permits.

203A. Economic Theory and Methods for Political Science I. (4) Discussion, three hours. Preparation: knowledge of elementary calculus. Introduction to techniques of economic analysis and survey of major topics in formal political economy. Investigation of models of regulation, trade protection, collective bargaining, and economic growth as time permits.

203B. Economic Theory and Methods for Political Science II. (4) Discussion, three hours. Preparation: course 203A. Continuing survey of microeconomic techniques used in formal political science, with focus on market failures and on modeling individual choice in nonmarket situations. Specific topics include externalities, public goods and allocation mechanisms, collective action, spatial models, structure-induced equilibrium, and information asymmetries.

204. Game Theory in Politics. (4) Seminar, three hours. Survey of game theory with emphasis on utilizing mathematical models to understand political and economic phenomena. Applications concern political participation, public goods, legislatures, industrial regulation, bureaucracies, interest groups, and party competition. Designed to help students become informed consumers of game-theoretical literature in political science.

M208A. Game Theory. (4) Same as Economics M214A and Mathematics M261.) Lecture, three hours. Designed for graduate economics, mathematics, and political science students. Bargaining theory, the core, the value, other solution concepts. Applications to oligopoly, general exchange and production economies, and allocation of joint costs. S/U or letter grading.
220B. International Relations Core Seminar II. (4) (Formerly numbered C221.) Seminar, three hours. Enforced requisite: course 220A. Further analysis of aca
demic issues in international relations and introduction to design of research project in this area. Letter grading.

220C. International Relations Research Seminar. (4) Seminar, three hours; tutorial meetings, to be ar-
 ranged. Enforced requisites: courses 220A, 220B. 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 model influences the other person's choice by affecting his expectations of how we will behave. Discussion of theories of deterrence, coercion diplomacy, crisis management, war termina-
tion, and negotiation. Use of various theoretical ap-
proaches to explaining strategic interaction, including psychology, bargaining theory, and game theory.

223. Politics and Strategies of Modern War. (4) (Formerly numbered C222.) Seminar, three hours. Analysis of various national security problems in both their military/technical and political dimensions. Letter grading.

225. American Foreign Policy. (4) Discussion, three hours. Discussion of how to explain for-
eign policy-making at individual, group, small group, bureaucra-
tic, and domestic politics levels. Application to se-
lected cases in American foreign policy.

226. Making of American Foreign Policy. (4) (Formerly numbered C226.) Seminar, three hours. In-
tensive analysis of policy formulation process and sub-
stance of selected contemporary problems in foreign policy. Political and institutional factors affecting for-
eign policies; analysis of policy options. S/U or letter grading.

227. Foreign Policy Process. (4) (Formerly num-
bered C227.) Seminar, three hours. Requisites: cours-
es 120A, 220A, 220B. Political science and policy sci-
cence approaches to national foreign policy processes, with primary focus on formulation and implementation of American foreign policy. S/U or letter grading.

230. Contending Perspectives on International Political Economy. (4) Discussion, three hours. Sur-
vey of various theoretical approaches to international political economy.

231. International Political Economy I. (4) Semi-
nar, three hours. Interaction between international trade and investment and domestic political econom-
ics of both industrialized and industrializing societies.

232. International Political Economy II. (4) Semi-
nar, three hours. Designed to develop Ph.D. students' skills in setting up and solving simple institutional de-
sign, political economic, and political science partic-
ipation models, as well as two-level game models of domestic politics and international conflict and coop-
eration, with emphasis on applications in international political economy and comparative politics.

233A-233B-233C. Political Economy Workshops (4-4-4). Discussion, two hours. Preparation: success-
ful completion of major field examinations. Workshops for students writing or preparing to write dissertations. Reading and discussion of research in progress pre-
sented by UCLA faculty, visiting scholars, and ad-
vanced graduate students. Research paper of publish-
ability grade is 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 the prerequisite. S/U or letter grading.


242. Chinese and East Asian Politics. (4) (Former-


244. Latin American Politics. (4) (Formerly num-
bered C244.) Seminar, three hours. Survey of con-
temporary research approaches and problems in Lat-
in American politics. S/U or letter grading.

245. Middle Eastern Politics. (4) (Formerly num-
bered C245.) Seminar, three hours. Survey of con-
temporary research approaches and problems in Mid-
le Eastern politics. S/U or letter grading.

246A. Western European Politics. (4) (Formerly num-
bered C246A.) 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 the-
tories of causation.

247. Politics of Soviet Union and Post-Soviet Re-
gion. (4) (Formerly numbered C247.) Seminar, three hours. Survey of contemporary research approaches and problems in Soviet Union and post-Soviet region politics. S/U or letter grading.

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 Poli-
Cy. (4) Seminar, three hours. Examination of domestic social, economic, bureaucratic, and organizational sources of Russian foreign and strategic policy. S/U or letter grading.

248. South Asian Politics. (4) (Formerly numbered C248.) Seminar, three hours. Survey of contemporary research approaches and problems in South Asian politics. S/U or letter grading.

251. Political Economy of Economic Reform. (4) Discussion, three hours. Some familiarity with eco-
nomics helpful. Principal political and economic argu-
ments for economic reform and consideration of polit-
ical issues that arise from this process. Letter grading.

252. Parties and Party Systems. (4) Seminar, three hours; discussion, one hour (when scheduled). Theo-
ries 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 con-
text and consequences of political reform. Com-
munist systems; theories of post-Leninist political plural-
ization and convergence.

254A-254B. Institutions and Comparative Poli-
itics. (4-4) Seminar, three hours; discussion, one hour (when scheduled).
254A. Comparative Institutional Analysis. (4) Seminar, three hours; discussion, one hour (when scheduled). Use of advances of national choice theory and new institutionalism to compare and analyze major institutional structures, including presidentialism vs. parliamentaryism, unicameralism vs. bicameralism, two-party vs. multiparty systems, cadre vs. mass parties, and plurality vs. proportional electoral systems.

254B. Political Institutions, Delegation, and Policy-Making. (4) Seminar, three hours; discussion, one hour (when scheduled). Analysis of political foundations of policy-making. Critical examination of democratic 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 designs 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. Lab and Analog Mass Politics. (4) Discussion, three hours. Questions and topics on comparative labor and working-class politics. S/U or letter grading.


American Politics


M261A. Proseminar: Political Psychology. (4) (Same as History M236A and Psychology M228A.) Seminar, three hours. Introduction to political psychology: psychobiography, personality and politics, mass attitudes, group conflict, political communication, and elite decision making.

261B. Mass Attitudes and Political Behavior. (4) (Formerly numbered C261B.) Seminar, three hours. Requisite: course 141B or 260A. Analysis of development and change of political attitudes in mass politics and their relationship to voting, protest, and violence. S/U or letter grading.

261C. Political Communication. (4) Discussion, three hours. Broad survey of research bearing on role of mass media in political communication. 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) (Formerly numbered C262.) Seminar, three hours. Critical examination of literature on party systems and organization. Special attention to political functions, electoral campaigns, and party structure. S/U or letter grading.

264. Politics and Society. (4) (Formerly numbered C264.) Seminar, three hours. Application of selected classical and contemporary sociological theories to politics. S/U or letter grading.


266. Group Theories of Politics. (4) Discussion, three hours. Critical appraisal of "group theory" approaches to study of political decision making, with special attention to empirical research problems and findings. S/U or letter grading.

268B. Electoral Democracy: Theory and Behavior. (4) (Same as Public Policy M246.) Seminar, three hours. Examination of both empirical and normative questions from rich variety of perspectives for scholars in all subfields of political science as well as policy students 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 modern research in American political behavior. Letter grading.


270. Legislative Behavior. (4) (Formerly numbered C270.) 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) (Formerly numbered C271.) 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. Environmental Politics of the 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 bureaucracies 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

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 politics of thinking of politicians, bureaucrats, producers, consumers, and nations as utility maximizers. Topics include microfoundations for macromodels, forms of political participation, state, government regulation, growth of government, bureaucratic elections, public policy, inflation, S/U or letter grading.

M281A-M281B. Social Theory and Comparative History. (4-4) (Same as History M203A-M203B and Sociology M296A-M296B.) Seminar, three and one-half hours every other week. Introduction to historically rooted social theory and theoretically sensitive history, following program of Center for Social Theory and Comparative History. Each course may be taken independently for credit. S/U or letter grading.


293. Great Ideas in Social Sciences. (2) Seminar, two hours. Vehicle for faculty and visitors to teach research seminars of variable length. Special training opportunities on advanced quantitative methods, including complexity theory, agent-based modeling, experimental economics, social cognitive neuroscience, and evolutionary psychology. S/U or letter grading.

495. Teaching Political Science. (4) Seminar, to be arranged. Requisite: permission of person employed as teaching assistant, associate, or fellow. Teaching assistantship 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, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study and Research. (2 to 4) Tutorial, to be arranged. May be applied only three times toward minimum course requirement in first two years. May be repeated. S/U or letter grading.


PSYCHIATRY AND BIOBEHAVIORAL SCIENCES

David Geffen School of Medicine

UCLA

C8-238 Semple Institute

Box 951759

Los Angeles, CA 90095-1759

(310) 206-5110

http://www.psychiatry.ucla.edu
Problems Related to the Mental Health of the Child 524 / Psychiatry and Biobehavioral Sciences

M. Douglas Anglin, Ph.D., in Residence
Robert J. Asarnow, Ph.D., in Residence
Michael S. Levine, Ph.D., in Residence
Gary C. Galbraith, Ph.D., in Residence
Andrew J. Fuligni, Ph.D., in Residence
Itzhak Fried, M.D., Ph.D., in Residence
Robin S. Fisher, Ph.D., in Residence
Michael J. Gitlin, M.D., in Residence
Suzie M. El-Saden, M.D., in Residence

Scope and Objectives
The Department of Psychiatry and Biobehavioral Sciences offers interdisciplinary courses related to the mental health professions of the biobehavioral sciences in addition to its programs for psychology interns and residents and for medical students.

Enrollment in department courses is limited to registered UCLA students, students registered in programs officially affiliated with UCLA, and students enrolled concurrently through UCLA Extension. Students who meet these requirements, but who are not affiliated with a departmental training program, must also meet required course requisites determined by specific educational programs.

Clinical Psychology Internship
The department offers a 12-month Clinical Psychology Internship. Students enrolled in clinical psychology programs at APA-approved universities are eligible to apply. Applications are accepted through November 1. The primary goals of the internship are to provide a year of intensive exposure to a wide variety of clinical and human services experiences and to maximize the personal growth of each professional. Students interested in this certificate program should contact David Crawford, C8-746 Semel Institute, (310) 206-8100, e-mail: dcrawford@mednet.ucla.edu.

Information on clinical practicums which are offered in conjunction with other educational institutions and UCLA departments may be obtained from the department office.

Psychiatry and Biobehavioral Sciences

Upper Division Courses
M180. Contemporary Problems in Developmental Disabilities. (4) (Formerly numbered M180a.) (Same as Psychology M180.) Seminar, three hours. Corequisites: course M181A. Limited to Developmental Disabilities Program students. Examination of broad spectrum of issues related to mental retardation, intelligence and IQ, genetics, neurobiology, and other development disabilities. P/NP or letter grading.
M181. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Biology M181, Neuroscience M130, Physiological Science M130, and Psychological Science M171J). Lectures three hours. Requisite: Neuroscience M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychological Science M171A) or Psychological Science M111A or Psychology M115. Underlying brain systems involved in psychiatric symptoms and neurological disorders, including schizophrenia, autism spectrum disorder, obsessive-compulsive disorder. Provides basic understanding of brain dysfunctions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.

M181A. Research in Contemporary Problems in Developmental Disabilities. (4) (Same as Psychology M181A.) 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).


197. Individual Studies in Psychiatry. (2 to 4) (Formerly numbered 199.) Tutoring; 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 taken for letter grade once only. May be repeated for credit. Individual contract required. Additional information and contract forms are available in Office of Education, C8-237/C8-238 Semel Institute. P/NP or letter grading.

199. Directed Research in Psychiatry and Biobehavioral Sciences. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Cullinating paper may be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

207A-207B-207C. Hypnosis Seminars. (2-2-2) Experimental and normative mental health professionals for adult and child clinical applications, involving didactics, demonstrations, trainee practice, and feedback. Following training in inductions and development of clinical phenomena (e.g., role regression, hypnoanalysis, self-hypnosis), focus on psychotherapeutic applications, including direct symptom removal, behavioral methods, and hypno-analysis. Emphasis on acquiring skills for clinical practice. S/U grading.


M210. Editorial Board Apprenticeship. (2) (Same as Health Services M249Q.) Seminar, two hours. Designed for postdoctoral fellows and advanced Ph.D. students. Participation in peer review process for academic journal, Health Psychology, with consideration of interface between behavioral science, health, and medicine. Reading and discussion of submissions and advising of editor on suitability for full review. S/U or letter grading.


M222. Transcultural Psychiatry. (4) (Same as Anthropology M222.) Seminar, three hours. Consideration of psychiatric topics in cross-cultural perspective, such as studies of drug use, deviance, suicide, homicide, behavioral disorders, “culture specific” syndromes, non-Western psychiatry, and questions of “sick” societies. May be repeated for credit.


M230. Communication of Science. (2) (Same as Biomatics M262.) Lecture, two hours; discussion, one hour. Presentation of various types of scientific writing 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 people. Letter grading.

M231. Hispanic Mental Health Issues and Treatment. (2) (Same as Social Welfare M203E.) Mental health issues and needs of Hispanics through semi- nars, lecture, and workshop along with critical comparison of psychiatry in Mexico and the U.S., analysis of various theoretical perspectives regarding biopsychosocial behavior; distinguishing psychodynamic from cultural factors in treatment of Spanish-speaking patients; treatment of Hispanic families, couples, undocumented persons, and criminal justice system clientele.


M236A-236B-236C. Psychology Internships. (1-1-1) Seminar, 90 minutes. Internship experiences. Seminar: weeknight (for full-time) and weekend (for part-time) placements.

261. Assessment and Treatment of African American Families. (2) (Same as Psychology M231.) Seminar, three hours; one hour. Discussion on topics including interviewing of parents and children, diagnosis, and related syndromes. S/U grading.

265. Legal and Ethical Issues with Vulnerable Populations. (3) Lecture, 90 minutes; laboratory, three and one-half hours. Discussion of current legal issues 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.

266. Clinical Psychopharmacology. (1) Lecture, 90 minutes; laboratory, three and one-half hours. Introduction to biopsychosocial perspectives of pharmacology. Discussion of specific disorders and their treatments. Letter grading.
M286. Advanced Magnetic Resonance Imaging. (4) (Same as Biomedical Physics M286 and Neuroscience M287.) Lecture. Four hours. Starting with basic principles 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 intensive than mathematical. Letter grading.

M270. Neural Basis of Memory. (4) (Same as Neuroscience M273.) Lecture; two hours; discussion, one hour. Analytical, and neurological data integrated into models for how behavioral phenomena of memory arise. Discussion of invertebrate memory, cortical conditioning, hippocampus and declarative memory, and frontal lobes and primary memory.

M272. Psychological Anthropology. (4) (Same as Anthropology M234Q.) Lecture. Three hours. Various psychological issues in anthropology, both theoretical and methodological. Areas of interest include such things as culture and culture, theory and culture, and culture psychiatry. Discussion of questions relating to symbolic and unconsciousness process as they relate to culture. Topic may vary from term to term. May be repeated for credit.

M273. Advanced Seminar: Medical Anthropology. (2 to 4) (Same as Anthropology M263Q, Community Health Sciences M263Q, and Nursing M263Q.) Seminar. Three hours. Limited to 15 students. Examination of interrelationships between society, culture, ecology, health, and illness. Bases for written critical analysis and class discussion provided through key theoretical works. S/U or letter grading.


M280. Population and 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 population variations. Cross-cultural study of how reproductive behaviors influence the family and social and economic structures. Consult Schedule of Classes for top.cics and instructors. May be repeated for credit.

281A-281B-281C. Behavioral Therapy in Educational Settings. (4-4-4) Lecture, one hour; laboratory, seven hours. Supervised experience in classroom working with exceptional children in conducting systematic observations, administering formal assessments, and developing and carrying out individualized educational and behavioral programs. Theoretical background furnished through one-hour weekly lecture. S/U or letter grading.

M282. Anthropology of Human Body. (2 to 4) (Same as Anthropology M254T) Seminar. Three hours. Exploration of how sociocultural and political dynamics shape perceptions of and understandings about human body, and how, reciprocally, those perceptions and understandings influence social processes. Includes materials from both non-Western and Western societies. Letter grading.

M283. Anthropology of Genetic Knowledge. (2 to 4) (Same as Anthropology M249Q) 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. Principles of Neuroimaging I. (4) Lecture, four hours; laboratory, two hours. Preparation: competence in integral calculus, electricity, and magnetism, computer programming (any language), general statistics. Requisite: course 292. Examples include but are not limited to: presurgical planning, cognitive and motor mapping, atrophy and ataxia, and surgical planning and lesion size. S/U grading.

284B. Principles of Neuroimaging II. (4) Lecture, four hours; laboratory, two hours. Preparation: competence in integral calculus, electricity and magnetism, computer programming (any language), general statistics. Requisite: course 292. 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 magneto stimulation, near infrared imaging. Letter grading.

M285. Functional Neuroimaging: Techniques and Applications. (4) (Same as Biomedical Physics M285.) Seminar, four hours. In-depth examination of activation imaging, including MRI and electrophysiological methods. Emphasis on analysis, experimental design, and results obtained thus far in human systems. Strong focus on understanding techniques, how to design activation imaging paradigms, and how to interpret results. Labs include visits and design and implementation of functional MRI experiment. S/U or letter grading.

M286A-M286B-M286C. Statistics in Psychiatric Research. (2-2-2) (Same as Biostatistics M206A-M206B-M206C) Seminar, 90 minutes. Requisite: Biostatistics 100B. Designed for graduate students. Examples from psychiatric literature used to illustrate statistical ideas and analysis strategies. Topics include experimental design, 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.


286. Social and Behavioral Factors of HIV/AIDS: Global Perspective. (4) (Same as Community Health Sciences M293.) Lecture, four hours. Requisite: course 292. Topics include: Global epidemiology, the social and behavioral foundations of the epidemic, with particular emphasis on novel applications, analysis, and acquisition methods. Presentation and critique of student papers. Overall emphasis on social and behavioral factors which influence both transmission and prevention of HIV/AIDS around the world. Letter grading.


290. Los Angeles HIV-Community Colloquium. (1) Lecture, two hours. Examination of emerging scientific and topical relevancy of problems. Consult Schedule of Classes for topics and instructors. May be repeated for credit.

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) Preparation: submission of written proposal to be structured by instructor and student prior to enrollment; additional information and proposal forms available in Office of Education, C8-237/C8-238 Semel Institute. One-to-one supervision of individual therapy cases, including analyses of patient data, supervision of ongoing treatment, and referral to other specialty theory, and applications to patient management. S/U or letter grading.

405. Trauma and Sexual Abuse Research Seminar. (3) Seminar, three hours. Designed for graduate and medical students and resident physicians interested in learning about biobehavioral trauma research. Introduction to DSM-IV TR diagnostic criteria for posttraumatic stress disorder (PTSD), as well as biopsychosocial sequelae. Examination and discussion of child and adult sexual abuse in context of being causative precursors of acute and chronic causes of PTSD. Evaluation of allostatic load, among other biologic variables, within context of physiological markers for PTSD. Review of current modes of treatment, including therapeutic and pharmacological interventions. Discussion of research methods particularly important for trauma research. S/U or letter grading.

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 electrophysiological and image acquisition. S/U grading.


434. Seminar: Addiction Psychiatry. (1) Seminar, one hour. Cutting-edge information on both 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 in addiction research. S/U 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 cognition 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 Approach to Investigating 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 interpretation of abnormal karyotypes and technical aspects of routine and special 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) Lecture, one hour. Designed for graduate students. Taught by instructor and student at time of initial enrollment. S/U or letter forms available in Office of Education, C8-237/C8-238.

487. Therapeutic Techniques for Children and Adolescents with Anxiety and Related Disorders. (1) Seminar, one hour. Preparation: introductory genetics course. Weekly lecture series intended for those interested in human genetics or in specific topic to be presented. Speakers are invited for their expertise or research in some special area related to human genetics and may be from UCLA or elsewhere. No grading. M490. 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 proposal forms available in Office of Education, C8-237/C8-238 Semel Institute, Directed individual research and study in psychiatry at graduate level. S/U or letter grading.

L. Anne Peplau, Ph.D., Vice Chair, Graduate Programs
Michelle G. Craske, Ph.D., Vice Chair, Academic Personnel

Professors
Paul R. Abramson, Ph.D.
Howard S. Adelman, Ph.D.
Robert F. Assarow, Ph.D., in Residence
Bruce L. Baker, Ph.D.
Bernard W. Balleine, Ph.D.
Jackson Beatty, Ph.D.
Peter M. Bentley, Ph.D.
Robert M. Bilder, Ph.D., in Residence
Elizabeth L. Bjork, Ph.D.
Robert A. Bjork, Ph.D.
Susan Y. Bookheimer, Ph.D., in Residence
Thomas N. Bradbury, Ph.D.
Dean V. Buonomano, Ph.D.
Larry L. Butcher, Ph.D.
Tyronne D. Cannon, Ph.D. (Staglin Family Professor of Psychology)
Patricia Cheng, Ph.D.
Bruce F. Chorpita, Ph.D.
Andrew Christensen, Ph.D.
Mark S. Cohen, Ph.D., in Residence
Michelle G. Craske, Ph.D.
Christine A. Dunkel Schetter, Ph.D.
Michael I. Eisen I S. Fanselow, Ph.D.
Andrew J. Fuligni, Ph.D., in Residence
R. Edward Geiselman, Ph.D.
Patricia M. Greenfield, Ph.D.
Carlos V. Grijalva, Ph.D.
Constance L. Hammen, Ph.D.
Keith Holyoak, Ph.D.
Michael R. Irwin, M.D. (Norman Cousins Endowed Professor of Psychoneuroimmunology)
Scott P. Johnson, Ph.D.
Jaana H. Juvonen, Ph.D.
Philip Keilman, Ph.D.
Barbara Knowlton, Ph.D.
Franklin B. Krasne, Ph.D.
Donald G. MacKay, Ph.D.
Neil M. Malamuth, Ph.D.
Vickie M. Mays, Ph.D.
Thomas R. Minor, Ph.D.
Hector F. Myers, Ph.D.
Keith H. Nuechterlein, Ph.D., in Residence
L. Anne Peplau, Ph.D.
Steven P. Reise, Ph.D.
Renata L. Repetti, Ph.D.
Dario L. Ringach, Ph.D.
Tara K. Scanlan, Ph.D.
David O. Sears, Ph.D.
Marian D. Sigman, Ph.D., in Residence
Alcino J. Silva, Ph.D.
Annette L. Stanton, Ph.D.
James W. Stigler, Ph.D.
Shelley E. Taylor, Ph.D.
Bernard Weiner, Ph.D.
Alan L. Yulle, Ph.D.
Eran Zaidel, Ph.D.

Professors Emeriti
William E. Broner, Jr., Ph.D.
James C. Coleman, 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.
Roche Geiman, Ph.D.
Gerald M. Goodman, Ph.D.
Barbara A. Henker, Ph.D.
Nancy M. Henley, Ph.D.
Eric W. Holman
John P. Houston, Ph.D.
Marion K. Jacobs, Ph.D.
Wendell E. Jeffrey, Ph.D.
O. Ivar Lovasa, Ph.D., Litt.D.
Irving Maltzman, Ph.D.
Albert Mehrabian, Ph.D.
Charles Y. Nakamura, Ph.D.
Allen Parducci, Ph.D.
Bertram H. Raven, Ph.D.
Richard A. Schmidt, Ph.D.
David Shapiro, Ph.D.
James H. Sidtisius, Ph.D.
James P. Thomas, Ph.D.
John R. Weisz, Ph.D.

Associate Professors
Aaron P. Blaisdell, Ph.D.
Craig R. Fox, Ph.D.
Marte G. Hassanen, Ph.D.
Yuen J. Huo, Ph.D.
J. David Jentsch, Ph.D.
Benjamin K. Kantor, Ph.D.
Jennifer L. Krull, Ph.D.
Matthew D. Lieberman, Ph.D.
Zili Liu, Ph.D.
Russell A. Poldrack, Ph.D. (Wendell Jeffrey and Bernice Wenzel Professor of Behavioral Neuroscience)
Stanley J. Schein, M.D., Ph.D.
Cindy M.Yee-Bradbury, Ph.D.

Assistant Professors
Carrie E. Bearden, Ph.D., in Residence
James W. Bates, Ph.D.
Hugh T. Blair, Ph.D.
Julienne E. Bower, Ph.D.
Alan D. Castel, Ph.D.
Naomi I. Eisen I S. Fanselow, Ph.D.
Adriana Galvan, Ph.D.
Phillip A. Goff, Ph.D.
Anna S. (Chung) Lau, Ph.D.
Steve S. Lee, Ph.D.
Hongjing Lu, Ph.D.
John R. Monterosso, Ph.D., in Residence
Rajesh R. Nandy, Ph.D.
Judith I. Piggot, M.D., in Residence
Lara A. Ray, Ph.D.
Theodore F. Robles, Ph.D.
Catherine M. Sandhofer, Ph.D.
Ladan Shams, Ph.D.
Jenessa R. Shapiro, Ph.D.
Nim G. Togtten, Ph.D.

Adjunct Professors
Dennis J. McGinty, Ph.D.
Jill M. Waterman, Ph.D.
Nancy J. Woolf, Ph.D.
Dahilla Zaidel, Ph.D.

Adjunct Associate Professors
Iris Firstenberg, Ph.D.
William J. McCarthy, Ph.D.

Adjunct Assistant Professor
Gian C. Gonzaga, Ph.D.

Scope and Objectives
Psychology is a subject of considerable interest to most people — we all tend to practice some form of intuitive psychology in an attempt to understand ourselves and the people and groups with whom we interact. The curriculum offered by the UCLA Department of Psychology presents psychology as a scientific discipline that employs systematic methods of inquiry to study and explain human and animal behavior — both normal and abnormal — in terms of a variety of underlying variables, including neural, physiological, and cognitive processes; developmental factors and individual differences; and social and interpersonal influences and contexts. According to recent surveys, the UCLA Psychology Department is ranked as one of the top departments in the country.

The undergraduate curriculum has been designed to reflect the extensive breadth of psychology — both the range of behavioral phenomena studied and the variety of methods and
theoretical approaches employed — while allowing students to pursue in greater depth those areas in which they become most interested. Beyond basic core courses, students can take many specialized courses in areas such as behavioral neuroscience, animal behavior, learning and memory, motivation, perception, cognition, measurement, personality, and clinical, social, developmental, community, and health psychology. The curriculum also provides excellent opportunities for research experience — either in the form of laboratory courses or by participation with faculty and graduate students in a wide variety of research projects.

A choice of three undergraduate majors is offered: a B.A. degree in Psychology and B.S. degrees in Cognitive Science and in Psychobiology. While the majors overlap in certain fundamental and basic knowledge bases, they differ considerably in their focus (i.e., the extent to which certain areas of psychology and related disciplines are studied) and in terms of the different student interests and needs they satisfy. For nonmajors, the department offers many courses that provide new and valuable insights into the understanding of human behavior, including their own.

At the graduate level, the department offers training leading to the Ph.D. degree with emphases in the areas of behavioral neuroscience, clinical, cognitive, cognitive neuroscience, developmental, health, learning and behavior, social, and quantitative psychology. The graduate program is designed to prepare future psychologists for careers as scientific investigators, college and university teachers, and professional psychologists.

Undergraduate Study

Psychology B.A.

The Psychology major is the most general of the three majors and offers both broad and in-depth coverage of the fundamental and traditional areas of psychology. It provides students with a strong foundation for postgraduate education in psychology and can serve as excellent background to prepare them for further training in such fields as law, education, government and public policy, business, and many of the health-related professions. Its basic liberal-arts orientation also provides excellent foundation for immediate postbaccalaureate careers in many areas, particularly ones in which an understanding of human behavior and its diversity of expression would be an asset.

The requirements described below represent the minimum requirements in satisfaction of the preparation and the major. Additional courses in psychology, statistics, and related sciences, as well as other types of research and fieldwork experiences, are highly recommended if students plan to pursue graduate work in psychology and related fields. Under special circumstances, graduate-level courses can be taken by undergraduate students, although such courses may not be applied toward degree requirements for the major. For additional information, contact the Undergraduate Advising Office, 1531 Franz Hall.

Prepsychology Major

Students need to file a petition in the Undergraduate Advising Office to declare the Prepsychology major. Prepsychology majors 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): Anthropology 7 or 12; Life Sciences 1 or 15 or Physiological Science 3; Chemistry and Biochemistry 2 or 14A or 20A (if students have completed one year of high school chemistry with a C or better, this requirement is waived); one course from Computer Science 2, Mathematics 2, Program in Computing 10A, Statistics 10, or one term of calculus; Physics 10 or 1A or 6A; one course from Philosophy 1, 2, 3, 4, 5, 6, 7, 8, 9, 21, 22, 22W, 31, 32; 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 Prepsychology major 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 Prepsychology major 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 nine preparation for the major courses and submit an application to enter the major by the end of the Spring Quarter of their second 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 Prepsychology major 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 human evolution course, one biology course equivalent to Life Sciences 1 or 15 or Physiological Science 3, one general chemistry course (or one year of high school chemistry with a C or better), one 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_tr.htm for up-to-date information regarding transfer selection for admission.

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

The Major

Required: (1) Five core courses, with at least two from each category and a fifth course from either category: (a) Psychology 110, 115 (or M117A, M117B, and M117C), 120A, 120B, and (b) 127 or 128, 130 (or one course from 133A through 133I), 135, 150; (2) one laboratory/fieldwork course from 101, 111, 116, 121, 126, 131, 136A through 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 of the three courses must be completed to receive psychology elective credit. Each upper division course must be taken for a letter grade. A C– or better is required in each core course and in at least one laboratory/fieldwork course. Students must have a 2.0 grade-point average in all upper division courses selected to satisfy major requirements.

Cognitive Science B.S.

The Cognitive Science major focuses on the study of intelligent systems, both real and artificial. While including a strong foundation in the traditional areas of psychology, the major is interdisciplinary in nature and emphasizes subject matter within cognitive psychology, computer science, mathematics, and related disciplines.

The requirements described below include sufficient preparation if students plan to pursue graduate work in cognitive science or related fields; however, they may want to include additional advanced courses in psychology and fields related to cognitive science (e.g., computer science, linguistics, mathematics, philosophy, and statistics) as well as other types of research and fieldwork experiences. Under
special circumstances, graduate-level courses can be taken by undergraduate students, although such courses may not be applied toward degree requirements for the major. For additional information, contact the Undergraduate Advising Office, 1531 Franz Hall.

Pre cog nitive Science Major

Students need to file a petition in the Undergraduate Advising Office to declare the Pre cog nitive Science major. They are then identified as Pre cog nitive Science majors until they (1) satisfy the preparation for the major requirements and (2) file a petition to declare the Cog nitive Science major. Questions about the major should be directed to the Undergraduate Advising Office, 1531 Franz Hall.

Preparation for the Major

Each of the following required courses must be taken for a letter grade (a C or better in each course and a 2.5 overall grade-point average in the preparation courses) before students reach 140 total units: Life Sciences 1 or 15 or Physiological Science 3; Chemistry and Biochemistry 2 or 14A or 20A (if students have completed one year of high school chemistry with a C or better, this requirement is waived); Mathematics 31A, 31B; Philosophy 7 or 8 or 9; Physics 10 or 1A or 6A; 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 Pre cog nitive Science major before the term in which they plan to enroll. Students with no background in introductory statistics should take Statistics 10 before enrolling in course 100A.

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 Cog nitive Science major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one biology course, one general chemistry course (or one year of high school chemistry with a C or better), two calculus/analytical geometry courses, one general physics course, one philosophy course, one introduction to psychology course, one introduction to cognitive science course, one psychological statistics course, one psychology research methods course, one computer programming course in C++, and one other computer programming course.

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

The Major

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

Preparation for the Major

Life Sciences Core Curriculum

Required: Life Sciences 1, 2, 3, 4; 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.

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 Pre psychobiology major before the term in which they plan to enroll. Students with no background in introductory statistics should take Statistics 10 before enrolling in course 100A.

Each core curriculum course must be taken for a letter grade (a C– or better in each course and a 2.0 overall grade-point average in the core curriculum) before students reach 150 total units. Students who repeat more than two preparation courses or any preparation course more than once are denied admission to the major.

Transfer Students

Transfer applicants to the Psychobiology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2, one year of calculus, one year of general chemistry with laboratory for majors, one semester of organic chemistry with laboratory, one introduction to psychology course, one psychological statistics course, and one psychology research methods course. A second semester of organic chemistry or one year of calculus-based physics is strongly recommended but not required for admission.

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

The Major

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

Required: (1) Psychology 115 (or M117A, M117B, and M117C), 120A or 120B, and one course from 124A through 124J; (2) one course from 186A through 186D and one course from 121, 186A through 186D, or Computer Science 161; (3) three upper division elective courses (12 units) from Psychology 110, 112A through 116, M117J through M119X, 124A through 124J (if taken for the major, may not be applied as an elective); 130, 133B, 135, 142H, 160, 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 CM186B, Ethnomusicology 172A, Linguistics 103 through 185B, Mathematics 110A through 171, Neuroscience 102, Philosophy 124 through 136, Statistics 100A, 100B, 100C, 101B, 101C; (4) two terms of Psychology 195B or 196B (may be fulfilled by taking any two courses from 191CH, 195B, or 196B, provided content is approved by the Undergraduate Advising Office).

Students who complete Psychology M117A, M117B, M117C receive equivalent credit for course 115 and two upper division cognitive science electives. All of the 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 involves the study of brain-behavior relations and laboratory training in standard brain research techniques.

The requirements described below include sufficient preparation if students plan to pursue graduate work in any of the above fields; however, they may want to include additional advanced courses in psychology and related sciences as well as other types of research and fieldwork experiences. Under special circumstances, graduate-level courses can be taken by undergraduate students, although such courses may not be applied toward degree requirements for the major. For additional information, contact the Undergraduate Advising Office, 1531 Franz Hall.

Prepsychobiology Major

Students need to file a petition in the Undergraduate Advising Office to declare the Prepsychobiology major. They are then identified as Prepsychobiology majors until they (1) satisfy the preparation for the major requirements and (2) file a petition to declare the Psychobiology major.
Evolutionary Biology 100, 102, 105, 106, 110, 111, 115, 117, C119, 120, 121, 122, 124 (only 4 units may be applied toward the major), 129, 135, 146, M158, 164, 170, Microbiology, Immunology, and Molecular Genetics 185A, Molecular Cell, and Developmental Biology 100, 104, 138, C139, M140, CM156, 171, Neuroscience 102, Psychological 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 of the three courses must be completed to receive psychobiology elective credit.

Students must have a 2.0 grade-point average in all upper division courses selected to satisfy major requirements, and each must be taken for a letter grade.

Honors

Honors Courses

Each year the department offers a selection of honors courses, designated with an H suffix. The courses provide close contact with faculty members, emphasize readings in the original literature, student reports, and small group discussions, and may include field or research experience. Enrollment priority in honors courses is given to students in the departmental honors program. Consult the College of Letters and Science for information on requirements for College Honors.

Honors Program

Psychology, Cognitive Science, and Psychobiology majors intending to continue study at the graduate level are encouraged to apply for the departmental honors program. Students work for one year with a faculty sponsor on a research project that is the basis of a formal honors thesis. During that year they also participate in a weekly seminar (Psychology 191AH, 191BH, 191CH) in which thesis projects are presented and discussed and other topics of interest are explored with invited faculty members and other guests. Other requirements may apply. Consult the Undergraduate Advising Office during Spring Quarter for further information and application forms. Satisfactory completion of the program and the other requirements for the major leads to awarding of the degree with honors or highest honors.

Computing Specialization

Majors in Psychology, Psychobiology, and Cognitive Science may select a specialization in Computing by (1) satisfying all the requirements for a bachelor's degree in the specified major, (2) completing Program in Computing 10A, 10B, and at least one course from 10C, 15, 20A, 30, 40A, or 60, and (3) completing at least three courses from Psychology 85, 121, 142H, 186A through 186D (one 199 course may be substituted for one of these courses provided project has been approved by vice chair). A grade of C or better is required in each course. Students graduate with a bachelor's degree in their major and a specialization in Computing. Students planning to enter this specialization should consult the Undergraduate Advising Office.

Applied Developmental Psychology Minor

The Applied Developmental Psychology minor is designed to (1) provide a coherent academic program with focus on issues central to improving the well-being of children and their families, (2) teach undergraduates how to apply theories, research methods, and research findings to practical concerns, and (3) prepare students to join or receive further training in various child-related professions.

The minor is open to all enrolled UCLA students (including Cognitive Science, Psychobiology, and Psychology majors) who have an overall grade-point average of 2.0 or better and have been accepted into an approved applied developmental psychology internship program. For further information about applying to the internship program, contact the director of the Infant Development Program, 1615 Franz Hall, (310) 825-2896. For questions about additional course requirements for the minor, contact a counselor in the Undergraduate Advising Office, 1531 Franz Hall, (310) 825-2730.

Required Lower Division Course (4 units): Psychology 10.

Required Upper Division Courses (24 units): Psychology 134A (must be taken concurrently with course 134D), 134B (must be taken concurrently with course 134E), and four additional courses, of which at least three must be upper division, from Education 120, 121, 132, Psychology 129F, 130, 131, 132A, 132B, 133B through 133I, 134F, 134G, 134I, 199A or 199B (content must be approved by the Undergraduate Advising Office). Sociology M174. One of the four additional courses must include either Psychology 130 or one course from 133B through 133I.

Internship Requirement/Fieldwork Component (4 units): Psychology 134D (must be taken concurrently with course 134A), 134E (must be taken concurrently with course 134B). Students work as interns for two consecutive academic terms at an approved daycare center/school. The internship provides hands-on experience working with young children as teacher's aides and opportunities for observing children.

No more than two courses may be applied toward both this minor and a major in another department or program. Each minor course, except for the fieldwork component of the internship courses, must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Cognitive Science Minor

The Cognitive Science minor is designed to introduce students to cognitive science topics as addressed in a number of different disciplines, such as biology, computer science, engineering, linguistics, mathematics, philosophy, and psychology, while allowing them to pursue a more in-depth study of cognitive science topics within specific areas of their own choice.

The minor consists of two parts. In the first part students complete background courses and satisfy a computer programming experience requirement. In the second part they select a primary cluster 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 (with approval of the Undergraduate Advising Office) and complete one of the following four primary clusters: (1) biological basis of cognition cluster — three courses from Linguistics C135, Neuroscience 102, Psychology 115, 116, M117C (or Molecular Cell, and Developmental Biology M175C or Neuroscience M101C or Physiological Science M180C), 119B, 119F, M119L, M119N, 160; (2) computation and modeling cluster — three courses from Biomatics 108, Computer Science 161, Psychology 186A through 186D; (3) human cognition cluster — Psychology 121 and two courses from 120A or 120B, 124A through 124J, 133B, 133C, 133E; (4) mind and language cluster — three courses from Linguistics 120A, 120B, 125, 130, 132, C135, 185A, Philosophy 124, 125, 126, 127A, 127B, 129, 170, 172, Psychology 124A.

Students must also fulfill a secondary cluster requirement of two additional courses from one or more of the clusters not selected as the primary cluster.

No more than two courses may be applied toward both this minor and a major in another department or program. Each minor course must be taken for a letter grade, and students must have an overall grade-point average of
2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Fieldwork and Research Opportunities

Many research and fieldwork opportunities are open to students who wish to expand their knowledge and broaden their background in the field of psychology. These experiences can be enriching and help bring undergraduates closer to understanding the importance of research and internships, including their applications in the everyday world. At least one of the following courses is recommended for students planning postgraduate study: Psychology 99, 185, 192, 193, 194A through 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 (PROPS) represent a vital effort to identify and mentor underrepresented minority and/or low-income students. The purpose of PROPS is to encourage such students to participate in research and pursue graduate studies leading to careers in academia. The recruitment and application process for PROPS takes place each Fall Quarter. Students selected to participate are awarded stipends for Winter and Spring Quarters, during which time they do research under the mentorship of a psychology faculty member. In addition, students are required to attend weekly seminars covering such topics as graduate school, careers in academia, and research opportunities in various fields of psychology. Prior research experience is not required. This is an excellent opportunity for students to begin their research careers and acquire the needed experience to pursue advanced studies.

Infant Development Program

The Megan E. Daly Infant Development Program (IDP), established in May 1983, is designed as a teaching and research facility for the department and is set up to accommodate both cross-sectional and longitudinal investiga-

85. Introduction to Cognitive Science. (4) Lecture, three hours. Exploration of computer metaphor of mind as an information-processing system, focusing especially on perception, knowledge representation, and thought based on research in cognitive psychology, neuropsychology, and artificial intelligence. Many examples from visual information processing.

88A-B. Lower Division Seminars. (4 each) Seminar, three hours. Enforced requisite: course 10. Limited to freshmen. Physiological and psychological processes related to stresses and strains of daily living and potential relation of these processes to disease states. Examination of multifaceted nature of coping with stressors and exploration of strategies for stress management. P/NP or letter grading.

97. Variable Topics in Psychology. (4) Seminar, three hours. Enforced requisite: course 10. Study of selected topics in psychology at introductory level; seminar format designed for freshmen/sophomores. P/NP or letter grading.

Upper Division Courses

100A. Psychological Statistics. (4) Lecture, four hours. Requisites: course 10 with a grade of C or better, and one course from Computer Science 2, Matematics 2, Program in Computing 10A, Statistics 10, or one term of calculus. Designed for premajors. Basic statistical procedures and their application to research and practice in various areas of psychology. Letter grading.

100B. Research Methods in Psychology. (6) Lecture, two hours; laboratory, four hours. Enforced requisites: courses 10 and 100A, with grades of C or better. Introduction to research methods and critical analysis in psychology. Lecture and laboratory topics include experimental and nonexperimental research methods, statistical design and analysis as applied to a 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. Designed for juniors/seniors. Experimental findings on animal and human conditioning; retention 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 Laboratory. (4) Lecture, two hours; laboratory, three hours. Requisites: courses 10, 100A, 100B, 110. Designed for departmental majors. Laboratory experience with techniques in study of learning, especially with animals. Letter grading.

85. Introduction to Cognitive Science. (4) Lecture, three hours. Exploration of computer metaphor of mind as an information-processing system, focusing especially on perception, knowledge representation, and thought based on research in cognitive psychology, neuropsychology, and artificial intelligence. Many examples from visual information processing.

88A-B. Lower Division Seminars. (4 each) Seminar, three hours. Enforced requisite: course 10. Limited to freshmen. Physiological and psychological processes related to stresses and strains of daily living and potential relation of these processes to disease states. Examination of multifaceted nature of coping with stressors and exploration of strategies for stress management. P/NP or letter grading.

97. Variable Topics in Psychology. (4) Seminar, three hours. Enforced requisite: course 10. Study of selected topics in psychology at introductory level; seminar format designed for freshmen/sophomores. P/NP or letter grading.

Upper Division Courses

100A. Psychological Statistics. (4) Lecture, four hours. Requisites: course 10 with a grade of C or better, and one course from Computer Science 2, Matematics 2, Program in Computing 10A, Statistics 10, or one term of calculus. Designed for premajors. Basic statistical procedures and their application to research and practice in various areas of psychology. Letter grading.

100B. Research Methods in Psychology. (6) Lecture, two hours; laboratory, four hours. Enforced requisites: courses 10 and 100A, with grades of C or better. Introduction to research methods and critical analysis in psychology. Lecture and laboratory topics include experimental and nonexperimental research methods, statistical design and analysis as applied to a 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. Designed for juniors/seniors. Experimental findings on animal and human conditioning; retention 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 Laboratory. (4) Lecture, two hours; laboratory, three hours. Requisites: courses 10, 100A, 100B, 110. Designed for departmental majors. Laboratory experience with techniques in study of learning, especially with animals. Letter grading.

85. Introduction to Cognitive Science. (4) Lecture, three hours. Exploration of computer metaphor of mind as an information-processing system, focusing especially on perception, knowledge representation, and thought based on research in cognitive psychology, neuropsychology, and artificial intelligence. Many examples from visual information processing.

88A-B. Lower Division Seminars. (4 each) Seminar, three hours. Enforced requisite: course 10. Limited to freshmen. Physiological and psychological processes related to stresses and strains of daily living and potential relation of these processes to disease states. Examination of multifaceted nature of coping with stressors and exploration of strategies for stress management. P/NP or letter grading.

97. Variable Topics in Psychology. (4) Seminar, three hours. Enforced requisite: course 10. Study of selected topics in psychology at introductory level; seminar format designed for freshmen/sophomores. P/NP or letter grading.

Upper Division Courses

100A. Psychological Statistics. (4) Lecture, four hours. Requisites: course 10 with a grade of C or better, and one course from Computer Science 2, Matematics 2, Program in Computing 10A, Statistics 10, or one term of calculus. Designed for premajors. Basic statistical procedures and their application to research and practice in various areas of psychology. Letter grading.

100B. Research Methods in Psychology. (6) Lecture, two hours; laboratory, four hours. Enforced requisites: courses 10 and 100A, with grades of C or better. Introduction to research methods and critical analysis in psychology. Lecture and laboratory topics include experimental and nonexperimental research methods, statistical design and analysis as applied to a 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. Designed for juniors/seniors. Experimental findings on animal and human conditioning; retention 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 Laboratory. (4) Lecture, two hours; laboratory, three hours. Requisites: courses 10, 100A, 100B, 110. Designed for departmental majors. Laboratory experience with techniques in study of learning, especially with animals. Letter grading.
112A. Basic Processes of Motivated Behavior. (4) Lecture, 90 minutes; discussion, 90 minutes. Requi- sites: courses 10, 100A, 110. Designed for juniors/se- niors. Examination of some basic processes underly- ing motivated behavior, stressing environmental de- terminants of behaviors such as feeding, drinking, and reproduction-related behavior. Discussion of physiological mechanisms that contribute to such be- haviors. Consideration of topics such as reinforce- ment, acquired motivation, and drug addiction. Evalu- ation of evidence from laboratory studies con- ducted with animals. P/NP or letter grading.

112B. Psychology of Fear and Anxiety. (4) Lecture, three hours. Requisites: courses 10, 100A, 110. Recommended: course 115. Designed for juniors/se- niors. Presentation of biological and behavioral ap- proaches to fear and anxiety, taken from laboratory and applied research. In addition to overview of major principles from each approach, emphasis on areas in which significant research advances have recently oc- curred. Examination of concordance and discordance between results from laboratory and applied re- search, P/NP or letter grading.

112D. Animal Cognition. (4) Lecture, 90 minutes; discussion, 90 minutes. Requisites: courses 10, 100A, 110. Designed for juniors/seniors. Investigation of scientific study of cognition and behavior in ani- mals. Topics include perception and attention, work- ing and reference memory, spatial cognition, timing and counting, concept formation, and abstract rea- soning. Most discussions focus on laboratory findings with animals, as viewed from evolutionary framework concerned with natural histories of animals. P/NP or letter grading.


116. Behavioral Neuroscience Laboratory. (4) Lecture, one hour; laboratory, three hours. Requisites: courses 10, 100A, 100B, 115.Designed for Psychobi- ology 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 Physio- logical Science 111A. For Physiological Science ma- jors only, a grade of C– or better is required to proceed to Physiological Science 111B. Cellular neurophysi- ology, membrane potential, action potentials, and synaptic transmission. Sensory systems and motor system; how assemblies of neurons process complex informa- tion and control movement. P/NP or letter grading.

M117B. Molecular and Developmental Neurosci- ence. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course 115 or M117A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Physiological Science M180A) or Physiological Science 111A, Life Sciences 3, 4. Molecular bi- ology of channels and receptors; focus on voltage de- pendent channels and neurotransmitter receptors. Molecular biology of supramolecular mechanisms: synaptic transmission, axonal transport, cytoskele- ton, and microtubules. Introduction to modern molecular approaches in developmental neurobiology. P/NP or letter grading.

M117C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course 115 or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Physiological Science M180A) or Physiological Sci- ence 111A. Neural mechanisms underling motiva- tion, learning, and cognition. P/NP or letter grading.

M117J. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Bi- ology M181, Neuroscience M130, Physiological Sci- ence M181, and Psychiatry M181.) Lecture, three hours. Requisites: course 115 or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Physiological Science M180A) or Physiological Science 111A. Underlying brain sys- tems involved in psychiatric syndromes and neurologi- cal disorders, including schizophrenia, depression, bi- polar disorder, obsessive/compulsive disorder. Pro- vides basic understanding of brain dysfunctions that contribute to disorders and rationales for pharmaco- logical treatments. P/NP or letter grading.


119A. Neuropsychopharmacology. (4) Lecture, three hours. Requisite: course 115. Designed for ju- nior/seniors. Analysis of basic pharmacologic princi- ples to basic research on brain behavior, with neurochemi- cally significant substances in brain.


119C. Cognitive Neuroscience. (4) Lecture, three hours. Requisite: course 115 or M117C. Understand- ing complex mental functions depends on interplay of cognitive psychology and behavioral neuroscience. Designed to provide advanced undergraduate stu- dents with current perspectives on how complex pro- cesses of mind may be understood using neurosci- ence techniques. P/NP or letter grading.


119F. Neural Basis of Learning and Computing with Neurons. (4) Lecture, three hours. Requisite: course 115. Designed for juniors/seniors. Review of some recent advances in understanding of neurobiology of visual cognition. Topics include how is visual information processed by brain to generate actions? How do we recognize ob- jects? How do we perceive emotions displayed by other subjects? P/NP or letter grading.

119G. Neurobiology 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 submamm- alian species, circadian rhythms and circadian con- trol of sleep; development 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.


119K. Psychology of Sex and Aging. (4) Lecture, three hours. Requisite: course 115. Sexuality in aging from psychological and physiological perspec- tives. Topics include physical and cognitive changes in aging that affect sexual response, with emphasis on dif- ferences between males and females concerning ag- ing-related changes, emotional well-being, and human sexual response. P/NP or letter grading.

119L. Biology and Behavioral Neuroscience of Aging. (4) (Same as Gerontology M119X.) Lecture, three hours. Designed for juniors/seniors. Biologic mechanisms of aging process and its terminal phase, death, have been increasingly studied in recent years. Establishment of what is known experimentally about biology and behavioral neuroscience of aging and evaluation of theories developed to account for this knowledge. P/NP or letter grading.

120A. Cognitive Psychology. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A. Designed for juniors/seniors. Survey of cogni- tive psychology: how people acquire, represent, transform, use, and generate information. Perception, attention, imagery, memory, representa- tion 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 the real world through basic sensory mechanisms and perceptual processes. Perception of objects, surfaces, space, motion, and events. Connections between information, computations, and biological mechanisms in vision, audition, and other systems. P/NP or letter grading.

121. Laboratory in Cognitive Psychology. (4) Laboratory, four hours. Requisites: courses 10, 100A, 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. Requisites: courses 10, 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, 120A or 120B. Exploration of issues in visual information, such as storage and representation of visual information in memory, pattern recognition, nature and role of attention in visual processing, work and picture recognition, object perception, and imagery. Possible consideration of developmental aspects. P/NP or letter grading.

124C. Human Memory. (4) Lecture, two hours; discussion, one hour. Requisite: course 120A or 120B. Designed for juniors/seniors. 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, automaticity, sensory involvement in action such as vision and kinesthesia, role of reflexes, speed-accuracy trade-offs, and individual differences and abilities. Principles discussed should have relevance for numerous real-world situations in which complex motor skills 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 underlying perceptive, production, attention, and awareness in language and cognition. P/NP or letter grading.

124F. Thinking. (4) Lecture, three hours. Requisite: course 120A or 120B. Analysis of experimental studies of human categorization, reasoning, 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 in attention, sequential processes in action, general slowing phenomenon, and related neuropsychological issues. P/NP or letter grading.

124I. Cognitive Neuroscience of Memory. (4) Lecture, three hours. Requisites: courses 85 or 120A, and 120B or 120C. Introduction to neurological 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 Technology. (4) Seminar, three hours. Requisite: course 120A or 120B. Aspects of perception and cognition as they relate to learning and potential for learning technology. Basic knowledge about visual information processing, perceptual learning, knowledge representation, pattern recognition, 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 backgound to undertake various research activities during Winter and Spring Quarters. P/NP grading.

125B. Research Methods in Developmental Psychopathology. (4) Laboratory, three hours; fieldwork, seven hours. Limited to departmental majors. Research approaches utilized by psychologists to conduct research in developmental psychopathology. Letter grading.

125C. Advanced Research Methods in Developmental Psychopathology. (4) Laboratory, three hours; fieldwork, seven hours. Limited to departmental majors. Advanced research approaches utilized by psychologists to conduct research in developmental psychopathology. Letter grading.

126. Clinical Psychology Laboratory. (4) Laboratory, four hours. Requisites: courses 10, 100A, 100B, or 120A. Designed for departmental majors. Methods, designs, and issues in conduct of clinical psychology research. Students develop and conduct research. Content varies by instructor, with concentration on one of following: schizophrenia, mood disorders, anxiety disorders, childhood disorders, psychophysiological methods, observational methods with couples and families. Letter grading.

127. Abnormal Psychology. (4) Lecture, three hours. Requisite: course 10. Study of dynamics and prevention of abnormal behavior, including neuroses, psychoses, character disorders, psychosomatic reactions, and other abnormal personality patterns. P/NP or letter grading.

129A. Personality Measurement. (4) Lecture, three hours; discussion, one hour. Requisite: course 10. Open to students with credit for course 127. Overview of recent theories and research on different forms of psychopathology, such as depression, anxiety, schizophrenia, and childhood disorders. Discussion of assessment and treatment approaches. In-depth exploration of selected topics during discussion meetings. P/NP or letter grading.

129B. Introduction to Psychoanalysis. (4) Lecture, three hours. Requisites: courses 10, 100A. Development of Freud’s ideas from 1895 to 1925, with emphasis on how his theory evolved from a drive-based reinforcement model to the structural theory in which unconscious fantasy plays a crucial role. Coverage of developments beyond Freud, especially work of the British school under leadership of Klein, Winnicot, and Bibr. P/NP or letter grading.

129C. Culture and Mental Health. (4) Lecture, two hours; discussion, one hour. Requisites: courses 10, 100A. Focus on cultural influences on behavior in general, and culture and mental health in particular. Emphasis on cultural groups that comprise major U.S. ethnic groups (i.e., African Americans, Latinos/Hispanics, Asian Americans, and American Indians). P/NP or letter grading.

129D. Personality. (4) Lecture, three hours. Requisite: course 10. Survey of major topics in field of personality, including personality theory, personality assessment, and physiological, behavioral, and cultural role of perception, learning, and motivation in personality.


129F. Clinical Psychology of Childhood and Adolescence. (4) Lecture, two hours; discussion, one hour. Requisite: course 127. Survey of child and adolescent psychopathology and psychotherapy from a developmental perspective. Coverage includes such conditions as anxiety disorders, obsessive-compulsive disorder, and attention problems, eating disorders, and autism, with information on prevalence, causes, common treatments, outcomes, and prevention. P/NP or letter grading.

130. Developmental Psychology. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A. Designed for juniors/seniors. Elaboration of developmental aspects of physical, mental, social, and emotional growth from birth to adolescence. P/NP or letter grading.

131. Research in Developmental Psychology. (4) Lecture, one hour; laboratory, three hours. Requisites: courses 10, 100A, 100B, and 130 or one course from 133A through 133I. Designed for Psychology and Cognitive Science majors. Forms of scientific writing; ethics of research, especially with minors; special advantages and problems of asking developmental research questions; relevant methodologies for experimental and observational work; data analyses and data presentation options. Letter grading.

132A. Learning Disabilities in Perspective. (4) (Formerly numbered 132.) Lecture, three hours. Designed for juniors/seniors. Introduction to major U.S. ethnic groups (i.e., African Americans, Latinos/Hispanics, Asian Americans, and American Indians). P/NP or letter grading.

132B. Mental Health in Schools: Policy and Practice. (4) Seminar, three hours. Limited to juniors/seniors. Policies, models, and mechanisms for mental health in schools. Psychopathology placed into broader perspective of normal development and psychosocial problems to explore range of 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 such as development of perception, language development, and acquisition of concepts and domain-specific language. P/NP or letter grading.
133C. Language Development. (4) Lecture, three hours. Requisites: courses 10, 100A. Application of principles of cognitive development, learning, and perception to educational problems. Topics include first and second language acquisition (sounds, meanings, grammatical structures), learning mechanisms, communication skills, and relation between language and thought in children. P/NP or letter grading.

133D. Social and Personality Development. (4) Lecture, three hours. Requisites: courses 10, 100A. Theory and research on social and personality development during childhood. Topics include parent/child attachment, temperament, self-control, aggression, sex-typing, self-concept, moral reasoning and behavior, social status and social skills, and peer group relations. 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 computational issues in perception, research and theory about initial perceptual capacities, and some sensory foundations. P/NP or letter grading.

133F. Psychology and Education. (4) Lecture, three hours. Requisites: courses 10, 100A. Application of principles of cognitive development, learning, and perception to educational problems. Topics include general instructional issues, psychology of reading and mathematics, exceptional children, early childhood education, and the broader community. 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 autobiographical study. Students are exposed to 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.

133I. Applied Developmental Psychology. (4) Lecture, three hours. Requisites: courses 10, 100A. Application of developmental psychology to issues pertaining to improving well-being of children and their families. Topics include quality of child care, patterns and ranges of normal child behaviors, developmental disabilities, safety, legal, and public policy issues, child-rearing practices. P/NP or letter grading.


134B. Applied Developmental Psychology: Preschool/ School-Age Care and Education. (4) Lecture, three hours. Requisites: Applied Developmental Psychology minors. Coverage of children three to eight years old. Topics include physical, cognitive, social, and emotional development of children, developmentally appropriate practices, child care quality, role of educator/caregiver, and other related issues. Letter grading.


134D. Fieldwork in Applied Developmental Psychology. (2) Fieldwork, 86 hours per term. Enforced corequisite: course 134A. Designed for Applied Developmental Psychology minors. Fieldwork in applications of developmental psychology to support and illustrate, in applied setting, theories and research findings presented in lecture. P/NP grading.

134E. Advanced Fieldwork in Applied Developmental Psychology. (2) Fieldwork, 86 hours per term. Enforced corequisite: course 134A. Designed for Applied Developmental Psychology minors. Fieldwork in advanced applications of developmental psychology to support and illustrate, in applied setting, theories and research findings presented in lecture. P/NP grading.

134F. Infant Care and Development. (4) Lecture, three hours. Requisites: course 10, one course from 130 or 133B through 133I, one statistics course. In-depth study of research findings and theories used to understand infant development from conception through second year of life, including cross-cultural application of this knowledge to various populations. P/NP or letter grading.

134G. Early Childhood Curriculum. (4) Lecture, three hours. Requisites: course 10, one course from 130 or 133B through 133I, one statistics course. Examination of methods, materials, and philosophies that enhance development of children in context of childcare settings. Topics include issues of multiculturalism, antibias curriculum, and special needs adaptations. P/NP or letter grading.

134H. Child, Family, and Community. (4) Lecture, three hours. Requisites: course 10, one course from 130 or 133B through 133I, one statistics course. Examination of role of early childhood educators within context of diverse cultural beliefs, and cultural backgrounds and impact of these dynamics on children's development. P/NP or letter grading.

135. Social Psychology. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A. Designed for seniors/juniors. 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.

136A. Social Psychology Laboratory. (4) Lecture, one hour; laboratory, four hours. Requisites: courses 10, 100A, 100B, 135. Designed for Psychology majors. Research experience with nonexperimental methods for study of social attitudes or behavior, including field research, naturalistic observation, or questionnaires. P/NP or letter grading.

136B. Nonexperimental Methods in Social Psychology. (4) Lecture, two hours; laboratory, two hours. Requisites: courses 10, 100A, 100B, 135. Designed for Psychology majors. Research experience with nonexperimental methods for study of social attitudes or behavior, including field research, naturalistic observation, or questionnaires. P/NP or letter grading.

136C. Survey Methods in Psychology. (4) Lecture, two hours; laboratory, three hours. Requisites: courses 10, 100A, 100B, 135. Designed for Psychology majors. Survey research in psychology, with particular emphasis on surveys of social and political attitudes. Actual experience in systematic survey research such as that done by media polling agencies, market research companies, and academic survey research centers. Topics include survey design, sampling, interviewing techniques, response rates, questionnaire design, data coding, and analysis. Training in telephone interviewing techniques in laboratories. P/NP or letter grading.

137A. Sport Psychology. (4) Lecture, three hours. Designed for junior/senior Psychology majors. Introduction to field of sport psychology. Coverage of research and applied aspects of a range of topics, including youth sport participants as well as world-class performers.

137C. Close Relationships. (4) Lecture, three hours. Requisites: courses 10, 100A, 135. Examination of research and theory about friendship, dating, and marriage, with emphasis on how these relationships are affected by gender and changing sex roles. P/NP or letter grading.

137E. Work Behavior of Women and Men. (4) (Same as Women's Studies M137E.) Lecture, two and one-half hours. Requisite: course 10 or Women's Studies 10. Designed for seniors. Examination of work behavior of women and men. Topics include achievements of career choice, job findings, leadership, performance evaluation, discrimination and evaluation bias, job satisfaction, interdependence of work and family roles. P/NP or letter grading.

137F. Introduction to Sport Psychology. (4) Lecture, three hours. Designed for juniors/seniors. Survey of research and theory in sport psychology, including applied settings and team dynamics, moral development and aggression, personality, motivation, fan behavior, and performance enhancement. Consideration of youth sport through the world-class athlete.

137I. Interpersonal Influence and Social Power. (4) Lecture, three hours. Requisite: course 135. Theoretical and research focusing on how people influence one another and resist such influence, and on the bases of social power. Motivations and effects of influence for the powerholder and target of influence. Applications to such problems and issues as power and leadership in organizations, interpersonal influence and health, power relations in the family, interpersonal influence in everyday life, social power of political figures.

138. Political Elections: Political Psychology. (4) (Same as Political Science M138.) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 10. Designed for juniors/seniors. Examination of political behavior, political socialization, personality and politics, racial conflict, and psychological analysis of political issues.

140. Introduction to Study of Aging. (4) (Same as Gerontology M140 and Social Welfare M140.) Lecture, three hours. Designed for juniors/seniors. Perspectives on major features of human aging — biological, social, psychological, and humanistic. Introduction to information on the range of influences on aging to prepare students for subsequent specialization. P/NP or letter grading.

142H. Advanced Statistical Methods in Psychology (Honors). (4) Lecture, three hours; laboratory, two hours. Requisites: courses 100A, 100B. Survey of statistical techniques commonly used in psychology, education, and behavioral and social sciences: correlation techniques, analysis variance, and multiple regression. P/NP or letter grading.

144. Measurement and Its Applications. (4) (Formerly numbered 144.) (Same as Statistics M144.) Lecture, three hours. Requisites: course 100A, Statistics 10, 11, 12, 13, 14. Selected theories for quantification of psychological, educational, social, and behavioral science data. Classical test, factor analysis, gereration, item analysis, item response, scale theory, computer measurement, computer-adaptive, and related theories. Construction of tests and measures and their reliability, validity, and bias. P/NP or letter grading.

147A. Psychology of Lesbian Experience. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M147A and Women's Studies M147A.) Lecture, two hours; discussion, one hour. Requisite: course 10 or Lesbian, Gay, Bisexual, and Transgender Studies M147A. Psychology of Lesbian Experience. (4) (Same as Gerontology M140 and Social Welfare M140.) Lecture, three hours. Designed for seniors/juniors. Perspeetives on major features of human aging — biological, social, psychological, and humanistic. Introduction to information on the range of influences on aging to prepare students for subsequent specialization. P/NP or letter grading.

146. Measurement and Its Applications. (4) (Formerly numbered 144.) (Same as Statistics M144.) Lecture, three hours. Requisites: course 100A, Statistics 10, 11, 12, 13, 14. Selected theories for quantification of psychological, educational, social, and behavioral science data. Classical test, factor analysis, gereration, item analysis, item response, scale theory, computer measurement, computer-adaptive, and related theories. Construction of tests and measures and their reliability, validity, and bias. P/NP or letter grading.

147A. Psychology of Lesbian Experience. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M147A and Women's Studies M147A.) Lecture, two hours; discussion, one hour. Requisite: course 10 or Lesbian, Gay, Bisexual, and Transgender Studies M147A. Psychology of Lesbian Experience. (4) (Same as Gerontology M140 and Social Welfare M140.) Lecture, three hours. Designed for seniors/juniors. Perspeetives on major features of human aging — biological, social, psychological, and humanistic. Introduction to information on the range of influences on aging to prepare students for subsequent specialization. P/NP or letter grading.

150. Introduction to Health Psychology. (4) (Formerly numbered 137D.) Lecture, three hours. Requisites: course 10. Not open for credit to students with credit for former course 137D. Areas of health, illness, and treatment, and delivery of treatment that can be elicited by understanding of psychological concepts and research, psychological perspective on these problems, and how psychological vulnerabilities might be enlarged and extended in medical area. P/NP or letter grading.
of suicide and homicide have changed, as well as so-
homicides. Review of historic and contemporary stud-
sexual orientation, and class. Analysis of strength of
according to social factors such as age, gender, race,
do not occur randomly in society but are stratified ac-

177. Counseling Relationships. (4) Lecture, two hours; discussion, two hours. Requisites: courses 10, 100A, 100B, 127. Designed for Junior/Senior Psychology majors. Conceptual and empirical foundations of psy-
chological counseling; comparison of alternative mod-
els of counseling processes. Emphasis on counseling
approaches in community mental health areas such as
drug abuse, suicide prevention, and crisis interven-
tion. P/NP or letter grading.

178. Human Motivation. (4) Lecture, three hours. Designed for juniors/seniors. Examination of theories of human motivation, experimental findings support-
ing the theories, and history of study of motivation.
Topics include sociobiology, conflict, aspiration level,
achievement strivings, and causal attributions.

179A. Health Behavior and Health Status of Ethnic Groups: Behavioral Perspective. (4) Lecture, three hours. Requisite: course 10. Designed for juniors/se-

180. Contemporary Problems in Developmental Disabilities. (4) (Formerly numbered M180A.) (Same as Psychiatry M180.) Seminar, three hours. Corequi-
site: course M181A. Limited to Developmental Dis-
abilities Program students. Examination of broad spectrum of issues related to mental retardation, intel-
ligence and IQ, genetics, neurobiology, and other de-
velopmental disabilities. P/NP or letter grading.

181A. Research in Contemporary Problems in Developmental Disabilities. (4) (Same as Psychia-
M181A.) Lecture, one hour; laboratory, eight hours.
Corequisite: course M180. Limited to Develop-
mental Disabilities Program students. Research expe-
rience. In Progress grading (credit to be given only on completion of course M181B).

181B. Research in Contemporary Problems in Developmental Disabilities. (4) (Same as Psychia-
M181B.) Lecture, one hour; laboratory, eight hours.

184A-184B, 186A-186B. Psychological Opportunity Program Seminars. (2-2) Seminar, 90 minutes. De-
signed to bring together Psychology Research Op-
portunity Program (PROPS) students undertaking su-
ervised 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 fac-
culty member. P/NP grading.

185. Research Practicum in Psychology. (3) Labo-
ratory, seven hours. Corequisite course 194D. Limit-
ed to juniors/seniors. Practical applications of psy-
chology through research under guidance of faculty
mentor. Only 12 units from any combination of cours-
es 185, 185B, 185C may be applied to toward under-
graduate degree. May not be applied to
ward course requirements for any Psychology De-
partment major. Individual contract required. Infor-
mation and contracts may be obtained from Un-
dergraduate Advising Office, 1531 Franz Hall. P/NP grading.

186A. Cognitive Science Laboratory: Introduction to Theory and Simulation. (4) Lecture, two and one-
half hours; discussion, 30 minutes; laboratory, three hours. Requisites: courses 10, 85, 100A, 100B, Pro-
gram in Computing 15. Designed for Junior/senior de-
partmental majors. Models in several psychological domains (e.g., visual perception, categorization, rea-
sion time and problem solving) and computational models in-
clude semantic networks, search, production sys-
tems, connectionist networks, and mathematical models. Mnines and discussions interwoven with
computer simulations written in common Lisp. P/NP or letter grading.

186B. Cognitive Science Laboratory: Neural Net-
works. (4) Lecture, two and one-half hours; discus-
sion, 30 minutes; laboratory, three hours. Requisite: 

186C. Cognitive Science Laboratory: Psy-
chophysiological Methods. (4) Lecture, two hours;
laboratory, two hours. Requisites: courses 10, 85, 100A, 100B. Designed for Junior/senior depart-
mental majors. Lectures and laboratory work that 

186D. Neuroinformatics Studio. (4) Laboratory, four hours. Requisites: courses 10, 100A, 100B, 115. Lim-
ited to departmental majors. Neuroinformatics is ap-
plied to informatic methods, the study of neurocogni-
tion and behavior. In digital studio environment, ap-
plication of such methods to problems in neuron electrophysiology, neural networks, neuroanatomy, and neurophysiology.

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 pro-
cedures. Outside speakers utilized in presentation of
these materials. Students participate in presentations and/or discussions.

187B. Advanced Psychology and Law. (4) Le-
ture, three hours; discussion, one hour. Requisite: course 187A. Designed for juniors/seniors. Study of additional topics on legal psychology, including gang violence, theories of crime, corrections, repeat offend-
ers, community policing, and interrogation. Outside speakers utilized in presentation of these materials. P/NP or letter grading.

187C. Sex and Law. (4) Lecture, three hours. Limited to juniors/seniors. Examination of Constitutional foun-
dation for sexual rights in America, with focus on free-
doms of speech and press, right to privacy, and Ninth Amendment rights reserved by the people. P/NP or letter grading.

188A. Special Seminars: Psychology. (4) Seminar, three hours. Limited to juniors/seniors. Departmental-
ly 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. P/NP or letter grading.

188B. Special Courses in Psychology. (4) Lecture, three hours. Designed for Junior/senior majors. De-
partmentally sponsored experimental or temporary courses. Topics of particular interest, such as those
those taught by visiting faculty members. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.
190. Research Colloquia in Psychology. (1) Seminar, one hour. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

191. Variable Topics Research Seminars: Psychology. (1) Seminar, one hour. Limited to juniors/seniors. Research seminar on selected topics in psychology. Reading, discussion, and development of culminating project. May be repeated for credit. P/NP grading.

191A-191B1N-191CH. Departmental Honors Research Seminars. (2-2-2) (Formerly numbered 190AH-190BH-190CH.) Seminar, two hours. Enforced corequisite: course 198. Course 191AH is required to 191BH, which is requisite to 191CH. Limited to psychology honors program students. Opportunity for development and analysis of creative ideas through individual research projects with faculty sponsor and discussion of student and faculty research presentations. Information and applications may be obtained from Undergraduate Advising Office, 1531 Franz Hall. If approved in advance by Undergraduate Office, courses 191A-191B 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 and supervised practicum for advanced 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 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.

193. Journal Club Seminars: Psychology. (1) Seminar, one hour. Limited to undergraduate students. 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 papers. Research fields and topics vary by instructor. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May not be applied toward course requirements for any Psychology Department major. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

194B. Research Group Seminars: Psychology. (1) Seminar, one hour. Corequisite: course 196A (3-unit option). Limited to juniors/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 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.

194D. Research Group Seminars: Practicum. (1) Seminar, one hour. Corequisite: course 185. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field or of research of faculty members or students. 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.

195A. Community Internships in Psychology. (2) Tutorial (approved community setting), six hours. Corequisite: course 194A. Limited to juniors/seniors. Internship in an approved community supervised setting in community agency or business. Students meet on regular basis with sponsor and provide periodic reports of their experience. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May not be applied toward course requirements for any Psychology Department major. Individual contract with supervising placement sponsor required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

195B. Corporate Internships in Cognitive Science. (4) Tutorial, open to junior/senior Cognitive Science majors. Practical applications of cognitive science through internship experience in supervised setting. Students meet on regular basis with supervisor and provide periodic reports of their experience. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May 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.

195C. Internship in Developmental Disabilities. (1) Tutorial, eight hours. Corequisite: course 195A. Limited to students. Integration of theory and practice through graduate internship in supervised setting. Students work with staff at off-campus locations, providing wide variety of meaningful services to persons with developmental disabilities. Students write weekly reflective journals and present them for review at biweekly meetings with faculty sponsor. Final research paper required. Individual contract with supervising faculty member required. P/NP grading.

196A. Research Apprenticeship in Cognitive Science. (3 to 4) Tutorial, eight hours. Corequisite: course 194B. Limited to juniors/seniors. Practical applications of psychology through research under guidance of faculty mentor. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May not be applied toward course requirements for any Psychology Department major. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

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.

196C. Internship in Developmental Disabilities. (1) Tutorial, eight hours. Corequisite: course 195A. Limited to students. Integration of theory and practice through graduate internship in supervised setting. Students work with staff at off-campus locations, providing wide variety of meaningful services to persons with developmental disabilities. Students write weekly reflective journals and present them for review at biweekly meetings with faculty sponsor. Final research paper required. Individual contract with supervising faculty member required. P/NP grading.

196D. Research Apprenticeship in Cognitive Science. (3 to 4) Tutorial, eight hours. Corequisite: course 194B. Limited to juniors/seniors. Practical applications of psychology through research under guidance of faculty mentor. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree. May not be applied toward course requirements for any Psychology Department major. Individual contract with supervising faculty member required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.
204A. Basic Motivational Processes. (4) Lecture, three hours. Designed for graduate students. Analysis, using behavioral systems approach, of basic motivated behaviors such as drinking, eating, and reproduction. Same approach also applied to phenomena such as acquired motivation, reinforcement, and drug addiction. Historical survey of behavioral analyses of motivation and goal-directed behavior. S/U or letter grading.

204B. Theories of Learning. (4) Discussion, three hours. Requisite: course 200A. Critical discussion and in-depth analysis of current major theoretical approaches to associative learning, with emphasis on recent experimental analyses of conditioning phenomena.

204C. Evaluative Processes. (4) Lecture, three hours. Designed for graduate psychology students. Lectures and discussion on current research in application of learning principles to clinical and social problems such as alcohol and drug abuse, aggression, fear management, mental retardation, behavioral medicine, autism/schizophrenia, etc. S/U or letter grading.

204D. Fear and Anxiety. (4) Lecture, three hours. Preparation: graduate training. Presentation of theoretical and empirical advances, from biological and behavioral perspectives, in the area of fear and anxiety. Integration of animal and human research.

205A. Cortical Plasticity and Perceptual Learning. (2) Lecture, three hours. Designed for graduate students. Emphasis on the neural basis of perceptual learning. Overview of literature on cortical plasticity and how it relates to different forms of perceptual learning in visual, auditory, and somatosensory modalities. Review of mechanisms of cortical plasticity, including basic features of long-term synaptic plasticity and computational models of cortical processing. Letter grading.

205B. Human Neurophysiology. (2) Lecture, three hours. Designed for graduate students. Examination of higher cognitive processes in terms of neural mechanisms that underlie them. Topics include cortical modularity and organization, coordinated sensory representation, language, regional functional specialization, attention, and regulation of cortical function by extracortical systems. Letter grading.


205D. Clinical Psychopharmacology. (2) Lecture, three hours. Designed for graduate students. General principles of brain neurotransmitters, including synthesis, cell bodies and pathways, and receptor subtypes. General principles of drug administration and pharmacokinetics. Major classes of psychoactive drugs, animal models, and “atypical” compounds. Letter grading.

205E. Psychobiology of Emotion and Stress. (2) Lecture, three hours. Designed for graduate students. Overview of literature on role of brain and autonomic and endocrine systems in emotion and stress-related responses. Some emphasis on involvement of neurotransmitters, neuropeptides, and hormones in emotional plasticity, visceral function, and bodily diseases. Letter grading.


205G. Behavior Genetics. (2) Not same as course 205G prior to Winter Quarter 2008.) Lecture, three hours. Designed for graduate students. In-depth analysis of field of behavior genetics, including methods for determining genetic and environmental influences and for locating and characterizing genes impacting these traits, as well as current knowledge of genetic contributions to emotion and behavior disorders thereof. Letter grading.

205K. Vision Neurobiology. (2) Lecture, three hours. Designed for graduate students. Exploration of anatomy, physiology, and computation in visual system, focusing on retina, visual cortex, and overall performance. Letter grading.

205L. Cognitive Neuroscience. (2) Lecture, three hours. Designed for graduate students. Overview of neural basis of higher cognitive functions, integrating anatomical, physiological, and behavioral approaches and incorporating clinical and experimental data. Systems covered include attention, perception, memory, language, and hemispheric specialization. Letter grading.


M208. Biology of Learning and Memory. (4) (Same as Molecular, Cellular, and Integrative Physiology M200G, Neurobiology M200G, and Neuroscience M226.) Lecture, four hours. Molecular, cellular, circuit, systems, neuroanatomy, theory, and models of learning and memory. Cross-disciplinary focus on learning and memory to provide integrative view of subject that emphasizes emerging findings that take advantage of novel groundbreaking models. Letter grading.


212. Evaluation of Research Literature in Physiological Psychology. (4) Requisite: one psychology 200 series course. Psychologists critical of current research presented by members of seminar and their significance and methodology discussed and criticized in depth. May be repeated for credit. S/U grading.


215A. Health Psychology. (2) Lecture, 227.) 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 care and management of chronically ill or disabled, and practice of institutional healthcare and self-care. Letter grading.

220A. Social Psychology. (4) Lecture, three hours. Designed for graduate psychology students. Intensive consideration of concepts, theories, and major problems in social psychology.

231. Psychology of Gender. (4) Seminar, three hours. Preparation: one prior course on gender/women's studies. Critical evaluation of current research and theory concerning psychology of gender. Drawing on work from various areas of psychology to understand sources of gender differentiation and its consequences for human behavior and social interaction.

232. Human Sexuality. (4) Lecture, three hours. Designed for graduate students. Intended to teach students how to carry out research on human sexual behavior. Contents include theory construction, scale development, psychological and endocrinological implications, radioimmunosay (measuring hormones in blood sample), ethical issues, methodological and statistical considerations, measurement of sexual arousal, latency, and self-participation 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 related 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 and specific response; variables of approach-avoidance behaviors. Individual differences and drug-induced states as these relate to emotional response dimensions used to explain within-individual differenc- es in response to same environment over time or between-individual differences to same situation. Review of literature relating information rate from environments to arousal and preferences for those environments.

234. Social Psychological Aspects of Competitive Youth Sport. (4) Review of research concerning social psychological aspects of competitive sport for children. Sport is presented as a major achievement domain for young participants. Topics include sources and consequences of competitive stress, significant adult influences and interactions, predictors of performance, depression and anxiety, and dropping out, and socialization through sport.

235. Personality. (4) Survey of cognitive, analytic, and learning theory approaches to study of personality. Emphasis on intensive exploration of selected concepts and related research in social psychology designed to identify basic dimensions for analysis of normal/abnormal personality development.

236. Interdisciplinary Relationship Science. (4) Lecture, three hours. Limited to graduate students. Emphasis on intensive exploration of selected concepts and related research in social psychology designed to identify basic dimensions for analysis of normal/abnormal personality development.

240A. Language and Cognitive Development. (4) Lecture, three hours. Preparation: one undergraduate developmental psychology course in cognitive or language development. Designed for graduate students. Consideration of major topics and concepts, key theories, latest methods, and research findings in development of language and cognition. S/U or letter grading.

240B. Social and Emotional Development. (4) Lecture, three hours. Preparation: one undergraduate developmental psychology course in social development or related topic. Designed for graduate students. Consideration of major topics and concepts, key theories, latest methods, and research findings in social and emotional development. S/U or letter grading.

241. Current Developments in Developmental Psychology. (1) Discussion, 90 minutes. Designed for graduate developmental psychology students. Presentation of papers on current advances in developmental psychology and closely related areas by experts in the field. Emphasis on approaches to a problem, making it suitable to interweave presentations by graduate students. S/U grading.

242A-M242G. Seminars: Developmental Psychology. (4 each) Course may be taken independently and may be repeated for credit.

242A. Perceptual-Motor Development. (4) Seminar, three hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

242B. Cognitive Development. (4) Seminar, three hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

242C. Socialization. (4) Seminar, three hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

242D. Social and Development. Education. (4) (Same as Education 217A.) Seminar, four hours. Biological and social aspects of development. Development in context of current research and theoretical models; consideration of theoretical and methodological research on family, peer group, and school; application of developmental theory and research to educational practice. S/U or letter grading.

242F. Development of Language and Communication. (4) Seminar, three hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

242G. Adolescent Development. (4) (Same as Education 217F.) Seminar, four hours. Requisites: courses 240A, 240B. May be taken independently and may be repeated for credit. S/U or letter grading.

243A. Language and Cognitive Development. (4) Seminar, three hours. Requisites: courses 240A, 240B. Socialization processes in human development and implication for social/political, educational, research issues, values, and societal change. In Progress (243A) and S/U or letter (243B) grading.

244. Critical Problems in Developmental Psychology. (4) Lecture, three hours. Requisites: courses 240A, 240B. Current problems; content varies depending on interest of class and instructor. May be repeated for credit with consent of instructor.

245. Personality Development and Education. (4) (Same as Education 217C.) Review of research and theory of critical content areas in personality development that bear on school performance: achievement motivation, self-concept, aggression, sex differences, motivation, self-esteem, and status of emotional behavior in personality theory and development.

246. Psychological Aspects of Mental Retardation. (4) (Same as Psychiatry M246.) Lecture, 90 minutes. Dissection of problems 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.

247. Culture, Brain, and Development. (4) (Formerly numbered 247.) (Same as Anthropology M200S, Applied Linguistics and TESL M233, and Education M286.) 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.

248. Culture, Brain, and Development Forum. (1) (Same as Anthropology M203, Applied Linguistics and TESL M232, Education M285, and Neuroscience M293.) Seminar, 90 minutes every other week. Interdisciplinary seminar series to provide students with exposure to current research in understanding complex relationship between culture, brain, and development. S/U grading.

249. Evaluation Research. (4) Requisites: courses 250A, 250B. Introduction to evaluation research in psychology, with emphasis on clinical, community, and social psychology applications. Survey includes policy and strategy issues, design of evaluative studies, data analysis, and utilization of findings.


250B. Advanced Psychological Statistics. (4) Advanced experimental design and planning of investigations.

251A-251B-251C. Research Methods. (4-4-4) Tutorial, to be arranged. Designed for graduate psychology students. Students design and conduct original research projects under supervision of instructor in charge. It is anticipated that many students will complete their project in two terms (normally three terms allowed). S/U (251A, 251B) and S/U or letter (251C) grading.

252A. Multivariate Analysis. (4) Lecture, three hours. Requisites: courses 250A, 250B. Introduction to analysis of data having multiple dependent variables. Topics include continuous multivariate distributions, multiple regression, multivariate analysis of variance, discriminant analysis, log-linear models, multivariate categorical designs, and ordered categorical variables. Applications from various areas of psychology.


254A. Computing Methods for Psychology. (4) Lecture, three hours. Requisites: courses 250A, 250B. Use of MATLAB, but only basic programming knowledge assumed; no prior knowledge of MATLAB required. Designed to teach basic computer methods relevant to work in experimental psychology and cognitive science. Topics include simulation/modeling, statistical data analysis, and stimulus presentation. S/U or letter grading.
255A. Quantitative Aspects of Assessment. (4) Lecture, four hours. Requisites: courses 250A, 250B. Introduction to issues concerning empirical measurement of abstract constructs using both classical and modern empirical techniques. Hands-on approach allows students to develop practical experience. In addition to discussion of issues concerning reliability and validity, topics include exposure to analytic approaches, including item response theory, multiple regression, principal components analysis, exploratory factor analysis, confirmatory factor analysis, path analysis, and structural equation modeling. S/U or letter grading.


M257. Multivariate Analysis with Latent Variables. (4) (Same as Political Science M208D and Statistics M268D.) 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 structural model analytic models. Structural equation models, including path and simultaneous equation models. Parameter estimation, hypothesis testing, and other statistical issues. Computer implementation. S/U or letter grading.


259. Quantitative Methods in Cognitive Psychol- ogy. (4) Requisites: courses 250A, 250B. Number of nonstatistical mathematical methods and techniques commonly used in cognitive psychology. Topics include Markov chains, other stochastic processes, queuing theory, information theory, frequency analysis, etc.

260A-260B-260C. Proseminars: Cognitive Psychol- ogy. (1-1-1) Presentation of research topics by students, faculty, and visiting scholars. May be repeated for credit.

261. Perception. (S/U or letter grading. Contempo- rary theory and research in psycholinguistics? How do these systems process information? Consider the questions: Why do things look, sound, smell, taste, or feel as they do? What is the nature of perceptual systems? How do these systems process information?

262. Human Learning and Memory. (4) Seminar, three hours. Limited to graduate students. Analysis and discussion of research on cognitive and neural bases of decision making. S/U or letter grading.

268A-268E. Seminars: Human Information Pro- cessing. (4 each) Seminar, three hours. Limited to graduate students. Analysis and discussion of research on cognitive and neural bases of decision making. S/U or letter grading.

269. Seminar: Cognitive Psychology. (4) Seminar, three hours. Limited to graduate students. Concepts, theories, and pragmatics of human-computer interaction. Topics include optimizing Web and product interfaces to enhance quality of user experience, with focus on applying principles of cognition, perception, learning, and memory to create human-computer interactions that are consonant with user needs and capabilities. Course projects include creating and testing actual Web-based applications. S/U or letter grading.

M267. Multivariate Analysis with Latent Variables. (4) (Same as Political Science M208D and Statistics M268D.) 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 model analytic models. Structural equation models, including path and simultaneous equation models. Parameter estimation, hypothesis testing, and other statistical issues. Computer implementation. S/U or letter grading.


271D. Clinical Research Laboratory. (2) Discussion, one hour; laboratory, one hour. Corequisites: courses 270A or 270B or 270C, and 271A or 271B or 271C. Designed for psychology students. Acquaints students with faculty research interests and involves them in their course 251 research at an early stage to insure completion. S/U grading.


272A-272G. Advanced Clinical Psychological Methods. (4 each) Each course may be taken independently for credit.

272A. Behavior Modification with Children. (4) Seminar, three hours. Requisites: courses 271A, 271B, 271C. Designed for clinical intervention and assessment 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 independent for credit.

272C. Clinical Interventions for Psychological Problems of Children. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. May be taken independently for credit.

272D. Family Therapy and Family Dynamics. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. May be taken independently for credit.

272E. Special Problems. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. May be taken independently for credit.

272F. Behavior Modification with Adults. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. Designed for second-year graduate clinical psychology students. Current cognitive behavior modification principles and techniques. Major conceptual issues; specific techniques demonstrated and practiced by students to cover a range of adult problems such as depression, stress and anxiety, anger management, assertion problems. May be taken independently for credit.

272G. Marital Therapies. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisites courses 270A, 270B, 270C, 271A, 271B, 271C. Examination of assessment and treatment approaches for relationship problems in couples. Presentation, discussion, and illustration of procedures derived from social-learning, psychodynamic, and systems theories, with relevant research findings. May be taken independently for credit.

273A-273B-273C. Professional and Ethical Issues in Clinical Psychology. (2-2-2) Lecture, one hour; discussion, one hour. Designed for graduate clinical psychology students. Year-long course sequence covers topics of topical interest for clinical psychologists in their clinical work, including legal and ethical issues, child abuse, suicide assessment, issues in empirically validated treatments, psychiatric consultation and psychopharmacological issues, working with diverse client populations, etc. S/U or letter grading.

M274. Health Status and Health Behaviors of Ra- cial and Ethnic Minority Populations. (4) (Formerly numbered 274.) (Same as Health Services M274.) Lecture, three hours; discussion, one hour. Limited to graduate students. Overview of physical and mental health behaviors and status of major racial/ethnic groups in the U.S. Where appropriate, discussion of interventions and issues as well. S/U or letter grading.

275. Conceptual and Methodological Issues in Community Intervention. (4) Lecture, three hours. Limited to graduate students. Conceptualization of social problems from macrosocial perspective, discussion of core concepts, and a small number of theoretical models for select illustrative problems; discussion and critical evaluation of both individual-focused and community-focused interventions with high-risk and impacted populations. S/U or letter grading.

276. Clinical Approaches to Children with Learn- ing and Related Behavior Problems. (4) Lecture, three hours; discussion, one hour. Designed for Ph.D. students. Theoretical and research issues and problems related to purposes of and practices involved in assessment and correction approaches for children with learning and behavior problems. Practical experiences to illustrate course content and provide opportunities to improve research and clinical competence. S/U or letter grading.

277. Advanced Clinical Assessment. (4) Lecture, four hours; laboratory, three hours. Designed for graduate clinical psychology students. Modern empirical assessment techniques, clinical interpretation, case studies, psychological test battery, psychopathology, and application of assessment to problems in psychotherapy. S/U or letter grading.


M280. Affective Disorders. (2 or 4) (Same as Psy- chiatry M234.) Seminar, two hours. General topics related to primary affective disorders (depression, mania, and cyclothymic depressive illness), including diagnosis, pharmacology, epidemiology, psychology, phenomenology, biology, and treatment. Students enrolled for 4 units are assigned to a more intensive adult medicine list and required to make a presentation or prepare a research paper. S/U or letter grading.
283. Psychopathology. (4) Lecture, three hours. Survey of dominant psychological attributes of particular forms of psychopathology, including analysis of status of various theories concerned with etiology and mediating mechanisms of personality, neurotic, schizophrenic spectrum, and affective disturbances. S/U or letter grading.


285. Cognitive Behavior Therapy with Children: Treatment and Systems of Care. (2 or 4) (Same as Psychiatry M277.) Seminar, 90 minutes. Designed for first-year graduate clinical psychology students. Critical evaluation and integration of existing research on social psychological development of minority child. Emphasis on socialization of cognitive and personality and psychological empirical clarifying issues raised in this area of developmental study. S/U or letter grading.


289A-289B-289C. Current Issues in Clinical Psychology. (1-1-1) Discussion, two hours. Designed for first-year graduate clinical psychology students. Preparation: selection of research and applied topics relevant to clinical psychology. In Progress (289A, 289B) and S/U (289C) grading.


292. Biobehavioral Mechanisms of Stress and Disease. (4) Lecture, three hours. Attention to variety of specific disorders, with focus on explanatory models and approaches to intervention. S/U or letter grading.

292B. Psychosocial Contributors to Ethnic Disparities in Health. (4) Seminar, three hours. Limited to graduate students. Role of social class, gender, and other psychosocial factors in accounting for disparities in physical and psychological health in racial-ethnic groups. Attention to variety of specific diseases, with focus on explanatory models and approaches to intervention. S/U or letter grading.


296. Research Topics in Psychology. (1) Research group meeting, one hour. Limited to graduate students. Discussion of current literature, new ideas, methodological issues, and preliminary findings. Research presentations and opportunities for feedback on current and proposed research activity to encourage, support, and facilitate student research expertise. Assigned readings included. S/U grading.


298. Special Problems in Psychology. (4) Discussion, three hours. Content depends on interests of particular instructor. May be repeated for credit. S/U or letter grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

401. Fieldwork in Clinical Psychology. (1 to 12) Fieldwork, to be arranged. Requisites: courses 271A, 271B, 271C. Students on practicum assignments are required to register for this course each term (except by consent of clinical program committee). S/U or letter grading.

402. Clinical Research Practicum. (2) Fieldwork, two hours. Faculty and graduate students who share interests discuss current literature, new ideas, methodological issues, and preliminary findings. Meetings include research presentations and opportunities for feedback on current research activity to encourage, support, and facilitate student research expertise. Assigned reading included. S/U grading.

403. Special Topics Study Course. (1 to 4) Discussion, one to four hours. Under faculty supervision, group of students meets each week for quarter in self-study group to pursue specific topic of their choice that is not covered in other department courses. S/U grading.

410A-410B-410C. Clinical Teaching and Supervision. (4-4-4) Clinic, two hours; other, one to four hours. Preparation: completion of Ph.D. comprehensive examinations, advancement to candidacy or preparation for dissertation research activity under way. Study and practice of knowledge, concepts, and theories on teaching and supervision of applied clinical psychology. S/U or letter grading.

410D-410E-410F. Clinical Assessment Supervision. (4-4-4) Clinic, two hours; other, one to four hours. Preparation: completion of Ph.D. comprehensive examinations, advancement to candidacy or preparation for dissertation research activity under way. Study and practice of knowledge, concepts, and theories on teaching and supervision of applied clinical psychology. Letter grading.

420A-420B. Health Psychology Practicum. (2-2) Fieldwork, to be arranged. Designed for graduate students. Determination of what areas of health, illness, treatment, and delivery of treatment can be elucidated by understanding of psychological concepts and research; psychological perspective on these problems; how psychological perspective might be extended and applied in medical area. Through practical field placement, students apply knowledge acquired in class to research observation and/or clinical work in field. S/U or letter grading.

421. Research in Social Psychology. (2) Discussion, two hours; reading and group work, four to six hours. Discussion of concepts and theories on teaching and research methods, make research presentations, and obtain feedback on current and proposed research activity. S/U grading.

423. Social Survey Research Practicum. (4) Prerequisite: one hour; additional hours to be arranged. Methods of survey sampling, conduct and management of computer-assisted telephone interview surveys. S/U or letter grading.

425. Health Psychology Lecture Series. (2) Lecture, one hour; additional hours to be arranged. Policies and research in health psychology from Los Angeles area present their research, programs, and/or clinical work as part of training in health psychology. May be repeated for credit. S/U grading.


454. Internship in Industrial Psychology. (2 to 4) Fieldwork, to be arranged. S/U or letter grading.


501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Research and Study in Psychology. (2 to 12) Tutorial, to be arranged. One 596 course is required during second year of graduate study, and one 598 or 599 course is required during each succeeding year of graduate study. (Terminal M.A. candidates are exempt from this requirement.) S/U grading.

597. Individual Studies. (2 to 12) Tutorial, to be arranged. Designed primarily as preparation for Ph.D. qualifying examinations. May be required by some area committees as requisite for taking examinations. S/U grading.

599. Research for Ph.D. Dissertation. (2 to 12) Tu- torial, to be arranged. Preparation: successful completion of qualifying examinations. One 599 course is required during each year following completion of qualifying examinations. S/U grading.
Scope and Objectives

The School of Public Affairs offers undergraduate minors in Public Affairs (see below) and in Urban and Regional Studies (see Urban Planning later in this section of the catalog).

Undergraduate Study

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.

To enter the 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 or counselor at (310) 206-4613 or spaminor@spa.ucla.edu.

Required Core Courses (8 units): Public Policy 10A and one course from 10B, 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, 104A, 104B, 104C, 104F, M108S, Urban Planning 141, M175; (b) labor and work cluster — Public Policy 141, C142, 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 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 CM165, may not be applied toward the minor. No more than three of the cluster and elective courses may be from a single department, and no more than two may be from outside the school.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

PUBLIC HEALTH SCHOOLWIDE PROGRAMS

School of Public Health

UCLA

A1-269 Center for the Health Sciences

Los Angeles, CA 90095-1772

(310) 825-5524

e-mail: info@ph.ucla.edu

http://www.ph.ucla.edu

Scope and Objectives

The profession of public health is responsible for the protection, preservation, and promotion of the health of communities and populations. Although the health problems of today differ from those of the past and of the future, the professionals who make up the field need to be trained to respond to broad community problems utilizing the basic ideas of prevention of disease and promotion of well-being. This goal can be achieved only with an understanding of the health status of the population through data gathering and analysis, as well as knowledge of the complex relationships between disease process in the social and biological environment of the community.

The field of public health today needs practitioners from many disciplines. Candidates for graduate study may come from a wide variety of academic backgrounds, training, or experience, including both the natural and social sciences.

Undergraduate Study

Public Health Minor

The Public Health minor is designed for students who wish to learn more about core public health functions, including the assessment and monitoring of the health of communities and populations at risk to identify health problems and priorities, the formulation of public policies designed to solve identified local and national health problems and priorities, the assurance that all populations have access to appropriate and cost-effective care, and the evaluation of the effectiveness of that care.

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 file a petition at the School of Public Health Student Services 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 Science 100, Environmental Health Sciences 100, Epidemiology 100, Health Services 100, Public Health 150 (must be taken during the first term of enrollment in the minor), and one elective course to be selected from Biostatistics 100B, Community Health Sciences 90, 91, 130, 132, 140, 160, 181, Health Services M110, C121, Public Health 53, M106, or M151. Transfer credit for any of the above is subject to school approval.

Each minor course must be taken for a letter grade, with a minimum grade of C in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/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 Public Health offers two school-wide degrees, Master of Public Health (M.P.H.) and Doctor of Public Health (Dr.P.H.), and M.S. and Ph.D. degrees in Biostatistics, Environmental Health Sciences, Epidemiology, Health Services, and Public Health (offered through the Department of Community Health Sciences). Two interdepartmental degree programs — the Doctor of Environmental Science and Engineering (D.Env), housed in the Department of Environmental Health Sciences, and the Ph.D. in Molecular Toxicology — are also available. The M.S. program in Preventive Medicine and Public Health is not admitting new students at this time. For information on the Preventive Medicine Residency program, see http://www.ph.ucla.edu/pmr/.

Public Health

Lower Division Courses

10. Introduction to Public Health. (4) Seminar, three hours. Designed for lower division students. Introduction to range of topics, issues, and frameworks to help students understand current public health issues and public health systems, policies, and practices. P/NP or letter grading.


Upper Division Courses

M106. Health in Chicano/Latino Population. (4) (Same as Chicana and Chicano Studies M106.) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. Examination of Chicano/Latino health status through life expectancy, causes of death, reportable diseases, services utilization, provider supply, and risk behaviors within demographic/immigration changes. Binational review of health effects in U.S. and Mexico. Letter grading.


M151. Healthcare in Transitional Communities. (4) (Same as Sociology M142.) Lecture, three hours; discussion, one hour. Analysis of social, cultural, economic, and political processes affecting organization and accessibility of healthcare in transitional and disadvantaged communities. Fieldwork required. Letter grading.

M160A. Health Outreach and Education for At-Risk Populations. (4) (Same as Medicine M160A.) Lecture, four hours; possible field observations. First in a series of courses to explore prevention of disease in at-risk populations, clinical services and referrals for disadvantaged, and effects of low socioeconomic status on academic achievement, career, and family. Lectures by faculty and practitioners, with field visits. P/NP or letter grading.

M160B. Health Outreach and Education for At-Risk Populations. (4) (Same as Medicine M160B.) Lecture, two hours; discussion, two hours. Requisite: course M160A. Second in series of courses to explore prevention of disease in at-risk populations, clinical services and referrals for disadvantaged, and effects of low socioeconomic status on academic achievement, career, and family. Lectures by faculty and practitioners, discussion groups, and field activities including health education. P/NP or letter grading.

180SA. Current Topics in California Health Policy. (4) Lecture, four hours. Corequisite for UCLA students. Civic Engagement 193SA; for non-UCLA students: one internship course. Limited to junior/senior UC Center Sacramento Program students. Development of systematic understanding of policy analysis to help students develop their own advanced policy analysis of current California-related health policy issues, and analysis of key policy challenges facing health and healthcare of California's diverse population. Offered in summer only. Letter grading.

Public Policy

School of Public Affairs

UCLA
3250 Public Affairs Building
Box 915656
Los Angeles, CA 90095-1656
(310) 825-7667, Department Office
(310) 825-0448, Admissions
fax faculty: (310) 206-0337
fax administration/admissions: (310) 206-2381
e-mail: mppinfo@spa.ucla.edu
http://www.spa.ucla.edu/dpp/

Michael A. Stoll, Ph.D., Chair

Professors
Joel D. Aberbach, Ph.D.
Helmut K. Anheier, Ph.D.
Albert Carnesale, Ph.D.
Michael R. Darby, Ph.D. (Warren C. Corder Professor of Money and Financial Markets)
Franklin D. Gilliam, Ph.D.
Neal Halton, M.D., M.P.H.
Joel F. Handler, J.D.
Sanford M. Jacoby, Ph.D. (Howard Noble Professor of Management)
Matthew E. Kahn, Ph.D.
Mark A.R. Kleinman, Ph.D.
Arleen Leibowitz, Ph.D.
Susanne Lohmann, Ph.D.
Barbara J. Nelson, Ph.D.
Mark A. Peterson, Ph.D.
Allen J. Scott, Ph.D.
Michael K. Stenstrom, Ph.D.
Michael A. Stoll, Ph.D.
Fernando M. Torres-Gil, Ph.D.
Lynne G. Zucker, Ph.D.

Professors Emeriti
Robert Dailey, Ph.D.
Michael D. Intriligator, Ph.D.
Archie Kleingartner, Ph.D.
Daniel J.B. Mitchell, Ph.D. (Ho-Su Wu Professor Emeritus of Management)
Richard N. Rosecrance, Ph.D.
Charles E. Young, Ph.D.

Associate Professors
J.R. DeShazo, Ph.D.
Meredith Phillips, Ph.D.
Andrew Sable, Ph.D.
Amy B. Zegart, Ph.D.

Assistant Professors
Aaron L. Panofsky, Ph.D.
Sarah J. Reber, Ph.D.

Lecturers
C. Mike Dennis, M.P.A., C.P.F.O.
Rick Tuttle, Ph.D.

Visiting Professors
Dean Baim, Ph.D.
Michael S. Dukakis, J.D.
Matthew P. Drennan, Ph.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.P) degree and participates in the undergraduate minor in Public Affairs.

The M.P.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.P with work toward a J.D. in the School of Law, an M.B.A. in the John E. Anderson Graduate School of Management, 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 Schoolwide Programs earlier in this section of the catalog.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/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.P) degree. Three concurrent degree programs (Public Policy M.P.P.P/Law J.D., Public Policy M.P.P.P/Management M.B.A., and Public Policy M.P.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, development of their applications with examples from instructor's own research, visitors, small student projects, or field trips.

10B. California Policy Issues. (4) Lecture, three hours; outside study, nine hours. Enforced requisite: course 10A. 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 issue, with examination of both necessity and difficulty of making and executing wise policies around psychoactive substances. Concurrently scheduled with course C235. Letter grading.
102. Imperfect Rationality. (4) Lecture, three hours; outside study, nine hours. Idea that individuals are capable of acting rationally, in their own interest, is central to economics, politics, and law. Understanding why individuals make decisions and how those decisions differ from rational choices is a fundamental problem of modern economics. Examining the extent to which people are capable of acting rationally leads to further analysis of sociopolitical phenomena such as voting, social norms, and social interaction. The course also explores the influence of sociopolitical and cultural factors on individual decision making.

103. Ethics, Morality, and Public Life: Contempor- ary Controversies. (4) Lecture, four hours; outside study, eight hours. Introductory analysis of ethical and moral questions that arise in public life. Goal is not to imbue students with a given body of factual knowledge or to develop new quantitative or social science methodologies to analyze such questions, but to enhance their critical thinking skills. Letter grading.

104. Culture and Political Structure of Los Angeles. (4) Lecture, three hours; outside study, nine hours. Exploration of two pieces of the puzzle in modern urban life: the different communities that live here (and in most other major cities) and the political structure that binds us all together. Who are the communities living here? How do they organize themselves and develop communities? Are they integrated into the local political system? What is "mainstream" today? How does political structure help or impede the notion of a united city? Letter grading.

105. Leadership in Public Interest. (4) Lecture, three hours. Examination of prevailing models, theories, and practices of leadership in public settings and application of them through case studies, films, and situational articles. Participation in group projects and discussions designed to improve understanding of role of leadership in mobilizing people to do difficult work. Introduction to literature and theory on leadership. Students are required to study a book on leadership and present a critique. Letter grading.

112. Controversies in Education Policy. (4) Formerly numbered C112.) Lecture, three hours; outside study, nine hours. Focus on several controversial topics in contemporary education. Topics vary each year and include multiculturalism, affirmative action, test score gap, bilingual education, and school choice. Emphasis varies each year. Students are required to critically evaluate logic and evidence behind important education policies and to encourage students to critically analyze why action X is morally right or wrong. How do people reason about welfare programs? What are the moral implications of the work? How does your government's structure influence how people reason about whether action X is morally right or wrong? How can we design government structures that encourage people to act ethically, contribute to public goods, and lead productive and fulfilled lives? P/NP or letter grading.

125. Rights and Wrongs of Affirmative Action. (4) Lecture, three hours; discussion, one hour. Exploration of race-based affirmative action from moral, political, and legal perspectives. Topics include: (1) the nature and causes of affirmative action and defining discrimination, individual and group equality; different meanings of “diversity”; meritocracy and its critics; and historical and future-based arguments; (2) motivation and action of major players (business, labor, government); and (3) changing patterns of government involvement in public policy. Letter grading.

CM126. Political Ethics. (4) Formerly numbered M126.) (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, and lack thereof, of political life. Coverage of both readings in moral and political theory and real-world examples. Topics include: terrorism, civil rights politics, and presidential campaigns. Topics include basic ethical theory, role-relations of crime, Machiavellian amorality, democratic responsibility and representation, ethics of compromise, "dirty hands" problems, international ethics. Concurrently scheduled with course C249. Letter grading.

M127. 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, 100, or 101. Examination of how public issue life cycle is shaped by (1) economics, (2) politics, and (3) media. Analysis of various actors — business, news media, mass public, organized interests, Congress, the president, regulatory agencies, and courts (and 2) ideology. Examination of role of public opinion in urban policy.
146. Democracy, Disobedience, and Dissent. (4) Lecture, three hours; outside study, nine hours. Requi-
sites: Philosophy 6 or Political Science 10. Theories of political and legal obligation and their critics; justified disobe-
dience in response to inequality, injustice, and social exclusion; moral and religious pluralism as argu-
ment for both obedience and dissent. Letter grading.

C147. Critical Thinking in Global-
izing World. (4) Lecture, three hours; outside study, nine hours. To enable students to (1) think of
world in dynamic terms, (2) be able to map, divide, and assemble thir in many different ways, and (3) be able to articulate patterns of flux, change, and move-
ment in world space and history. Concurrently scheduled with course C245. Letter grading.

148. Business and Public Policy. (4) Lecture, three hours; outside study, nine hours. Requisite: course 10A. Introduction to key issues arising at interface be-
tween business and government policy. Discussion of why government focuses so intensively on regulating
economics and their critics; justified disobe-
dience in response to inequality, injustice, and social exclusion; moral and religious pluralism as argu-
ment for both obedience and dissent. Letter grading.

C149. California Sustainable Development: Eco-
nomic Perspective. (4) (Same as Environment M135 and Urban Planning M163.) Lecture, three hours.
Examination of specific environmental chal-
enges that California faces. Microeconomic perspec-
tive used, with special emphasis on incentives of pol-
liters to reduce pollution and of federal, and state government to address these is-
ues. Focus on measurement and empirical hypothe-
sis testing. P/NP or letter grading.

187. Research Seminar: Public Policy. (4) (Formerly numbered 457.) Seminar, three hours; outside study, nine hours. Requisite: course 10A. Limited to
and required of seniors in Public Affairs minor. Pro-
duction of research project that examines in depth a
critical policy issues in its social context, including political pressures involved and problems of imple-
mentation. Emphasis on skills of data acquisition and analysis, conceptualization, and written analysis and pre-
presentation. Letter grading.

191A. Variable Topics Research Seminars: Public Policy. (4) Seminar, three hours; outside study, nine 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, dis-
cussion, and development of culminating project. Must be taken for credit if applied toward Public Affairs minor. May be repeated for credit with topic change. P/NP or letter grading.

191B. Variable Topics Research Seminars: Public Policy. (3) Seminar, three hours. Examination of par-
ticular subfields of policy studies (e.g., international policy, crime policy, policy history) in depth, with spe-
cific topics to be identified by instructor. Reading, dis-
cussion, and development of culminating project. Must be taken for credit if applied toward Public Af-
airs minor. May be repeated for credit with topic change. P/NP or letter grading.

191C. Variable Topics Research Seminars: Public Policy. (2) Seminar, two hours. Examination of partic-
ticular subfields of policy studies (e.g., international policy, crime policy, policy history) in depth, with specific topics to be identified by instructor. Reading, discus-
sion, and development of culminating project. Must be taken for credit if applied toward Public Affairs minor. May be repeated for credit with topic change. P/NP or letter grading.

191D. Variable Topics Research Seminars: Public Policy. (1) Seminar, one hour. Examination of partic-
ular subfields of policy studies (e.g., international policy, crime policy, policy history) in depth, with specific topics to be identified by instructor. Reading, discus-
sion, and development of culminating project. Must be taken for credit if applied toward Public Affairs minor. May be repeated for credit with topic change. P/NP or letter grading.

193A. Marschak Colloquium: Social Sciences. (2) Seminar, two hours. Limited to undergraduate stu-
dents. Analysis of the Marschak Colloquium presentations, highly regarded and long-standing in-
terdisciplinary 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)
(Formerly numbered 199.) Tutorial, four hours. Prepa-
ratio: 3.0 grade-point average. Limited to juniors/se-
niors. Individual intensive study, with scheduled meet-
ings to be arranged between faculty member and stu-
dent. 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 204) to pre-
pare students for economic analysis of public policy, with review of economic principles and basic micro-
economic theory and policy applications. Consumer theory and demand, producer theory and supply, equi-
librium of product and factor markets. Letter grading.

202. American Political Institutions and Process-
es. (4) Lecture, three hours; outside study, nine hours.
Designed to provide background necessary to develop
strategies for dealing effectively with political environ-
ment of policy and administration. Discussion of U.S. constitutional arrangements, followed by in-
strumental and integrative examination of primary in-
stitutions of politics and governance from organized inter-
est 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). Re-
view of statistical principles useful to policy research and analysis. Topics include descriptive statistics, ex-
pectations, univariate distribution, probability, covari-
ce and correlation, regression, analysis of variance, ran-
dom sampling, estimators, unbiasedness and effi-
ciency, statistical inference, confidence intervals, and hypothesis testing. Letter grading.

204. Principles of Microeconomic Theory II. (4)
Lecture, three hours; outside study, nine hours. Requi-
site: course 201. Second course in two-term se-
quence (see course 204) covering both theory and policy applications. Topics include monopoly, factor markets, general equilibrium, welfare economics, ex-
ternalities, public goods, uncertainty, and intertempo-
ral optimization. Letter grading.

205. Bureaucracy and Public Management. (4)
Lecture, three hours; outside study, nine hours. Prob-
lems posed by behaviors within and by bureaucracies.
Conceptual tools for comprehending organization en-
vironment in which policy analysts work; tools for un-
derstanding role of policy analysts and impact of organizations. Practical suggestions for policy analyst attempting to
navigate waters of bureaucracy. Theoretical analysis integrated with case studies. Letter grading.

206. Political Economy of Policy Adoption and Im-
plementation. (4) Lecture, three hours; outside study, nine hours. Analysis of how policy is formed, adopted, and implemented. How policies are formu-
lated, by whom, how policy agendas are set, how to
define relationships among bureaucrats, lobbyists, and media experts. Letter grading.

207. International Political Economy. (4) Lecture,
three hours; outside study, nine hours. Examination of political, legal, and economic structures that show how the U.S. fits in among varieties of modern capitalism and business/government relations. Analysis of do-
metric policy options nations are pursuing in re-
sponse to economic globalization, such as protectionis-
tism, mercantilism, and deregulation. Introduction to international coalitions being formed, including NAF-
TA, and to nongovernmental organizations created to deal with special problems such as global environ-
mental crisis. Letter grading.

208. Statistical Methods of Policy Analysis II. (4)
Lecture, three hours; outside study, nine hours. Requi-
site: course 203. Second core course in statistics and quantitative methods for M.P.P degree. Quantita-
tive studies of public policy, covering regression anal-
ysis and its application to public policy questions. Let-
ter grading.

209. Management in the 21st Century. (4) Lecture,
three hours; outside study, nine hours. Overview of moral philosophy, political theory, and public-sector ethics using readings from classical and contempo-
rary literature and case studies. Consideration of vari-
ous political theories in which terms such as “democracy” and “liberty” are used in public discourse. Practice in de-
veloping and defending moral arguments, both orally and in writing. Letter grading.

(Same as Social Welfare M221A and Urban Planning M241.) Lecture, three hours. Nature, roles, and history of welfare institutions in different societies; applicable social system theory of different components of wel-
fare system; theory and research about welfare poli-
cies and organizational forms. S/U or letter grading.

211. Aging Policy, Elderly, and Families. (4)
(Same as Social Welfare M290P.) Lecture, three hours;
outside study, nine hours. Designed for gradu-
ate students. Examination of theoretical models and concepts of policy process and application to aging
policy. Analysis of decision-making processes that af-
fect social policies. Development of models and develop-
ment of contemporary policy. Exploration of current
proposals and issues. Letter grading.

212. Child Welfare Policy. (4) (Same as Social Welfare M290L.) Lecture, three hours. Development of social policy as it affects families and children from different cultural backgrounds and as it is given form in public child welfare system. Examination of develop-
ment of infrastructure to support needs of children and families. S/U or letter grading.

213. Mental Health Policy. (4) (Same as Social Welfare M290K.) Lecture, three hours. Examination of evolution of social policy and services for mentally ill, with emphasis on political economy, neurological and sociological factors that affect views of mental illness and services they are provided. S/U or letter grading.

214. Poverty, Poor, and Welfare Reform. (4)
(Same as Social Welfare M290L and Urban Planning M246.) Lecture, three hours. Major policy and research issues concerning poverty and social welfare policy di-
rected toward poor in U.S. S/U or letter grading.

215. Health Policy. (4) (Same as Social Welfare M290L.) Lecture, three hours. Introduction to contem-
porary issues in healthcare financing and delivery, pro-
viding historical perspective on emergence of these is-
sues. Examination of major public programs and their relationship to issues of access and cost. S/U or letter grading.

216. Public Policy for Children and Youth. (4)
(Same as Social Welfare M290N.) Lecture, three hours. Policy issues that affect children and adoles-
cents in relation to their interaction with schools and communities, with emphasis on the role of policy across federal, state, and local levels. S/U or letter grading.

217. Methods of Evaluating Social Programs. (4)
Lecture, three hours; outside study, nine hours. Requi-
sites: courses 203, 208. Examination of design of and statistical methods for evaluating impacts of so-
cial programs. Introduction to use of experimental and nonexperimental designs and to various methods for estimating impacts of social programs. Discussion of designs for process analyses. Letter grading.
225. Education Policy and Education Inequality. (4) (Formerly numbered C225.) Seminar, three hours; outside study, nine hours. Limited to graduate students. Examination of policies that may produce socioeconomic and ethnic disparities in educational success. Topics include international and national comparisons of educational outcomes, private and public school policy, and intervention policies and programs for educational reform. 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 have shaped rise and characteristics of nonprofit sector. 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 M241E and Urban Planning M288.) 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 nonprofit community planning; emerging patterns of physical, economic, and social planning within framework of social change theory. Letter grading.

CM230. Labor Markets and Public Policy. (4) (Same as Management M250C.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Survey of major topics in economic analysis of labor markets and public policies toward labor market. Topics include labor force trends and measurement, compensation determination, productivity, internal labor markets, human capital, union bargaining power, and unemployment in over seven to nine hours, respectively. Letter grading.

CM231. Comparative Industrial Relations. (4) (Same as Management M255.) Lecture, three hours; outside study, nine hours. Required: Management 409 or elementary knowledge of labor economics. At national and international levels, historical and contemporary analysis of comparative industrial relations between advanced industrial nations and in the developing world. Letter grading.

M224. Introduction to Geographic Information Systems. (4) (Same as Urban Planning M256A.) 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 using spatial data for mapping and analysis. Topics include data quality, data manipulation, spatial analysis, and information systems. Use of mapping and spatial analysis to address planning problems. Letter grading.

M224B. Advanced Geographic Information Systems. (4) (Same as Urban Planning M206B.) Lecture, four hours; laboratory, four hours. Required: course M224A or Urban Planning M206A. Principles and skills of geographic analysis and modeling; managing, processing, and interpreting spatial data. Especially useful for students interested in environmental, demographic, and transportation-related research. Scripts (Avenue), modeling (Spatial Analyst), network analysis, and transportation modeling (TransCAD). Letter grading.

233. Employment Issues in California. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Drawing on resources of UCLA Business Forecasting Project, introduction to general features of California labor market, analysis of employment fluctuations and forecasting techniques including linkages between employment fluctuations in California and similar issues in the country, and social issues related to labor market. Letter grading.

234. Labor Markets and Social Policy. (4) Lecture, three hours; outside study, nine hours. Examination of analysis of labor markets, additional emphasis 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 social problem and to drug abuse control as policy issue, with examination of necessity and difficulty of making and executing wise policies around psychoactive substances. Concurrently scheduled with course C101. Letter grading.

237. Ethical Questions in Public Life. (4) Lecture, three hours; outside study, nine hours. Introduction to moral issues that commonly arise in public life. Ethics of political roles, compromise and moral integrity, lying and deception, place of rhetoric in defending stand on issues, politics and violence. Letter grading.

238. Issues in Cultural Policy. (4) Seminar, three hours; outside study, nine hours. Designed for graduate students. Survey of role of policy in shaping forms and meanings of culture in contemporary society. Overview of relevant theories of culture and their ramifications in such phenomena as consciousness, ideology, and identity. Empirical examination of what policymakers have said and done about promotion of culture in interests of various social goals. Contemporary trend of economic and cultural intersecting to be subject for trend analysis. Examination of globalization and national cultural interests in depth. General debate about logic and meaning of cultural politics in contemporary society and their consequences for trajectories of cultural policy at local, national, and international levels. Letter grading.

C239. Budget Politics, Social Policy, and Entitlement Reform. (4) Lecture, three hours; outside study, nine hours. Examination of politics of public budgeting in the U.S., with emphasis on financing of social safety net programs. Examination of both public policies toward moral issues that commonly arise in public life. Ethics of political roles, compromise and moral integrity, lying and deception, place of rhetoric in defending stand on issues, politics and violence. Letter grading.

M240. Theories of Regional Economic Development. (4) Lecture, three hours; outside study, nine hours. Focus on relations between regional planning and economic development policies. Letter grading.

M241. Introduction to Regional Planning. (4) (Same as Urban Planning M230.) Lecture, three hours. Critical and historical survey of evolution of regional planning theory and practice, with particular emphasis on relations between regional planning and developments within Western social and political philosophy. Major concepts include regions and regionalism, territorial community, and social production of space. Letter grading.

242. Regional Development, Urbanization, and Industrial Policy. (4) Lecture, three hours; outside study, nine hours. Survey of regional development, with special reference to a new introduction to general urban geography and its relevance for formulation of local economic development policies. Letter grading.
Scope and Objectives

The Department of Radiation Oncology includes clinical divisions at the UCLA Medical Plaza and Reagan UCLA Medical Center, West Los Angeles VA Medical Center, and divisions of experimental radiation biology and medical radiation physics. Research and teaching facilities are available at the UCLA Medical Plaza, Reagan UCLA Medical Center, and West Los Angeles VA Medical Center.

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 and stereotactic radiosurgery for A-V malformations, meningiomas, and malignant intracranial lesions. Research interests include clinical trials, radiation biology, radiation modifiers, molecular biology, immunology, and applied physics. Knowledge of the disease in question, the comparative efficacy of radiation therapy and other methods, radiation biology and pathophysiology, and the physical characteristics of various radiations is essential.

The educational programs serve medical, dental, basic science (biology and physics), nursing, and radiation therapy students, and community and postgraduate physicians; there also is a four-year program for residents who are qualifying for certification in radiation oncology by the American Board of Radiology.

For further details on the Department of Radiation Oncology and a listing of the courses offered, see http://www.radonc.ucla.edu.

RADIOLOGICAL SCIENCES

David Geffen School of Medicine

UCLA
924 Westwood Boulevard, Suite 805
Box 735146
Los Angeles, CA 90095-7351
(310) 481-7512
fax: (310) 794-8056
http://www.radiology.ucla.edu

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 traumatic, musculoskeletal, gastrointestinal, genitourinary, cardiac, neuroradiology, mammography, pediatrics, emergency radiology, computed tomography, magnetic resonance imaging, ultrasound, and interventional radiology are provided. Students acquire interpretative skills by didactic instruction and interactive teaching sessions and through the use of Web-based teaching materials. A longitudinal core clerkship is offered during the third year, with a comprehensive examination.

Greater depth of experience is provided by the three weeks of elective clerkship offered to fourth-year medical students that emphasizes training in angiography/interventional radiology, neuroradiology, interventional neuroradiology, and pediatric radiology.

For further details on the Department of Radiological Sciences, see http://www.radiology.ucla.edu.

RE/LEGI/N, STUDY OF

Interdepartmental Program

College of Letters and Science

UCLA
329 Dodd Hall
Box 951451
Los Angeles, CA 90095-1451
(310) 206-1356, 825-4570
e-mail: alaven@humnet.ucla.edu
http://www.humnet.ucla.edu/humnet/religion/

S. Scott Bartchy, Ph.D., Chair

Faculty Advisory Committee
Carol A. Bakhos, Ph.D. (Near Eastern Languages and Cultures)
S. Scott Bartchy, Ph.D. (History)
William M. Bodiford, Ph.D. (Asian Languages and Cultures)
Ra’anan S. Boustan, Ph.D. (History)
Donald J. Costantino, Ph.D. (World Arts and Cultures)
Jacco Dieleman, Ph.D. (Near Eastern Languages and Cultures)
David C. Rapport, Ph.D., Emeritus (Political Science)
Amy Richlin, Ph.D. (Classics)
Allen F. Roberts, Ph.D. (World Arts and Cultures)
William M. Schniedewind, Ph.D. (Near Eastern Languages and Cultures)
Jonathan A. Silk, Ph.D. (Asian Languages and Cultures)
Ronald W. Vroon, Ph.D. (Slavic Languages and Literatures)
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. Many students select this major in combination with a second major field, a minor, or related language study.

Undergraduate Study

Study of Religion B.A.

Preparation for the Major

Required: History 4; Philosophy 2; two courses from Anthropology 9, Asian 60, History 1A, 1B, 1C, 9A, 9C, 9D, 10A, 10B, 11A, 11B.

Transfer Students

Transfer applicants to the Study of Religion major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one history of religions course, one philosophy of religion course, and two courses from sociocultural anthropology, Buddhism, history of Western civilization, Asian civilizations, civilizations of Africa, and history of China.

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

The Major

Required: A minimum of 14 upper division courses from the list below, of which at least four (including Study of Religion 100 and Philosophy 175) must be from Group I, at least two must be from each of Groups II and IV, and at least three must be from Group III (at least one on each of the three religious traditions listed). No more than five of the 14 may be from any one group. A course may be taken twice, on different topics, for credit toward the major where repetition is allowed by the department offering the course. Variable topics courses not listed below (e.g., History 191) may be approved by the adviser as satisfying requirements for which five units may be applied toward major. Individual studies courses (197 and 199) may be approved by consent of the adviser.

Approved courses (courses marked with an asterisk have readings in foreign languages; see departmental course listings for requisites):

Group I — Methods: Anthropology 130, 156, History 186C, Philosophy 175, Study of Religion 100, 110, 120, Theater 101A


Honors Program

The honors program provides exceptional students with an opportunity to do independent research under the tutorial guidance of a faculty member. Students admitted to honors should take three 199 courses under the guidance of the sponsoring professor. The first 199 course should be taken in Spring Quarter of the junior year, the second during the following Fall Quarter, and the third during Winter Quarter of the senior year. The three courses count as part of the regular requirement of 14 upper division courses. The program culminates in an honors thesis.

To qualify for admission students should have a minimum grade-point average of 3.4. The 199 courses designed for the program and the thesis topic should be approved by the committee in charge of the major.

For further information, contact Professor S. Scott Barchy at the program address.

Study of Religion

Upper Division Courses

100. Undergraduate Seminar: Study of Religion. (4) Limited to 20 students. Interdisciplinary approach to some major topics in study of religion, such as religion and politics, mysticism, ideas of revelation, myth and religious worship and ritual. May be repeated for credit with consent of instructor.

110. Religion and Violence. (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 Rapoport and case studies dealing with religion and violence in India, Northern Ireland, Egypt, Lebanon, Israel, Palestine, Sri Lanka, and the U.S. Letter grading.

120. 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 misunderstandings. Letter grading.

199. Directed Research in Study of Religion. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper or project required. Twelve units may be applied toward major. Individual contract required. Letter grading.

ROMANCE LINGUISTICS AND LITERATURE

Interdepartmental Program

College of Letters and Science

UCLA
212 Royce Hall
Box 951536
Los Angeles, CA 90095-1536
(310) 825-1147
fax: (310) 825-9754
e-mail: allen@humnet.ucla.edu
http://www.humnet.ucla.edu/humnet/romancell/index.html

Edward F. Tuttle, Ph.D., Chair

Faculty Advisory Committee

Franco Betti, Ph.D. (Italian)
Jean-Claude Carron, Docteur ès Lettres (French and Francophone Studies)
Massimo Ciavolella, Ph.D. (Italian)
Eric L. Gans, Ph.D. (French and Francophone Studies)
Françoise Lionnet, Ph.D. (French and Francophone Studies)
Claudia Parodi-Lewin, Ph.D. (Spanish and Portuguese)
A. Carlos Quicoli, Ph.D. (Spanish and Portuguese)
Dominique L. Sportiche, Ph.D. (Linguistics)
Edward F. Tuttle, Ph.D. (Italian)

Scope and Objectives

The Romance Linguistics and Literature Program emphasizes modern linguistic and literary theories in the study of Romance languages. Linguistic and literary theories can be pursued independently or jointly; however, the integration of linguistic and literary knowledge is taken to be one of the highest aims of this interdepartmental graduate program.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaA/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Romance Linguistics and Literature Program offers Master of Arts (M.A.) and Doctor of
ROTC Program – Aerospace Studies

College of Letters and Science

UCLA
218 Student Activities Center
Box 951611
Los Angeles, CA 90095-1611
(310) 825-1742
fax: (310) 825-3055
e-mail: afrotc@ucla.edu
http://www.scscnet.ucla.edu/afrotc/

Kevin H. Grill, M.S., Lieutenant Colonel, Chair
Professor
Kevin H. Grill, M.S., Lieutenant Colonel

Adjunct Assistant Professors
Daniel L. Carter, M.A., Captain
Lawrence A. Smith II, M.B.A., Captain

Undergraduate Study
Four-Year Program

The four-year program is available to first-term freshmen and those full-time students with at least three and one half years of undergraduate and/or graduate study remaining and consists of an initial two-year General Military Course, or GMC (Aerospace Studies 1A, 1B, 1C, 2A, 2B, and 2C), followed by a two-year Professional Officer Course (POC) described under Two-Year Program. GMC participation requires one hour of academic class 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 GMC and wish to enter POC attend a four-week field training course the summer following GMC completion. At field training, students 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.

Two-Year Program

The two-year program is known as the Professional Officer Course (POC) and consists of Aerospace Studies 130A, 130B, 130C, 140A, 140B, and 140C. POC participation requires three hours of leadership laboratory and three hours of academic class each week during the academic year.

Requisites for the two-year program are successful completion of the GMC and a four-week field training course (see Four-Year Program above), or successful completion of a six-week field training program on an Air Force base during the summer preceding enrollment in the program.

Students interested in the six-week field training program must apply to the department chair early during Fall Quarter of their sophomore year. U.S. citizenship is required. There is no obligation to apply. 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 the six-week summer field training are provided meals, quarters, clothing, and travel and incidental expenses. Subjects are the same as those in the four-week course plus the academic portion of the GMC (see Four-Year Program above).

Students enrolled in the POC incur a military obligation and are paid from $450 to $500 per month during the academic year. Additionally, they may compete for a scholarship up to full tuition, fees, and $750 for textbooks. Gradua-
tion and successful completion of the POC leads to a commission as a second lieutenant. Cadets then report to one of the challenging assignments in the Air Force.

Aerospace Studies

Lower Division Courses

Freshman-Year Courses

Z. Leadership Laboratory. (No credit) Laboratory, three hours. Mandatory for and limited to Air Force ROTC cadets. Provides cadets with practical command and staff leadership experiences through performance of various tasks within framework of organized cadet corps. As integral part of aerospace studies curriculum, provides experiences designed to develop leadership potential and serves as orientation to active duty. No grading.

1A-1B-1C. First year of U.S. Air Force. (2-2-2) Lecture, one hour. Survey course designed to introduce students to U.S. Air Force and Air Force Reserve Officers’ Training Corps. Topics include mission and organization of Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and introduction to communication skills. P/NP or letter grading.

Sophomore-Year Courses

20A-20B-20C. Evolution of U.S. Air Force and Space Power. (2-2-2) Lecture, one hour. Historical survey of air and space power designed to motivate students to transition from Air Force ROTC cadet to officer candidate. Featured topics include Air Force heritage and leaders; introduction to air and space power through examination of competencies, functions, and doctrines; and continued application of communication skills. P/NP or letter grading.

Upper Division Courses

130A-130B-130C. Air Force Leadership Studies. (4-4-4) Lecture, three hours. Requisites: courses 1A, 1B, 1C, 20A, 20B, 20C. Study of leadership and quality management, fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of Air Force junior officers. Use of case studies to examine Air Force leadership and management 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

UCLA
120S Student Activities Center
Box 951609
Los Angeles, CA 90095-1609
(310) 825-7381, 825-7384
fax: (310) 825-1785
e-mail: armymrotc@milsci.ucla.edu
http://www.army.ucla.edu

Christopher P. Talcott, M.S., Lieutenant Colonel, Chair
Professor
Christopher P. Talcott, M.S., Lieutenant Colonel
Adjunct Assistant Professors
Jason J. Choi, B.S., Captain
Eric C. Cortes, B.S., Major
Donald H. Hong, M.S., Captain
Brian M. McDermott, B.S., Captain
Casey J. Miner, M.A., Captain
George E. Zuniga, B.S., Captain

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 1936 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-year programs for incoming freshmen and two-year programs for current and transfer students. The Army also offers a three-year program for students who apply before the end of their freshman year. 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 $900 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.army.ucla.edu, by calling (310) 825-7381, or by e-mail to armymrotc@milsci.ucla.edu. Completed four-year applications should be submitted by December 31 of the year preceding college matriculation. Two- and three-year scholarship applications may be obtained from the UCLA Military Science Department and are considered when received.

Army ROTC Program

Army ROTC is a program that enables students to become officers in the U.S. Army, Army 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 reaction courses. Non-ROTC students may enroll in many of the military science courses without enrolling in the ROTC program.

Additionally, students who decide to become Army officers can receive summer training in military parachuting (Airborne School at Fort Benning, GA), helicopter operations that include rappelling from a hovering helicopter (Air Assault School in Hawaii), and mountaineering operations (Northern Warfare School in Alaska). Scholarships are available for two, three, and four years of academic study and are awarded on a competitive basis. Army Scholarships pay for full tuition and mandatory fees or housing, up to $10,000, and provide a tiered stipend ranging from $3,000 to $5,000 per year and a $900 book allowance. Nonscholarship, contracted ROTC cadets also receive the tiered stipend of $3,000 to $5,000 per year. Students in the program also compete for over $35,000 in merit-based scholarships provided annually by various private organizations that support the Army ROTC program. Additionally, students may work part-time as officer trainees in local Army Reserves or National Guard units through the simultaneous membership program (SMP). Contracted students can fly free on military aircraft within the continental U.S. on a space-available basis.

Students may select a branch of the Army in which to be commissioned from 16 specialty fields, including military intelligence, aviation, signal communications, finance, logistics, nursing, and engineering. Prior to completion of the ROTC program, students may request to go on active duty or serve part-time in the Army Reserves or National Guard.

Undergraduate Study

Students aspiring to become Army officers follow prescribed course sequences with the Military Science Department and a physical fitness program. Generally, the courses consist of one 2- to 4-unit course per term and physical fitness sessions one to three times per week.
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 National Guard, Reserves, or Active Army. Students’ preferences are a major factor in determining which specialty is awarded.

Students selected for Advanced ROTC must attend a five-week leadership development and assessment course between their Military Science III and IV years. Cadets receive an allowance for travel expenses and are paid for attendance.

The active duty obligation for those students selected to enter the Reserves or National Guard is for initial training, and only for a period of several months. The active duty obligation for those students commissioned into the Active Army is three years. Students who accept the offer of leadership in the Reserves, National Guard, or Active Army.

Military Science

Lower Division Courses

1. 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 the department. Designed to allow cadets to apply leadership techniques and military skills taught in classroom and to develop their confidence as future military officers.

11. Foundations of Officership. (2) Lecture, one hour. Introduction to issues and competencies that are central to commissioned officer’s responsibilities. Framework established to understand officership, leadership, military customs, briefings, and life skills such as physical fitness, nutrition, and time management. P/NP or letter grading.

12. Basic Military Leadership. (2) Lecture, one hour. Introduction to fundamentals of leadership, Army leadership values, ethics, and counseling techniques. Foundation of basic leadership fundamentals central to commissioned officer’s responsibilities established. P/NP or letter grading.

13. Leadership Development. (2) Lecture, one hour. Introduction to military problem solving, methodology students can use in their daily lives. Experiential exercises in goal setting and military writing style. Broad overview of life in Army, 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 guerrilla strategies; explanation/discussion of political, economic, religious, and social 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 communications, and consideration of others. P/NP or letter grading.

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, operations planning, and military processes, and military orders process. P/NP or letter grading.

132. Army Officiership and Communication. (4) Lecture, three hours; laboratory, four hours. Examination of officiership that culminates in detailed case study. Interpersonal communication, with focus on general communication theory as well as written and spoken communication skills. Presentation of information 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. P/NP or letter grading.

142. Leadership, Ethics, and Military Law. (4) Lecture, three hours; laboratory, four hours. Interactive course to enhance student understanding of organizational culture, leadership, 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. Officership: Professional Military Leadership. (4) Lecture, three hours; laboratory, four hours. Capstone interactive leadership course to prepare students for challenges of being commissioned officers in U.S. Army by discussing various leadership challenges and case studies. Study of military units, with specific emphasis on joint operations involving Army, Navy, Air Force, and Marine Corps assets. Military operations other than war, and global war on terror. Other topics include personnel administration, maintenance management, and financial planning. P/NP or letter grading.

197. Individual Studies in Military Science. (2 to 4) (Formerly numbered 199.) 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.

ROTC PROGRAM – NAVAL SCIENCE

College of Letters and Science

UCLA
120T Student Activities Center
Box 951399
Los Angeles, CA 90095-1399
(310) 825-9075
fax: (310) 267-4615
http://www.navy.ucla.edu

Archibald Morrison, M.S., Colonel, Chair
Professor
Archibald Morrison, M.S., Colonel, U.S. Marine Corps

Adjunct Assistant Professors
Michael T. Brownlie, B.A., Lieutenant, U.S. Navy
Christian E. Esquivel, B.S., Lieutenant, U.S. Navy
Rommel M. Estevès, M.S., Commander, U.S. Navy
Michael C. Palmer, M.A., Major, U.S. Marine Corps

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 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 Naval Science Department offers a minor in Naval Science. The ROTC program is also available through UCLA Extension.

All three ROTC departments offer voluntary four-year programs for incoming freshmen and two-year programs 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 $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 December 1 of the year preceding college matriculation. 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 a reserve commission at graduation in the U.S. Navy or Marine Corps. Through the Naval Reserve Officers' Training Corps (NROTC), scholarship students receive full tuition, fees, books, and subsistence pay of $250 to $400 per month. Non-scholarship students may apply to participate as members of the midshipman battalion under the NROTC College Program and, like NROTC Scholarship students, they also receive a reserve commission at graduation. Because of the rapid development of highly technical 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 option students must also pass a swimming test. The department also conducts a sail training program for all Navy midshipmen. All naval science courses are open to students who are not in the program but have an interest in the Navy/Marine Corps and related fields, such as engineering, navigation and naval operations, history, and management.

Undergraduate Study

Scholarship Program

The majority of naval science students attend the University on Navy/Marine Corps Scholarships which are awarded primarily on a four-year basis to high school seniors selected by a nationwide competition. A two-year upper division scholarship program is also available, with a similar selection process, to students who have not yet begun their junior year in college. Applications for both types of scholarships are due by December 1 and March 1, respectively, each year. In addition to tuition, fees, and uniforms, students receive subsistence pay of $250 to $400 per month and a book stipend. Scholarship students are obligated to serve on active duty for a minimum of four years following graduation and commissioning.

College Program (Nonscholarship)

Students attending the University who meet Navy/ Marine Corps requirements but who do not have an NROTC Scholarship may enroll in the College Program during their freshman year. These students have the opportunity to compete for scholarships after the completion of one term of naval science courses. If they do not win a scholarship, or choose not to compete for one, they must compete for advanced standing prior to their junior year. A two-year College Program is also available to students who have not yet started their junior year. Students enter the two-year program with advanced standing after selection through national competition and completion of a six-week summer training period. Applications for the two-year program are due March 1 of the sophomore year. All College Program students receive uniforms, naval science textbooks and, once selected for advanced standing, monthly subsistence pay in their junior and senior years. College Program students serve on active duty for a minimum of three years following graduation and commissioning.

Marine Corps Option

Highly motivated NROTC students may request designation as Marine Corps option students and may also pursue any UCLA academic degree. The final summer cruise involves intensive Marine training. Marine Corps option students also participate, on a limited basis, in field training exercises during the academic year.

Naval Science Minor

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 (10 units): Naval Science 1B, 20A, 20B.


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.
1A. Introduction to Naval Science. (3) Lecture, three hours. Introduction to organization of Naval Service, various components of Navy, career opportunities, shipboard damage control, fire fighting, Naval and Marine Corps operations, and some customs and traditions of Naval Service. Letter grading.

1B. Naval Ship Systems I (4) Lecture, four hours. Introduction to naval engineering, with emphasis on steam, nuclear, diesel, and gas turbine propulsion systems and their associated auxiliary components. Basic thermodynamic theory, electrical theory, stability, and buoyancy. P/NP or letter grading.

20A. Naval Ship Systems II. (4) Study of naval weapon systems, with emphasis on infrared, radar, and sonar principles. Target designation and acquisition, methods of solving fire control problem, target detection systems. Analysis of transfer and feedback functions inherent in weapon systems.

20B. Seapower and Maritime Affairs. (3) Lecture, three hours. Conceptual study of seapower, with emphasis on historical development of naval and commercial power. Seapower examined in relation to economic, political, and cultural strengths, with focus on current abilities of specific nations to use oceans to attain national objectives. P/NP or letter grading.

Upper Division Courses


102B. Naval Leadership and Management I. (4) Examination of current and classical leadership and management theories, with emphasis on their application to junior military officer's role as a leader/manager. Topics include managerial functions, performance appraisal, motivation theories, group dynamics, leadership theories, and communication.

102C. Leadership and Ethics. (2) Lecture, two hours. Requisite: course 101B. 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.

197. Individual Studies in Naval Science. (1 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

**SCANDINAVIAN SECTION**

College of Letters and Science

UCLA
332 Royce Hall
Box 951537
Los Angeles, CA 90095-1537
(310) 825-6828
fax: (310) 825-9754
http://www.humnet.ucla.edu/humnet/scandinavian/

Timothy R. Tangherlini, Ph.D., Head

Professors
Jesse L. Byock, Ph.D.
Mary Kay Norseng, Ph.D.
Ross P. Shideer, Ph.D.
Timothy R. Tangherlini, Ph.D.

Professor Emeriti
James R. Massengale, Ph.D.

Assistant Professors
Arne O. Lunde, Ph.D.
Kendra J. Wilson, Ph.D., In Residence

Adjunct Assistant Professor
Zoe Patrice Borovsky, Ph.D.

Scope and Objectives

Scandinavia consists of five Northern European countries: Denmark, Finland, Iceland, Norway, and Sweden. These countries form a geographic bridge between the American and European continents and a political bridge between Western and Eastern Europe. For all students of 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 Denmark, Norway, and Sweden. Danish, Norwegian, and Swedish are mutually understandable languages, giving the student of one access to the literatures and cultures of the other two. Both undergraduate and graduate majors are expected to concentrate on one Scandinavian language, though they study the literatures of the other language areas.

Undergraduate Study

Undergraduate Courses

No credit is allowed for completing a less advanced course after successful completion of a more advanced course in Danish, Norwegian, and Swedish grammar and/or composition. Students with demonstrated preparation may be permitted a more advanced program by the section or may be transferred to a more advanced course with consent of the instructor.

Native speakers of Norwegian, Swedish, and Danish may not enroll in any language course (including courses 105, 110, 115) in the Scandinavian Section except by petition in writing to the section. Non-Scandinavian students with knowledge of one of these Scandinavian languages may not take courses in the others except by petition in writing. Petitions must include a description of the student's linguistic background and the reason for wanting to take the language course in question.

Scandinavian Languages

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 for up-to-date information regarding transfer selection for admission.

The Major

Required: Twelve upper division Scandinavian courses, including 105 or 110 or 115, 141, 142, 143. As an option, three upper division courses in a related field may be taken if approved in advance by the undergraduate adviser. It is recommended that students who plan to do graduate work in Scandinavian take German 1 through 6.

Scandinavian Minor

To enter the Scandinavian minor, students must have an overall grade-point average of 2.0 or better.

Required Courses (28 units): Any seven Scandinavian courses, two of which may be lower division courses selected from Scandinavian 1 through 50.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
Graduate Degree

The Scandinavian Section offers the M.A. degree in Scandinavian.

Old Norse Studies

Lower Division Course

40. Heroic Journey in Northern Myth, Legend, and Epic. (4) Lecture, three hours. All readings in English. Comparison of journeys of heroes. Readings in mythology, legend, folktales, and epic, including Nibelenlied, Volsunga saga, Eddas, and Beowulf. Cultural and historic backgrounds to texts. P/NP or letter grading.

Upper Division Courses

135. Vikings. (5) Lecture, three hours; discussion, one hour. Survey of history, anthropology, and archaeology of Viking Age society. Readings draw on medieval sagas as well as secondary material, focusing on impact of Vikings on northern Europe, and considering ways in which European and Scandinavian societies evolved in response to Viking incursions. P/NP or letter grading.

139. Saga. (4) Seminar, three hours. Sagas are largest extant medieval prose literature. Texts in English, with selections from different types of Icelandic sagas. Consideration of history and society that produced these narratives. Concurrently scheduled with course C139. Graduate students do additional readings and write more extensive research papers. Letter grading.


145. Old Norse Literature and Society. (4) Seminar, three hours. Critical issues in medieval Scandinavian studies. May be repeated for credit. Concurrently scheduled with course C145. Graduate students do additional readings and write more extensive research papers. Letter grading.

596. Directed Individual Study or Research. (4) Tutorial, to be arranged with faculty member who directs study or research. Course work that may be identified by a two-letter code using initials of sponsoring instructor — see department for I.D. number. May be repeated once; only one course in 500 series may be applied toward M.A. graduate course requirement. 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.

Scandinavian

Lower Division Courses

1. Elementary Swedish. (4) Discussion, four hours. P/NP or letter grading.


6. Elementary Swedish: Intensive. (12) Lecture, 15 hours; laboratory, five hours. Intensive basic course in Swedish equivalent to courses 1, 2, and 3. Offered in summer only. P/NP or letter grading.

11. Elementary Norwegian. (4) Discussion, four hours. P/NP or letter grading.


21. Advanced Old Norse Prose. (4) Lecture, three hours. Enrolled requisite: course 152. Readings of major saga texts. Also, secondary sources that bear on specific issues in Old Norse literature and medieval Scandi¬navian history. S/U or letter grading.


50. Introduction to Scandinavian Literatures and Cultures. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 50W. Designed for students in general and for those wishing to prepare for more advanced and specialized studies in Scandinavian literature and culture. Selected works from literatures of Denmark, Norway, Sweden, Iceland, and Finland, ranging from myth, national epic, saga, and folk-tale through modern novel, poetry, play, short story, and film, read in English and critically discussed. S/U P/NP or letter grading.

50W. Introduction to Scandinavian Literatures and Cultures. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 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 folk-tale through modern novel, poetry, play, short story, and film, read in English and critically discussed. Satisfies Writing II requirement. Letter grading.

Upper Division Courses


130. Elementary Finnish. (4) Discussion, three hours. Introduction to standard language of Finland. Practice in grammar, listening, speaking, reading, and writing. P/NP or letter grading.


136. Introduction to Sami Language and Culture. (4) Lecture, three hours. Use of thematically arranged, structurally graduated readings, conversation topics, individual and group assignments, and journal writing to provide systematic overview of linguistic characteristics of Estonian language. At course end students should be able to communicate in Sami in variety of common social situations and should be equipped with necessary basic concepts to continue language acquisition and cultural studies in their social and professional milieu, interacting with native speakers, or taking formal courses at intermediate level. Concurrently scheduled with course C236. P/NP or letter grading.

141. Backgrounds of Scandinavian Literature. (4) Seminar, three hours. Readings and discussion of representative texts selected from literature of medieval, Renaissance, baroque, and Enlightenment periods. P/NP or letter grading.

C141A. Theory of Scandinavian Novel. (4) Formerly numbered C162A. 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.
141FL. Backgrounds in Scandinavian Literature. (2) Seminar, two hours. Requisite: course 5 or 15 or 25. Enforced corequisite: course 141. Additional work in Nordic languages to augment work assigned in course 143, including reading, writing, and other exercises in Danish, Icelandic, Norwegian, or Swedish. P/NP or letter grading.


143. Scandinavian Literature of the 20th Century. (4) Seminar, three hours. Readings and discussion of selected works of modern Scandinavian literature from beginning of century to the present. P/NP or letter grading.

143FL. 20th-Century Scandinavian Literature. (2) Seminar, two hours. Requisite: course 5 or 15 or 25. Enforced corequisite: course 143. Additional work in Nordic languages to augment work assigned in course 143, including reading, writing, and other exercises in Danish, Icelandic, Norwegian, or Swedish. P/NP or letter grading.

CM144A. Voices of Women in Nordic Literature. (4) (Formerly numbered CM 186.) Seminar, three hours. Readings and discussion of selected plays by Henrik Ibsen. May be concurrently scheduled with course CM244A. P/NP or letter grading.

C145A. Henrik Ibsen. (4) (Formerly numbered 141A.) Seminar, three hours. Readings and discussion of selected plays by Henrik Ibsen. May be concurrently scheduled with course CM245A. P/NP or letter grading.

C145B. Knut Hamsun. (4) (Formerly numbered 141B.) Seminar, three hours. Readings and discussion of selected works by Knut Hamsun and other 19th- and 20th-century Scandinavian writers who explored theme of nature as modern idyll. May be concurrently scheduled with course CM245B. P/NP or letter grading.

C146A. August Strindberg. (4) (Formerly numbered 141C.) Seminar, three hours. August Strindberg’s portrayal of marital conflict reflected and shaped literary representation of so-called battle of sexes. His work, as well as its literary transformations, placed into Scandinavian, European, and feminist context. May be concurrently scheduled with course CM246A. P/NP or letter grading.

C147A. Hans Christian Andersen. (4) (Formerly numbered 184.) Lecture, two hours; discussion, one hour. Study of works of Hans Christian Andersen, Danish novelist, dramatist, and writer of tales, including consideration of his literary background and of his times. Analysis of his works in terms of their structure, style, and meaning. P/NP or letter grading.

C147B. Soren Kierkegaard. (4) (Formerly numbered 141D.) Seminar, three hours. Soren Kierkegaard’s prophetic, polemical, and deeply personal writings, focusing on themes of faith, reason, and the existence of absolute truths. May be concurrently scheduled with course CM247B. P/NP or letter grading.

161. Introduction to Nordic Cinema. (4) (Formerly numbered 187.) Seminar, three hours. Designed for students in general and for those preparing for more advanced studies in Scandinavian literature and culture. Viewing and discussion of films by Ingmar Bergman and other Scandinavians. P/NP or letter grading.

C171. Introduction to Scandinavian Folklore. (4) (Formerly numbered 178.) Seminar, three hours. Introduction to fairy tales and legends of Scandinavian tradition as well as to interpretive methodologies that strive to answer question “why do people tell stories that they tell?” Concurrently scheduled with course C271. Letter grading.

177. Queer Scandinavia. (4) Seminar, three hours. Queer themes in Scandinavian literature, mainly from 19th and 20th centuries. Scandinavian countries have had more progressive attitudes 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 presentation of historical view of how homosexuality has been perceived in Western world during 19th century. P/NP or letter grading.


C180. Literature and Scandinavian Society. (4) Seminar, three hours. Discussion of selected aspects of Scandinavian society based on readings of contemporary literature as well as historical and/or sociological material. May be repeated for credit (as determined by undergraduate adviser) with topic change. May be concurrently scheduled with course C263. P/NP or letter grading.

181. Contemporary Swedish Literature. (4) Seminar, three hours. Reading and analysis of selected texts by 20th-century Swedish authors. P/NP or letter grading.

C185. Seminar: Scandinavian Literature. (4) (Formerly numbered C179.) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Selected topics in Scandinavian prose, poetry, and drama. May be repeated for credit with consent of instructor and undergraduate adviser. May be concurrently scheduled with course C265. P/NP or letter grading.

197. Individual Studies in Scandinavian. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. 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

C236. Introduction to Sami Language and Culture. (4) Lecture, three hours. Use of thematically arranged, structurally graduated readings, conversation topics, individual and group assignments, and journal writing to provide systematic overview of linguistic characteristics of Estonian language. At course end students should be able to communicate in Sami, varying dialects, and should be equipped with necessary basic concepts to continue language acquisition and cultural studies in their social and professional milieu, interacting with native speakers through informal and formal courses at intermediate level. Concurrently scheduled with course C236. S/U or letter grading.

C241A. Theory of Scandinavian Novel. (4) Formerly numbered 262A. Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Analysis of predominant structures of Scandinavian novel from its 18th-century beginnings through its rise in 19th century and its 20th-century evolution. Discussion of application of contemporary critical theories to novels. May be concurrently scheduled with course C241A. 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) (Formerly numbered 262B.) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Readings and discussion of writings by Scandinavian women writers analyzed in historical, theoretical, sociological, critical, and comparative contexts. May be concurrently scheduled with course CM144A. Graduate students may meet as group one additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C245A. Henrik Ibsen. (4) (Formerly numbered 251.) Seminar, three hours. Preparation: advanced knowledge of one modern Scandinavian language. Readings and discussion of selected plays by Henrik Ibsen. May be concurrently scheduled with course C145A. Graduate students may meet as group one additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C245B. Knut Hamsun. (4) (Formerly numbered 252.) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Readings and discussion of selected works by Knut Hamsun and other 19th- and 20th-century Scandinavian writers who explored theme of nature as modern idyll. May be concurrently scheduled with course C145B. Graduate students may meet as group one additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C246A. August Strindberg. (4) (Formerly numbered 253.) 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.

C253. Literature and Scandinavian Society. (4) Seminar, three hours. Designed for graduate students. Discussion of selected aspects of Scandinavian society based on readings of contemporary literature as well as historical and/or sociological material. May be repeated for credit (as determined by graduate adviser) with topic change. May be concurrently scheduled with course C180. Graduate students may meet for extra seminar hours and write research papers of greater length and depth. S/U or letter grading.

C247B. Soren Kierkegaard. (4) (Formerly numbered 254.) 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.

C255. Seminar: Scandinavian Literature. (4) Seminar, three hours. Preparation: reading knowledge of a Scandinavian language. Selected topics in Scandinavian poetry, prose, 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.

M270. Seminar: Literary Theory. (5) (Same as Comparative Literature M294, East Asian Languages M251, English M270, French M270, German M270, Italian 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.

C271. Introduction to Scandinavian Folklore. (4) (Formerly numbered 262F.) Seminar, three hours. Preparation: advanced knowledge of one modern Scandinavian language. Introduction to fairy tales and legends of Scandinavian tradition 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 Methods. (4) (Same as English M205A.) Seminar, three hours. Exploration of scholarly and literary attempts to study, define, analyze, promote, and/or appropriate oral traditions, from Homer and ancient Greece to origins of vernacular literatures, European romantic (re)discovery of oral traditions, and contemporary heuristic models of oral composition, and modern-day electronic media and popular verbal genres, such as joking and rapping. S/U or letter grading.
SLAVIC LANGUAGES AND LITERATURES

College of Letters and Science

UCLA
322 Humanities Building
Box 951502
Los Angeles, CA 90095-1502
(310) 825-3856
fax: (310) 206-5263
e-mail: slavic@humnet.ucla.edu
http://www.humnet.ucla.edu/humnet/slavic/

David W. Macfadyen, Ph.D., Chair

Professors

Michael H. Hein, Ph.D.
Vycheslav V. Ivanov, Ph.D.
Emily R. Kleinin, Ph.D.
Roman Koropeckyj, Ph.D.
Gail D. Lenhoff, Ph.D.
David W. Macfadyen, Ph.D.
Aleksandr L. Osipov, Ph.D.
Ronald W. Voon, Ph.D.

Professors Emeriti

Henning Andersen, Ph.D.
Peter C. Hodgson, Jr., Ph.D.
Vladimir Markov, Ph.D.
Rochelle H. Stone, Ph.D.
Dean S. Worth, Ph.D.

Senior Lecturers S.O.E.

Olga Kagan, Ph.D.
Edward Denzler, M.A., Emeritus

Lecturers

Georgiana Galateanu, Ph.D.

Susan C. Kresin, Ph.D.
Ganna Kudyma, Ph.D.

Scope and Objectives

The Department of Slavic Languages and Literatures offers a wide array of courses in the languages and cultures of Russia and of Central and Eastern Europe. Instruction is offered in Czech, Hungarian, Polish, Romanian, Russian, Serbian/Croatian, and Ukrainian to provide the necessary linguistic skills to pursue advanced work in the literature, culture, history, politics, and social structures of these areas. Students have the choice of several majors and minors and the opportunity to enhance their knowledge and skills through programs of study abroad.

The department offers two majors in Russian. The Russian Language and Literature major is designed to provide students with basic mastery of the Russian language and familiarity with the classics of Russian literature. Students typically begin to study Russian in their first year, but those contemplating a Russian major later in their academic program can fulfill the Russian language requirement by combining regular coursework with summer programs or with the University of California Education Abroad Program (EAP) in Moscow, which is open to students who have completed the equivalent of one or more years of study (level 1 on the American Council on Teaching of Foreign Languages — ACTFL — scale). Students interested in this program should consult the undergraduate adviser as early as possible.

The major in Russian Studies is designed for students who wish to complement mastery of the language with an array of courses on Russian history, politics, literature, and culture. The major in Central and East European Languages and Cultures is designed to provide students with a mastery of two languages of central or eastern Europe and familiarity with the literature, as well as general background in the cultural, political, and social history of the Slavic peoples.

The graduate program provides advanced training in Slavic literatures and linguistics leading to the M.A. and Ph.D. degrees. The primary task of the department faculty is to develop and refine the critical and analytic skills of its students in preparation for productive careers in college teaching and research in the Slavic field. Alternative careers include language teaching, business, translation, interpreting, librarianship, and government service.

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


556 / Slavic Languages and Literatures

**Russian Language and Literature B.A.**

**Preparation for the Major**

*Required:* Russian 1, 2, 3, 4, 5, 6, or equivalent proficiency, 90A or 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](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

*Required:* Thirteen courses (52 units), including Russian 100A and 100B, or 101A, 101B, and 101C, and M118, 119, 120, 123, 130A, 140A. Four or five additional courses must be selected from Russian 102A, 102B, 102C, 103A, 103B, 103C, 124C, 124D, 124G, C124N, 124T, 125, 126, M127, 128, 130B, 130C, 140B, 140C, 140D, 150, C170, 191.

**Russian Studies B.A.**

**Preparation for the Major**

*Required:* Russian 1, 2, 3, 4, 5, 6, or equivalent proficiency as determined through departmental testing (equivalent to ACTFL level 1), 90A.

**Transfer Students**

Transfer applicants to the Russian Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Russian and one Russian civilization course.

Refer to the UCLA Transfer Admission Guide at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

*Required:* Thirteen courses (52 units), including Russian 100A and 100B, or 101A, 101B, and 101C, and M118, 119, 120, 123, 130A, 140A. Four or five additional courses must be selected from Russian 102A, 102B, 102C, 103A, 103B, 103C, 124C, 124D, 124G, C124N, 124T, 125, 126, M127, 128, 130B, 130C, 140B, 140C, 140D, 150, C170, 191.

**Honors Program**

The honors program is designed for exceptional departmental majors who wish to complete a research project that culminates in an honors thesis. Juniors and seniors who have completed all university-level coursework, including all preparation courses and requirements for the major, with an overall grade-point average of 3.0 and a 3.5 GPA or better in the major courses, are eligible to apply. Students must have the sponsorship of an approved faculty adviser.

All honors students must enroll in Slavic 198A and 198B in two consecutive terms to conduct independent research and write the honors thesis. The results of the research should be presented as a conference paper at the annual Slavic Undergraduate Research Conference.

**Central and East European Studies Minor**

The Central and East European Studies minor is designed for students who wish to augment their major program of study in the College of Letters and Sciences with exposure to a variety of disciplines pertinent to the study of central and eastern Europe, including language, literature, history, political science, folklore, ethnomusicology, and women’s studies.

To enter the minor students must be in good academic standing (2.0 minimum grade-point average) and file a petition with the department counselor in 322B Humanities Building, (310) 825-3856.

**Required Lower Division Course (5 units):** Central and East European Studies 91 or Slavic 90.

**Required Upper Division Courses (28 to 31 units):** (1) One three-quarter introductory central and east European language sequence to be selected from Czech 101A, 101B, 101C, Hungarian 101A, 101B, 101C, Polish 101A, 101B, 101C, Romanian 101A, 101B, 101C, Serbian/Croatian 101A, 101B, 101C, or 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 Czech 155, Ethnomusicology 161C, History 120A through 120D, 130A, 130B, Polish 152A, 152B, 152C, Political Science 156B, 156D, Romanian 152, Russian 124G, Serbian/Croatian 154, Slavic 125, 126, 179, Sociology M166, Ukrainian 152, Women’s Studies M166, or 185; (3) 12 units of second-year or higher-level language courses to be selected from Czech 102A, 102B, 102C, 187A through 187M, Hungarian 102A, 102B, 102C, 187A through 187M, Polish 102A, 102B, 102C, 187A through 187M, Romanian 102A, 102B, 102C, 187A through 187M, Serbian/Croatian 102A, 102B, 102C, 187A through 187M, Ukrainian 102A, 102B, 102C, 187A through 187M (187 courses are 2 units each) OR three courses dealing directly with any central and east European culture to be selected from Czech 155, Ethnomusicology 161C, History 120A through 120D, 130A, 130B, Hungarian 121, Polish 152A, 152B, 152C, Political Science 156B, 156D, Romanian 152, Russian 124G, Serbian/Croatian 154, Slavic 125, 126, 179, Sociology M166, Ukrainian 152, Women’s Studies M166, or 185.

With approval of the undergraduate adviser, other related upper division courses may be applied toward the minor. No more than two courses (9 to 10 units) may be applied toward both this minor and a major or minor in another department or program.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of C 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 (13 units):** Russian 6 and two courses from 25, 90A, 90B.

**Required Upper Division Courses (23 units):** Three courses from Russian 101A through 103C and two additional upper division Russian language and literature courses.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**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 (10 to 15 units):** Russian 3 or 13B or 15B and two courses from 25, 90A, 90B.

**Required Upper Division Courses (20 units):** Five Russian language or literature courses, including at least two from Russian M118, 119, 120, 130A, 130B, 130C, 140A through 140D.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Russian Studies Minor**

To enter the Russian Studies minor, students must have an overall grade-point average of 2.0 or better.

**Required Lower Division Courses (10 to 15 units):** Russian 3 or 13B or 15B and two courses from 25, 90A, 90B.
Required Upper Division Courses (20 units): Five courses dealing directly with Russian language and literature courses, history M127A through 127D, Political Science 128A, 128B, 156A, Russian C170. With approval of the undergraduate adviser, other related courses may be applied toward the minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gsaa.library.ucla.edu/gsaa/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.) and Doctor of Philosophy (Ph.D.) degrees in Slavic Languages and Literatures.

Bulgarian

Upper Division Courses

101A-101B-101C. Elementary Bulgarian. (5-5-5) (Formerly numbered 103A-103B-103C.) Lecture, five hours. Course 101A is requisite to 101B, which is requisite to 101C. Basic courses in Bulgarian language. P/NP or letter grading.

101B. Survey of Bulgarian Literature. (4) Lecture, three hours. Designed for juniors/seniors. Lectures and readings in English. Survey of Bulgarian literature from Middle Ages to present. P/NP or letter grading.

Central and East European Studies

Lower Division Course

91. Culture and Society in Central and Eastern Europe. (6) (Formerly numbered Slavic 91.) Lecture, three hours; discussion, one hour. Intersocial 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.

Czech

Upper Division Courses


102A-102B-102C. Advanced Czech. (4-4-4) (Formerly numbered 102D-102E-102F) Lecture, three hours. Requisite: course 101C. 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.


187B. Advanced Tutorial Instruction in Czech. (2) Tutorial, one hour; laboratory, one hour. Requisite or corequisite: course 187A. Tutorial and guided independent study of advanced Czech: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187C-187M. Advanced Tutorial Instruction in Czech. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Czech placement test. Tutorial and guided independent study of advanced Czech: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

Hungarian

Upper Division Courses

101A-101B-101C. Elementary Hungarian. (4-4-4) Discussion, three to four hours. Course 101A is requisite to 101B, which is requisite to 101C. Introduction to grammar; instruction in speaking, listening, reading, and writing. P/NP or letter grading.

102A-102B-102C. Advanced Hungarian. (4-4-4) Lecture, three hours. Requisite: course 101C. Course 102A is requisite to 102B, which is requisite to 102C. 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.

187A. Advanced Tutorial Instruction in Hungarian. (2) Tutorial, one hour; laboratory, one hour. Preparatory two hours of Hungarian and/or Hungarian placement test. Recommended corequisite: course 187B. Tutorial and guided independent study of advanced Hungarian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187B. Advanced Tutorial Instruction in Hungarian. (2) Tutorial, one hour; laboratory, one hour. Requisite or corequisite: course 187A. Tutorial and guided independent study of advanced Hungarian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187C-187M. Advanced Tutorial Instruction in Hungarian. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Hungarian placement test. Tutorial and guided independent study of advanced Hungarian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

197. Individual Studies in Hungarian. (2 to 4) (Formerly numbered 199.) 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.

Lithuanian

Upper Division Courses

101A-101B-101C. Elementary Lithuanian. (4-4-4) Lecture, five hours. Course 101A is requisite to 101B, which is requisite to 101C. Basic courses in Lithuanian language. P/NP or letter grading.

102A-102B-102C. Advanced Lithuanian. (4-4-4) Lecture, three hours. Requisite: course 101C. Course 102A is requisite to 102B, which is requisite to 102C. 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.

Polish

Upper Division Courses

101A-101B-101C. Elementary Polish. (5-5-5) (Formerly numbered 102A-102B-102C.) Lecture, five hours. Course 101A is requisite to 101B, which is requisite to 101C. Basic courses in Polish language. P/NP or letter grading.

102A-102B-102C. Advanced Polish. (4-4-4) (Formerly numbered 102D-102E-102F) Lecture, three hours. Requisite: course 101C. Course 102A is requisite to 102B, which is requisite to 102C. 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. Reimagining a Nation. Readings in 19th-century Polish literature and culture. 152C. Dreaming, Mocking, and Writing “as if.” Readings in modern Polish literature and culture.

187A. Advanced Tutorial Instruction in Polish. (2) Tutorial, one hour; laboratory, one hour. Preparation: two years of Polish and/or Polish placement test. Recommended corequisite: course 187B. Tutorial and guided independent study of advanced Polish: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187B. Advanced Tutorial Instruction in Polish. (2) Tutorial, one hour; laboratory, one hour. Requisite or corequisite: course 187A. Tutorial and guided independent study of advanced Polish: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187C-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. P/NP or letter grading.

197. Individual Studies in Polish. (2 to 4) (Formerly numbered 199.) 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 Course

280. Seminar: Polish Literature. (4) Seminar, three hours. Selected topics in Polish prose, poetry, and drama. May be repeated for credit with consent of instructor and graduate adviser.
Romanian

Lower Division Course

90. Introduction to Romanian Civilization. (4) Lecture, three hours. Introductory survey of social and cultural institutions of Romanian people and their historical background. P/NP or letter grading.

Upper Division Courses

102A-102B-102C. Advanced Romanian. (5-5-5) (Formerly numbered 101D-101E-101F). Lecture, five hours. Requisite: course 101C. Course 102A is requisite to 102B, which is requisite to 102C. Differences between oral and written discourse, expansion of students’ general and academic vocabulary, and increase of range of grammatical structures for use in speaking and writing. Cultural information to be included in readings. Letter grading.
103. Intermediate Elementary Romanian. (12) (Formerly numbered 104.) Lecture, 19 hours. Intensive basic course in Romanian equivalent to courses 101A, 101B, and 101C. Preparation: prior course in sequence or Romanization.
152. Survey of Romanian Literature. (4) Lecture, three hours. Lectures and readings in English. Survey of Romanian literature from Middle Ages to present. P/NP or letter grading.
187A. Advanced Tutorial Instruction in Romanian. (2) Tutorial, one hour; laboratory, one hour. Requisite: course 102C or Romanian placement test. Recommended corequisite: course 187B. Tutorial and guided independent study of advanced Romanian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.
187B. Advanced Tutorial Instruction in Romanian. (2) Tutorial, one hour; laboratory, one hour. Requisite or corequisite: course 187A. Tutorial and guided independent study of advanced Romanian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.
187C-187M. Advanced Tutorial Instruction in Romanian. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Romanian placement test. Tutorial and guided independent study of advanced Romanian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

Graduate Course

201. Romanian as a Romance Language. (4) Lecture, three hours. Survey of structure and development of the Romanian language, with special emphasis on relationship of Romanian to other members of the Romance group.

Russian

Lower Division Courses

1. Elementary Russian. (5) Recitation, five hours; laboratory, one hour. P/NP or letter grading.
2. Elementary Russian. (5) Lecture, five hours; laboratory, one hour. Requisite: course 1, P/NP or letter grading.
3. Elementary Russian. (5) Lecture, five hours; laboratory, one hour. Requisite: course 2, P/NP or letter grading.

7. Intermediate Russian. (12) Intensive basic course in the Russian language equivalent to courses 1, 2, and 3.
11A-11B-12A-12B-13A-13B. Self-Paced Program in Russian. (2 each) 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. Russian Novel in Translation. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 25W. Designed for nonmajors. Study of major works by the great 19th-century Russian novelists. P/NP or letter grading.
25W. Russian Novel in Translation. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 25. Designed for nonmajors. Study of major works by the great 19th-century Russian novelists. Satisfies Writing II requirement. 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 20th century 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, cultural and political flux within non-Russian 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 limits of Slavic and Near Eastern studies. Examination of relation of Russian 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 the 20th Century. (4) Lecture, three hours. Not open for credit to students with credit for course 90BW. Survey of literature, theater, cinema, television, press, music, and arts. Emphasis on contemporary Russian literature, with constant reference to Russian and early Soviet antecedents. P/NP or letter grading.
90BW. Russian Civilization in the 20th Century. (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 90B. Survey of literature, theater, cinema, television, press, music, and arts. Emphasis on contemporary Russian literature, 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 vocabulary, and developing speaking skills required for academic discourse. P/NP or letter grading.
101A. Russia and the West; 101B. Soviet Russia; 101C. Contemporary Russia.
102A-102B-102C. Topics in Advanced/Superior Russian. (4-4-4) (Formerly numbered 102A-102D.) Lecture, three hours. Requisite: course 101C. Discussion and composition, with emphasis on vocabulary development and review of selected grammar topics. Readings in fiction and nonfiction, films, and videos, and use of 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 for Social and Cultural Studies. (4-4-4) (Formerly numbered 107.) Lecture, three hours. Requisite: course 101C. Exploration of texts and media in social sciences 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 economics and business in Russia, language of advertising, business and official correspondence. P/NP or letter grading.
M118. History of Russia from Origins to Rise of Muscovy. (4) (Formerly numbered 118.) (Same as History M127A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Kievan Russia and its culture; Mongol principalities and towns; Mongol invasion; unification of Russian state by Muscovy. Autocracy and its Servitors: P/NP or letter grading.
119. Golden Age and Great Realists. (4) Lecture, three hours. Designed for juniors/seniors. Russian majors are advised to take this course in their sophomore year. Lectures and readings in English. Survey of 18th-century Russian literature (Pushkin, Gogol, Tolstoy, Dostoevsky, Chekhov) in its cultural, political, and social contexts. P/NP or letter grading.
120. Literature and Revolution. (4) Lecture, three hours. Designed for juniors/seniors. Russian majors are advised to take this course in their sophomore year. Lectures and readings in English. Survey of 19th-century Russian literature (Pushkin, Gogol, Tolstoy, Dostoevsky, Chekhov) in its cultural, political, and social contexts. P/NP or letter grading.
121. Russian Literature Now. (5) Lecture, three hours. Designed for juniors/seniors. Lectures and readings in English. Overview of Russian literature today, with emphasis on status of Russia’s “Golden Age” and Soviet traditions for writers working in modern Russia. Death of one tradition and attempts at creation of another lead away from written word into neighboring medium. Consideration of battles of modern storytelling with cinema, television, and Internet. Is literature changing way in which it creates popular, profitable, and important narratives or is it slowly dying? Hands of capital and visual culture? Letter grading.

122. Siberia. (5) Lecture, three hours. Introductory survey in which current cultural and ecological issues are situated in their geographical and historical background, including analysis of Siberian human geography before first contact with European colonizers and development of modes of interaction among different cultural groups. Reading in English of selection of literary works by well-known 20th-century Siberian writers whose texts serve as loci for closer examination of Siberian regional literary culture and ecological network within which it exists. Letter grading.

123. Historical Commentary on Modern Russian. (4) Lecture, three hours. Requisite: course 101C. Historical explanation of phonological and morphological anomalies of modern Russian.


124D. Studies in Russian Literature: Dostoevsky. (4) Lecture, three hours. Lectures and readings in English. Selections from early short fiction and philosophical works. Two-thirds reading of one or two major novels such as Crime and Punishment or The Brothers Karamazov. P/NP or letter grading.


124P. Studies in Russian Literature: Pushkin. (4) Lecture, three hours. Lectures and readings in English. Major works in all genres, including lyric poetry, narrative poems, plays, prose fiction, and selected letters. P/NP or letter grading.

124T. Studies in Russian Literature: Tolstoy. (4) Lecture, three hours. Lectures and readings in English. Early and late stories and novels, excerpts from the diaries and one major novel such as War and Peace or Anna Karenina. P/NP or letter grading.


126. Survey of Russian Drama. (4) Lecture, three hours. Lectures and readings in English. Introduction to representative selection of most important dramatic works in Russian literary tradition, including works from neoclassical, Romantic, realist, and futurist traditions. P/NP or letter grading.

127. Women in Russian Literature. (4) Same as Women’s Studies M127.) Lecture, three hours. Designed for juniors/seniors. Lectures and readings in English. Introduction to “alternative tradition” of women’s writing in Russia and the Soviet Union. Emphasis on images of women expressed in this tradition as compared with those found in works of contemporary male writers. P/NP or letter grading.

128. Russian Science Fiction. (4) Lecture, three hours. Readings in English. Introduction to Russian science fiction in the 20th century. May be recommended. Lectures and readings in Russian. May be repeated for credit with topic and/or instructor change.

130A-130B-130C. Russian Poetry, (4-4-4) Lecture, three hours. Requisite: course 102C. Conducted in Russian. Reading and analysis of texts with focus on vocabulary, pronunciation, and style, respectively, in three consecutive terms. S/U or letter grading.

201A-201B-201C. Russian: Vocabulary, Pronunciation, Style. (4-4-4) Lecture, three hours. Requisite: course 102C. Conducted in Russian. Reading and analysis of texts with focus on vocabulary, pronunciation, and style, respectively, in three consecutive terms. S/U or letter grading.


211B. 18th-Century Russian Literature. (4) Lecture, three hours. Requisite: course 220A. Survey of the literature from its beginning through the Kievan and Muscovite periods up to the end of the 17th century.


213A. 20th-Century Russian Literature from 1890 to 1929. (4) Formerly numbered 213B.) Lecture, three hours. Required for M.A. (literature). Lectures and readings in major literary trends of modernist period, such as decadence, symbolism, futurism, acmeism, and ornamental school. Analysis of representative works by Blok, Belyi, Khlevnoy, Pasternak, Platonov, and others. S/U or letter grading.


230. Russian Folklore. (3 to 5) Lecture, three hours. Lectures and readings in English. General introduction to Russian folklore, including survey of genres of related folkloric phenomena. Concurrently scheduled with course C240. P/NP or letter grading.

231. Topics in Russian Phonology. (4) Lecture, three hours. Requisite: course 220A. Selected topics in Russian phonology. May be repeated for credit with consent of instructor.

240. Russian Folklore. (3 to 5) Lecture, three hours. Lectures and readings in English. General introduction to Russian folklore, including survey of genres and related folkloric phenomena. Concurrently scheduled with course C217. S/U or letter grading.

241. Topics in Russian Palaeography. (4) Lecture, three hours. Requisite: course 220A. Selected topics in Russian palaeography. May be repeated for credit with consent of instructor.

242. Topics in Russian Morphology. (4) Lecture, three hours. Requisite: course 220A. Selected topics in Russian inflection and derivation. May be repeated for credit with consent of instructor.

243. Topics in Historical Russian Grammar. (4) Lecture, three hours. Requisites: course 240, Slavic 211. Selected topics in Russian historical phonology, morphology, and syntax. May be repeated for credit with consent of instructor.
Upper Division Courses

103E. Intensive Elementary Estonian. (2) Lecture, 19 hours. Intensive basic course in Estonian equivalent to one year of language study. Use of series of thematically arranged, structurally graduated readings, conversation exercises, and individual and group assignments, as well as journal writing, to provide systematic overview of linguistic characteristics of Estonian language. P/NP or letter grading.

103L. Intensive Elementary Latvian. (12) Lecture, 19 hours. Intensive basic course in Latvian equivalent to one year of language study. Use 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.

125. Interwar Central European Prose. (4) Lecture, three hours. Analysis of selected novels, stories, plays, and essays of representative contemporary authors in translation. Special attention to relation between literature and historical and ethnic concerns. P/NP or letter grading.

126. Postwar Central European Prose. (4) Lecture, three hours. Analysis of selected novels, stories, plays, and essays of representative contemporary authors in translation. Special attention to relation between art and ideology. 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 antiquities. P/NP or letter grading.

177. Individual Studies in Slavic Languages and Literatures. (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. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A-198B. Honors Research in Slavic Languages and Literatures. (4-4) Tutorial, three hours. Course 198A is requisite to 198B. Limited to junior/senior departmental honors program students. Development and completion of honors theses 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/senior. Supervised individual research under the guidance of faculty member. No more than 199 hours may be used to meet graduation requirements. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Literary Proseminar. (4) Seminar, three hours. Required for M.A. (literature). Designed to prepare incoming graduate students for scholarly work by introducing them to resources (departmental, intra- 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.

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.


M229. Introduction to Slavic Bibliography. (2) (Same as Information Studies M229C.) Introduction to Slavic and East European bibliography for the humanities and social science 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 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 Slav. (4-4) Lecture, three hours. Requisite: course 201. 241A. Advanced Readings in Canonical Texts; 241B. East, West, and South Slavic Recensions of Church Slav.


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.

M299. Research Resources for European Studies. (2) (Same as French M299, German M299, Information Studies M299, Italian M299, and Spanish M299.) Lecture, two hours. Essentials of library research strategy and effective searching in key print and online resources for European and Russian studies. Through completion 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 Apprenticeship Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship with 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. Letter grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. Letter grading.


**Ukrainian**

Upper Division Courses


102A-102B-102C. Advanced Ukrainian. (4-4-4) Lecture, three hours. Requisite: course 101C. Course 102A is requisite to 102B, which is requisite to 102C. 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, Shuhencho, 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. Recommended corequisite: course 187B. Tutorial and guided independent study of advanced Ukrainian: advanced conversation, compulsory vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187B. Advanced Tutorial Instruction in Ukrainian. (2) Tutorial, one hour; laboratory, one hour. Requisite or corequisite: course 187A. Tutorial and guided independent study of advanced Ukrainian: advanced conversation, compulsory vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187C-187M. Advanced Tutorial Instruction in Ukrainian. (2) 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. P/NP or letter grading.

**Scope and Objectives**

The Social Thought minor provides an opportunity for students to take a series of courses that focus on modern social and intellectual thought from the 17th through the 20th century. The minor builds on lower division introductory exposure to the history of modern ideas as embodied in a number of key texts by significant thinkers such as Descartes, Hobbes, Locke, Smith, Rousseau, Wollstonecraft, Mill, Marx, Weber, Darwin, Nietzsche, Freud, DuBois, de Beauvoir, and others and promotes more intense and broad exposure to the great ideas and modern thinkers of the contemporary world. It culminates with enrollment in a two-term senior thesis tutorial related to a theme from previous coursework and closely supervised by a faculty mentor. The senior thesis occurs in conjunction with a weekly research colloquium where students meet with faculty members to discuss their senior thesis work or related work in the minor.

The minor is intended to supplement the liberal arts education of undergraduates who, through their major, are interested in finding an area of specialization related to career objectives and who seek broad and systematic training in the major ideas of the modern world.

**Undergraduate Study**

**Social Thought Minor**

The Social Thought minor is limited to students who formally apply and are admitted. To apply, students must submit an application, a personal statement supporting their interest in pursuing the minor, a letter of recommendation from a faculty mentor, and a transcript to the College Academic Counseling Office, A316 Murphy Hall.

To enter the minor, students must have an overall grade-point average of 2.0 or better and apply for admission only after successfully completing the following lower division requirements: General Education Clusters 21A and 21B, OR two courses from Philosophy 6, Political Science 10, Sociology 10.

**Required Upper Division Courses (16 to 20 units):** Four courses spanning at least two different departments selected from Economics 107, Geography 134, History 122D, 142A, 142B, Philosophy 151A, 151B, 155A, 155B, 154, 156. Political Science M111A through 114B, 116A, Sociology 101, 102, and with approval of the chair, 191 seminars in social thought.

**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.
No more than two courses (8 to 10 units) may be applied toward both this minor and a major or minor in another department or program. Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Social Thought

Upper Division Courses

190A-190B. Research Colloquia in Social Thought I, II. (2-2) Seminar, two hours. Corequisite for course 190A: course 199A; for course 190B: course 199B. Limited to juniors/seniors. Required of students in Social Thought minor. Designed to bring together students undertaking supervised senior thesis work in seminar setting with one or more faculty members to discuss their work or related work in Social Thought minor. Led by one supervising faculty member. Course 190A may be repeated for credit. P/NP grading.

199A-199B. Directed Research or Senior Thesis in Social Thought I, II. (4-4) Tutorial, to be arranged. Corequisite for course 199A: course 199A; for course 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.

Scope and Objectives

The primary objectives of the Department of Social Welfare graduate program are to prepare leaders for the profession of social work and to develop the empirical base for all facets of practice. In response to changing demographic trends and the emergence of new social problems, the department provides leadership in the areas of policy, practice, and research and in the development of an innovative curriculum for training students and professionals to meet the service needs of a multicultural clientele.

The educational program is based on the premise that all students need to acquire a common body of knowledge and basic skills, and a common understanding of the philosophy and values of the profession. These then form a sound foundation for the development of more specialized knowledge and skills along the lines of each student's interests and the needs of the field.

Students are encouraged to take advantage of the resources within the University by selecting elective courses in related disciplines. In addition, as a department within the School of Public Affairs, the program affords students instructional opportunities in the other affiliated departments — Public Policy and Urban Planning.

Beyond national opportunities in the profession of social work, there is increasing demand for qualified and experienced social workers to serve in the international field, where many social service programs are conducted under the auspices of the United Nations, the U.S. government, and national sectarian organizations. Graduates of the doctoral program generally secure appointments at major universities or research centers. The challenge to the department, the profession, and those who join us as students is to prepare to forge the paths, build the bridges, and shape the future to ensure that all individuals, families, and communities enjoy better education, better healthcare, better job training, and better economic futures.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/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


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. Requisite: course 100A. Review of existing policy regarding major social issues in field of social welfare. Examination of discrepancy between need and capacity of social agencies to address need. Exploration of differential impact of policy on various populations. P/NP or letter grading.

101. Social Welfare in Multicultural Society. (4) Lecture, four hours. Social policy viewed from perspective of various cultural groups. Students to become aware of their own cultural perspective and learn to recognize similarities and differences in values, perspectives, and beliefs across cultural groups. P/NP or letter grading.


103. Introduction to Direct Practice with Individuals, Families, and Groups. (4) Lecture, four hours. Requisites: courses 100A, 100B, 101. Description and demonstration of basic skills employed in direct social work practice via casework process. Students practice these skills in written, role-play, small group, and video or audio exercises. P/NP or letter grading.
104A. Filipino American Community and Family. (4) Lecture, four hours. Examination of interaction of Filipino American families and communities within larger social and political environment to understand importance of social, cultural, and political influences of Filipino American families and communities. P/NP or letter grading.

104B. Japanese American Redress. (4) Lecture, four hours. Examination of process through which Civil Liberties Act of 1988 was created, pursued, and passed. This act was official apology from the U.S. government to over 110,000 Japanese Americans incarcerated in concentration camps during World War II. P/NP or letter grading.

104C. Diversity in Aging: Roles of Gender and Ethnicity. (4) (Same as Gerontology M104C and Women's Studies M104C.) Lecture, four hours. Exploration of complexity of variables related to diversity of aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in multidisciplinary perspective utilizing faculty from variety of fields to address issues of diversity. Letter grading.

104D. Public Policy and Aging. (4) (Same as Gerontology M104D.) Lecture, four hours. Examination of theoretical foundations 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.

104E. Social Aspects of Aging. (4) (Same as Gerontology M104E) Lecture, four hours. Topics include theories of aging, economic factors, changing roles, social relationships, and special populations. Weekly seminars organized around key aspects of social gerontology. P/NP or letter grading.

104F. Japanese American Community and Family. (4) Lecture, four hours; outside study, nine hours. Historical overview of Japanese American families and communities within larger social and political environment to understand importance of social, cultural, and political influences of Japanese American families and communities. P/NP or letter grading.

105. Social Welfare Policy in Modern America: Historical Perspectives. (4) Lecture, three hours; outside study, nine hours. Historical overview of American social policy dealing with three core societal problems: poverty, sickness, and joblessness. Programs developed by governments to ameliorate these problems include public insurance programs or cash transfers such as unemployment insurance, welfare, and Social Security. Collectively these programs are known as “the welfare state”; examination of origins of the U.S. welfare state, its development over time, and features that make it distinctive as compared to welfare states in other nations. Letter grading.

106. Research Seminar and Field Observation: Social Welfare. (4) Seminar, three hours; discussion, one hour; outside study, eight hours. Didactic component with focus on development of basic skills in the areas of research. Students select one field of observation experience (module) from a number of field settings. P/NP or letter grading.

107. Field Practicum: Social Welfare. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 106. In field practicum students are placed in a specific agency where they combine observation of agency functions with participation in specific agency tasks and roles under institutional supervision of an agency mentor and a UCLA faculty member. P/NP or letter grading.

108S. Violence against Women. (4) (Same as Women's Studies M108S.) Lecture, three hours. Requisite: Women's Studies 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.

130A-130B. Community Research and Services Seminars. (4-4) (Formerly numbered 190A-190B.) Seminar, three hours; service learning, four hours; outside 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 on service-learning site experiences, with application of issues related to lecture and seminar readings. Students to be assigned to two-term tutoring/mentoring site where they apply tutoring techniques as they assist middle school children living in impoverished areas of Los Angeles County. In Progress (130A) and P/NP or letter (130B) grading.

131. Poverty, Poor, and Welfare Policy. (4) Seminar, three hours. Examination of current research and policy issues concerning poverty 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 (PROWA); and critical appraisal of recently enacted state welfare reform policies. Relationship between research knowledge about poverty and current policies, conflicts of gender, ethnicity, and class on patterns of poverty and policy responses. P/NP or letter grading.

132. Community Analysis and Community Needs. (4) Lecture, three hours. Limited to juniors/seniors. Examination of current understanding and depicting demographic composition 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 infrastructure necessary for ascertaining its strengths and resources that can be mobilized for addressing and responding to community needs, issues, and concerns. Social service agencies and communities can work together in partnership to enhance quality of community life. P/NP or letter grading.

140. Introduction to Study of Aging. (4) (Same as Gerontology M140 and Psychology M140.) Lecture, three hours. Designed for juniors/seniors. Perspectives on major features of human aging — biological, social, psychological. Introduction to information on the range of influences on aging to prepare students for subsequent specialization. P/NP or letter grading.


162. Health Policy and Services. (4) Seminar, three hours. Limited to juniors/seniors. Contemporary issues in healthcare financing and delivery and historical perspective on these issues. Focus on healthcare reform 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 roles in access and cost for diverse vulnerable populations. Various public and private approaches to healthcare reform and ways of thinking about predicted impact, cost, and political feasibility. ISSUES in care of persons with chronic illness and debate about public and private approaches to long-term care reform. Social work roles in healthcare policy and practice. P/NP or letter grading.

163. Prevention of Risky Substance Use and Related Problems. (4) Lecture, four hours. Limited to juniors/seniors. Prevention of substance use and related harms 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, skills, and expertise in determining effective interventions to reduce drug-related harm, using most up-to-date information. P/NP or letter grading.

164. HIV Prevention in the U.S. and in Developing World. (4) Lecture, three hours. Limited to juniors/seniors. Examination of various approaches to HIV prevention, drawing on infectious disease paradigms from public health and theories of behavior change from fields of psychology, sociology, and communications. Sexual behavior and injection drug use, existing and promising technologies to reduce HIV transmission, and fiscal, cultural, ethical, and moral dilemmas in allocation of prevention resources. P/NP or letter grading.

165. Nonprofit Sector, Social and Civil Society. (4) (Formerly numbered C165.) Lecture, three hours; outside study, nine hours. Use of political economy perspective to analyze forces that have shaped rise and characteristics of nonprofit sector and its constituent elements. Examination of social history of nonprofit sector in U.S. Exploration of legal and policy environments and different organizational forms. Comparative perspective between U.S. and other countries. P/NP or letter grading.

191. Variable Topics Research Seminars: Social Welfare. (4) Seminar, three hours; outside study, nine hours. Examination in depth of particular subfield of social welfare (e.g., children and youth, nonprofit, health, mental health). Limits of investigation set by individual instructor. May be repeated for credit with topic change. Letter grading.

194. Internship Seminars: Social Welfare. (1) Seminar, one hour; outside study, three hours. Corequisite: course 195. Not open to freshmen. Introduction to topics relevant to psychosocial determinants of children's health and community resources for children and families, with opportunity to gain breadth and depth of knowledge in seminar setting. May be repeated for credit. P/NP 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. Four hours minimum required. May be repeated for credit. Individual contract required. P/NP or letter grading.
Graduate Courses

201A-201B. Dynamics of Human Behavior. (3-3) Lecture, two hours discussion, one hour. Biopsychosocial factors associated with individual and group behavior and development as applicable in social functioning of individuals and groups. Emphasis on theoretical issues and related evidence which contribute to unified theory of human development. Letter grading.

202A-202B. Dynamics of Human Behavior. (2-2) Discussion, two hours. Requires: courses 201A, 201B. Deviations and pathologies or stresses in physical, emotional, and social areas of human functioning as those problems relate to role and function of social workers. S/U or letter grading.

203A-203B-203C. Integrative Seminars. (2-2-2) Seminar, two hours. Integrating courses to bring together 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.

M203E. Hispanic Mental Health Issues and Treatment. (2) (Same as Psychiatry M231.) Seminar, two hours. Mental health issues and needs of Hispanics through seminars and videotapes dealing with historical components of Hispanic culture in the U.S., analysis of various theoretical perspectives regarding biopsychosocial behavior, distinguishing psychodynamic, cultural factors in treatment of Spanish-speaking patients. Lecture, three hours. S/U or letter grading.

M203F-M203G-M203H. Child Abuse and Neglect. (2-2-1) (Same as Community Health Sciences M245B-M245C-M245D.) Lecture, three hours; out-of-class time, 90 minutes; one field trip. Review of current status of homelessness: who are homeless, 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 analyzed within context of economic, political, social,philosophical, and scientific climate of period. S/U or letter grading.

M221A. Foundations of Social Welfare Policy. (4) (Same as Public Policy M210 and Urban Planning M241.) Lecture, three hours. Nature, roles, and history of welfare institutions in different societies; applicable social systems; essential components of welfare system; theory and research about welfare policies and organizational forms. S/U or letter grading.

M221B. 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 organizations develop and maintain their internal functions. Development of beginning skill in organizational analysis. S/U or letter grading.

223. Seminar: Social Work Profession. (2) Seminar, two hours. Nature and role of social work in contemporary social and global situations; probable future trends in profession; social work ethics, professional organizations, certification license; professional responsibility for continued self-criticism and improvement of profession. S/U grading.

225A. Social Welfare Policy. (4-4-4) Discussion, three hours. Designed for Ph.D. students. S/U or letter grading.

225A. Formulation and Analysis. (4) Discussion, three hours. Designed for Ph.D. students. Examination of principal issues in development, formulation, and adoption of U.S. social welfare policies, with particular focus on income distribution and redistribution. Emphasis on analysis of social policy issues and conceptual frameworks for analysis. S/U or letter grading.

225B. Implementation and Evaluation. (4) Discussion, three hours. Designed for Ph.D. students. Examination of issues in implementation and evaluation of social welfare policies, particularly those pertaining to provision, organization, and delivery of social services, including auspices funding, distribution, criteria for effectiveness, and use of quantitative methods in policy analysis. S/U or letter grading.


231A-231B-231C. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups IV, V, VI. (4-4-4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of theories, concepts, and principles underlying social casework practice. Specific attention to deviation and stress as conditions affecting functioning of individuals and groups, and to diagnostic knowledge and competence required in rehabilitation and prevention. S/U or letter grading.

231D. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups — Gerontology. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of theories, concepts, and principles underlying social casework practice. Theoretical models related directly to practice with diverse population of older adults. Presentation of comprehensive tools for multidimensional geriatric assessment. How to engage in collaborative treatment planning across range of late-life problems and address impediments to intervention process. Theoretical underpinnings and most effective practice models to enable students to serve needs of older clients and their families as they adjust to late-life transitions, as well as to health and mental health problems most prevalent for older adults. Client populations range from well elderly to physically frail and/or demented from diverse backgrounds. S/U or letter grading.

231E. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups — School Social Work. (4) Lecture, three hours; outside study, nine hours. Integration of theory and practice as they pertain to role of social workers in school settings. Biopsychosocial ecological assessment of students (including, but not limited to, differences due to ethnic and/or cultural diversity and to students who are learning handicapped); ecological intervention strategies, collaboration with individuals and social groups, and role of liaison between pupils, family, school, and community. Use of discussion, videos, current literature, and case presentation to explore impact of school social workers as change agents. S/U or letter grading.

240A-240B. Theory of Social Welfare Practice in Organizations, Communities, and Policy Settings I, II. (3-3) Lecture, three hours. Corequisite: required social work practicum. Historical and theoretical developments in administration, planning, and community organization; understanding the community as a social system; administration of organizations; role of the practitioner in identification, analysis, evaluation of needs, existing programs, policies, structures, and strategies of intervention. Letter grading.

241A-241B-241C. Advanced Theory of Social Welfare Practice in Organizations, Communities, and Policy Settings IV, V, VI. (4-4-4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Emphasis on various patterns of community action for attaining social welfare objectives; research and field experience directed toward study of social problems within context of community planning; emerging patterns of physical, economic, and social planning within framework of social change theory. S/U or letter grading.

M241D. Social Advocacy and Domestic Violence. (4) (Same as Law M339.) Lecture, three hours; fieldwork. Use of domestic violence as case study to give students skills needed to advocate for individuals or issues. How systems work, how law legitimizes systems, and how advocacy can be used to change systems. Letter grading.

241E. Leadership, Development, and Governance of Nonprofit Organizations. (4) (Same as Public Policy M228 and Urban Planning M230.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Various patterns of community action for attaining social welfare objectives; research and field experience directed toward study of social problems within context of community planning; emerging patterns of physical, economic, and social planning within framework of social change theory. Letter grading.

M241F. Strategic Planning for Public and Nonprofit Organizations. (4) (Same as Public Policy M247 and Urban Planning M290.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Technical processes of problem solving regarding substantive social welfare problems at community level. This form of community practice fills niche between professional and knowledge and skill set possessed by agency and program administrators on one hand and by policy analysts and policymakers on other. Letter grading.

245A-245B. Development of Social Work Practice. (4-4) Discussion, three hours. Designed for Ph.D. students. S/U or letter grading.

245A. Epistemology of Practice. (4) Discussion, three hours. Designed for Ph.D. students. Guiding scientific method in practice theory, practice research, development, and change of practice theories; intellectual foundations of practice theories; how professionals learn, apply, accumulate, and modify their practice knowledge; science and practice interplay. S/U or letter grading.

245B. Models of Social Work Practice Research. (4) Discussion, three hours. Designed for Ph.D. students. Research for practice, with major emphasis on methods of intervention research which seek to design, test, evaluate, and disseminate innovative intervention technologies. S/U or letter grading.

250. Critical Problems in Social Welfare. (2) Discussion, three hours. Designed for Ph.D. students. Current problems in field of social welfare. Specific topics vary depending on research and educational interests and needs of class. May be repeated for credit. S/U grading.

280. Social Welfare Research. (3) Lecture, three hours; outside study, six hours. Sources, nature, and uses of social work theory and research-based knowledge and broader social and economic welfare activities. Critical analysis of major methods of developing scientific knowledge. S/U or letter grading.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>281A-281B-281C</td>
<td>Advanced Social Welfare Research. (2-2-2) Discussion, two hours. Individual or group research projects requiring intensive examination and analysis of problem areas, directed toward development of research knowledge and techniques for social work practice. In Progress (281A, 281B) and S/U or letter (281C) grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>285A-285B-285C</td>
<td>Research in Social Welfare. (4-4-4) Discussion, three hours. Review of areas of research concern to social workers, with special attention to design, instrument construction, data collection, data reduction, analysis, and interpretation. Studies designed include survey, panel, experimental observation, and theory development research. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>285E</td>
<td>Research in Gerontology. (4) Lecture, three hours. Overview of research in aging. Development of research design, including experimental and alternative theoretical frameworks, conducting literature reviews, selecting appropriate research design, identifying sampling methods. Special considerations in aging research, including sampling, questionnaire design, and recruitment issues. Letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>285F</td>
<td>Research in Health. (4) Lecture, three hours. Research in area of health policy and services. Discussions of readings about range of research from field of health services. Identification of research design issues, design of research instruments, analysis of strengths and limitations of current approaches to health services research, consideration of alternative roles for social work practitioners in arena of health services. Letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>285I</td>
<td>Research in Youth Populations. (4) Lecture, three hours. Research methods as applied to problems, issues, and interventions pertaining to youth populations. Instruction and experience in applying experimental and quasi-experimental designs, survey research methods, ethnographic methods, single-subject designs, and observational methods. Operational definition of variables and selection and design of appropriate measures for research with children and adolescents. Letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>286A</td>
<td>Survey of Research Methods. (4) Discussion, four hours. Basic concepts underlying research methods. Content includes theoretical and conceptual approaches to research problem formulation; research design, including experimental, comparative, and survey; sampling; statistical methods; methods of observation and techniques of data analysis. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>286B</td>
<td>Advanced Research Methods. (4) Discussion, four hours. Advanced concepts underlying research methods. Content includes theoretical and conceptual approaches to research problem formulation; research design, including experimental, comparative, and survey; sampling; statistical methods; methods of observation and techniques of data analysis. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>286C</td>
<td>Research Internship. (4) Fieldwork, four hours. Supervised study and training through participation in projects supervised by students and carried out under faculty supervision, enabling students to apply research skills developed in prior courses. May be repeated for credit. S/U grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290A-290B-290C</td>
<td>Seminars: Social Work. (4-4-4) Seminar, three hours. Review of seminars dealing with trends in social work and social welfare, with focus on current social problems affecting individuals, groups, and communities and new patterns of intervention based on current demonstrations and research. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290D</td>
<td>Women, Health, and Aging: Policy Issues. (4) Same as Health Services CM241.) Lecture, three hours; discussion, one hour. Preparation: two upper division social sciences courses, two upper division biological sciences courses. Social and economic context of older women’s aging, major physical and psychological changes older women experience, delivery of health services to this population, and policies that respond to their health needs. Letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290L</td>
<td>Children with Special Healthcare Needs: Systems Perspective. (4) Same as Community Health Sciences M420 and Health Services M420.) Lecture, three hours. Examination and evaluation of principles, policies, programs, and practices that have evolved to identify, assess, and meet special health care needs of children, and adolescents with developmental disabilities or chronic illness and their families. Letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290J</td>
<td>Child Welfare Policy. (4) Same as Public Policy M212.) Lecture, three hours. Development of social policy as it affects families and children from different cultural backgrounds and as it is given form in public child welfare system. Examination of development of an infrastructure to support needs of children and families. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290K</td>
<td>Mental Health Policy. (4) Same as Public Policy M213.) 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 mentally ill and services they are provided. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290L</td>
<td>Poverty, Poor, and Welfare Reform. (4) Same as Public Policy M214 and Urban Planning M246.) Lecture, three hours. Major policy and research issues concerning poverty and social welfare policy directed toward poor in U.S. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290M</td>
<td>Health Policy. (4) Same as Public Policy M215.) Lecture, three hours. Introduction to contemporary issues in health 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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290N</td>
<td>Public Policy for Children and Youth. (4) Same as Public Policy M216.) Lecture, three hours. Policy issues that affect children and adolescents in their relation to their interaction with schools and communities, federal, state, and local levels. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290P</td>
<td>Aging Policy, Elderly and Families. (4) Same as Public Policy M211.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Policy issues that affect children and adolescents in their relation to their interaction with schools and communities. Federal, state, and local levels. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290S</td>
<td>Nonprofit Sector, State and Civil Society. (4) Formally numbered CM290S.) Same as Public Policy M227 and Urban Planning M287.) Lecture, three hours; outside study, nine hours. Use of political economy perspective to analyze forces that have shaped rise and characteristics of nonprofit sector and its constituent elements. Examination of social history of nonprofit sector, exploration of legal and policy environments and distinct organizational forms. Comparative perspective between U.S. and other countries. S/U or letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290T</td>
<td>Social Work and Juvenile Justice System. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Exploration of evolution of juvenile justice system in the U.S. and issues that have shaped current-day practice. Role of social workers in system to be theme throughout course. Letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>290U</td>
<td>Community Development and Housing Policies: Roles of State, Civil Society, and Nonprofit Sector. (4) Same as Public Policy M226 and Urban Planning M286.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Fundamental building blocks for successful management in nonprofit sector. Students develop management skills in strategic thinking/problem solving, project management, team building, and negotiation. Use of case studies to troubleshoot critical challenges, from finance to crisis management to marketing, that nonprofit managers typically face. Letter grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>375</td>
<td>Teaching Apprentice Practicum. (1 to 4) Seminar to be arranged. Teaching apprentice to gain 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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>401A-401B-401C</td>
<td>Practicum: Social Work. (3-3-3) Laboratory, 20 hours. Educationally directed practicum conducted in selected health, welfare, and educational facilities. Provides opportunities for students to test their theoretical knowledge and to acquire disciplined practice foundation in profession. In Progress (401A, 401B, 401C).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>402A-402B-402C</td>
<td>Advanced Practicum: Social Work. (4-4-4) Laboratory, 24 hours. Requires: 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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>490</td>
<td>Professional Communication for Social Welfare. (2) Lecture, two hours. Writing workshop on students’ papers in progress, with eye toward scholarly publication. Analysis and critique of various rhetorical and stylistic principles. May be repeated once. S/U grading.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>501</td>
<td>Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate department chair. May be repeated as needed. Graduate students in courses taken under cooperative arrangements with USC. S/U grading.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Undergraduate Study

Society and Genetics Minor

To enter the Society and Genetics minor, students must (1) have an overall grade-point average of 2.5 or better and (2) file a petition in 1323 Rolfe Hall no later than three terms before graduation. They are encouraged to declare the minor as early as possible and to discuss their proposed course of study with the undergraduate adviser.

Required Upper Division Courses (30 to 34 units): (1) Society and Genetics 101 or, for life sciences majors, a 4- or 5-unit upper division elective course from the approved list of courses issued each term by the program, (2) course M102W, (3) course 191, and (4) at least four upper division elective courses (minimum 16 units) from the approved list. One individual research tutorial and corequisite research seminar (courses 190 and 199) may be applied; enrollment in additional 190/199 courses may be considered by petition.

Students may petition to have a course not on the approved list applied toward the four-course elective requirement.

No more than one upper division course may be applied toward both this minor and a major or minor in another department or program. Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Society and Genetics

Upper Division Courses

101. Genetic Concepts for Human Sciences. (4) Lecture, three hours. Focused treatment of selected complex genetic concepts from molecular biology, population and quantitative genetics, and evolutionary biology, with emphasis on gene-environment interaction at various levels and culminating in exploration of notion of coevolution of genetics and society. Letter grading.

M102W. DNA: Promise and Peril. (5) (Same as Human Genetics M102W.) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Sequence of entire personal genome is now available to us. Consideration of impact that knowledge of this genomic sequence has on concepts of ourselves as individuals and of our place in biological universe. Exploration of how this information influences concepts of race/ethnicity and gender. Examination of ability of DNA-based forensics to identify specific individuals. As genes become commodities with value in marketplace, someone else may own our genes. Discussion of cloning of humans for reproductive and therapeutic purposes. Much has been made of medical implications of Human Genome Project, but we look at influence of this information on our concepts of self and identity. Satisfies Writing II requirement. 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. (2) Seminar, two hours. Enforced corequisite: course 199. Designed to bring together advanced undergraduate 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 once for credit with topic change. Letter grading.


zations and health agencies, government service, and human resources.

The Sociology Department faculty includes internationally renown 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.**

**Presociology Major**

While students are completing the lower division preparation courses for the major, they may be classified as Presociology majors.

**Preparation for the Major**

Required: Sociology 1, 20; one course from Mathematics 2, 3A, or 31A; one course from Statistics 10, 11, 13, or Psychology 100A.

Each course required for the major in Sociology, including lower division and allied field courses, must be taken for a letter grade with a grade-point average of 2.0. A minimum grade of C is required in each Preparation for the Major course.

**Transfer Students**

Transfer applicants to the Presociology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one introduction to sociology course, one finite mathematics or calculus course, and one statistics course.

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

**The Major**

Required: Fifteen upper division courses, including (1) two theory courses — Sociology 101, 102; (2) one methods course from Sociology 113 or Statistics 112; (3) one course from each of the following core areas: (a) interactions — Sociology 111, 119, CM125, 126, 130, 132, 133, 134, (b) institutions and social processes — courses 116, 158, 173, M174, (c) power and inequality — courses 156, 157, M162, 182; (4) any five upper division sociology elective courses; and (5) four upper division allied field courses (16 units) in anthropology, communication studies, economics, geography, history, political science, and psychology.

Students should complete course 101 and the core courses as early as possible and before taking other upper division courses. Courses 101 and 102 must be completed with grades of C or better. Students are required to maintain a 2.0 overall grade-point average in all upper division courses.

Only 8 units of Sociology 199 are allowed. At least six of the sociology courses 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.

As preparation for the honors program, students must complete all preparation for the major courses.

Prior to taking other upper division sociology courses, students must complete a 189 honors seminar section of Sociology 101 and 102. They then must complete all upper division requirements for the major.

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. Students should apply in the last term of their junior year.

**Computing Specialization**

Majors in Sociology may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the major, (2) completing Program in Computing 10A, 10B, 10C, and (3) completing Sociology 112, 113. Each course must be taken for a letter grade. Students graduate with a bachelor’s degree in sociology and a specialization in Computing.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

**Graduate Degrees**

The Department of Sociology offers Master of Arts (M.A.) 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 investigation. P/NP or letter grading.

2. M5. Social Organization of Black Communities. (Formerly numbered CM114A.) 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.

3. Sociohistorical Methods. (4) Lecture, three hours; discussion, two hours. Introduction to history of social thought, with special emphasis on theoretical precursors to development of discipline of sociology. Exposition and analysis of selected social theorists and concepts, especially from the 17th to 19th centuries. Letter grading.


88A-88B. Lower Division Seminars. (1 each) Seminar, one hour. Limited to 15 freshmen/sophomores. Variable topics of current sociological interest. Consult Schedule of Classes or "Department Announcements" for topics and instructors. P/NP grading.

Upper Division Courses

101. Development of Sociological Theory. (5) Lecture, three hours; discussion, one hour. Comparative survey of basic concepts and theories in sociology from 1850 to 1920. P/NP or letter grading.

102. Contemporary Sociological Theory. (5) Lecture, three hours; discussion, one hour. Requisite: course 101. Critical examination of significant theoretical formulations from 1920 to the present. P/NP or letter grading.

105A. Field Research Methods I. (6) Lecture, two hours; discussion, two hours; fieldwork, eight to 10 hours. Research practice in which students write field notes on their experiences and observations of intensive internships field placement. Readings focus on fieldwork roles and relations, observing and describing, writing field notes, field interviewing, ethical issues, and preliminary data analysis. Fieldwork and extensive field notes required. Letter grading.

106B. Field Research Methods II. (6) Lecture, two hours; discussion, two hours; fieldwork, 10 hours. Requisite: course 105A. Collection and analysis of both field notes and unstructured interview data from field student placement. Use of techniques of qualitative data analysis, including qualitative coding, analytic memoing, and grounded theory methods, to analyze these materials and to write ethnographic paper. Letter grading.

110. Sociohistorical Methods. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. General characteristics of scholarly abstraction, generalization, inference, and verification and particular problems of historical specification, comparison, and counterfactual reasoning in constructing and testing replicable explanation of historical event. P/NP or letter grading.

111. Social Networks. (4) Lecture, three hours; laboratory, one hour. Analysis of how social networks create social structure, how social actors utilize them, and their unexpected effects. Topics include: network analysis, social capital, and community. P/NP or letter grading.

112. Introduction to Mathematical Sociology. (4) (Formerly numbered C112.) Lecture, three hours; laboratory, one hour. Requisites: Mathematics 2, 3A (course whose course includes introductions to probability theory, matrix algebra, and differential and integral calculus), Statistics 10. Mathematical treatment of several sociological phenomena, such as occupation, 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 Environ 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 consequences of trends and differentials in family formation and dissolution. P/NP or letter grading.

118. Simulating Society: Exploring Artificial Communities. (5) (Same as Honors Coleman 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) (Formerly numbered 191K.) Lecture, three hours; discussion, one hour. Life history, reproduction, and behavior of different species of primates. P/NP or letter grading.

120. Self and Society. (4) Lecture, three hours; discussion, one hour. Examination of life in human primates. P/NP or letter grading.

121. M124A-M124B. Conversational Structures I, II. (4-4) (Formerly numbered CM124A-CM124B.) Lecture, three hours; discussion, one hour. P/NP or letter grading.

122. Study of Norms. (4) Lecture, three 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 systems are produced, used, and transformed in everyday, organizational, and extra-ordinary contexts. P/NP or letter grading.

123. Mind and Society. (4) Lecture, two and one-half hours; discussion, one hour. Requisite: course 1. Physical production of modes of thought and forms of knowledge. Study of ways in which bodies of knowledge and cognitive systems are produced, used, and transformed in everyday, organizational, and extra-ordinary contexts. P/NP or letter grading.

124. 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 under social conditions; relations between thought, sensations, and emotions; self and emotions; social construction of emotions. P/NP or letter grading.

125. Sociology of Time. (4) Lecture, three hours; discussion, one hour. Requisite: course 1. Conceptualization 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 death; social organization 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.

126. Mind and Society. (4) Lecture, two and one-half hours; discussion, one hour. Requisite: course 1. Designed for juniors/seniors. Characteristics of crowds, mobs, political movements, and revolutions; their relation to social unrest and their role in developing and changing social organization. P/NP or letter grading.

130. Collective Behavior. (4) Lecture, three hours; discussion, one hour. Requisite: course 1. Designed for juniors/seniors. Characteristics of crowds, mobs, political movements, and revolutions; their relation to social unrest and their role in developing and changing social organization. P/NP or letter grading.


135. Group Processes. (4) Lecture, three hours; discussion, one hour. Systematic study of formation, structure, and functioning of groups; analysis of group processes and group products from variety of theoretical viewpoints; implications of various research techniques. P/NP or letter grading.
M138. Death, Suicide, and Trauma. (4) (Same as Psychology M163.) Lecture, three hours; discussion, one hour. Sociological analysis of incidence of violent death. Suicide is ninth 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 problems. 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.

M142. Healthcare in Transitional Communities. (4) (Same as Public Health M151.) Lecture, three hours; discussion, one hour. Analysis of social, cultural, economic, and political processes affecting organization and accessibility of healthcare in transitional and disadvantaged communities. Fieldwork required. Letter grading.


145. Sociology of Deviant Behavior. (4) Lecture, three hours; discussion, one hour. Examination of leading sociological approaches to study of deviation and general survey of major types of deviation in American society. P/NP or letter grading.

C146. Sociology of Interpersonal Conflict. (4) Lecture, three hours; discussion, one hour. Origins, development, and outcomes of interpersonal conflicts and troubles that arise in close relationships, households, workplaces, and public places in contemporary societies. 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 behavior. Letter grading.

147B. Sociology of Criminal Justice. (4) Lecture, three hours; discussion, one hour. Examination of structures and routine decision-making processes of key criminal justice institutions, including police, courts, probation, and parole, jails and prisons. P/NP or letter grading.


149. Youth, Trouble, and Juvenile Justice. (4) (Formerly numbered CHY 149) Lecture, three hours; discussion, one hour. Examination of processes through which youth become involved in juvenile justice system. Analysis of this system as people-processing and people-changing institution as context for considering critical issues in juvenile justice. P/NP or letter grading.

M150. Sociology of Aging. (4) (Same as Gerontology M150.) Lecture, three hours; discussion, one hour. Study of sociological processes shaping definition, experience, and response to aging in contemporary society. Topics include race, class, and gender in aging over life course; interpersonal relations and 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 post-immigration settlement. P/NP or letter grading.

152. Comparative Acculturation and Assimilation. (4) Lecture, three hours; discussion, one hour. Requisite: course 151. Comparison of acculturation and assimilation of Europeans, Africans, Mexicans, and Asians in the U.S., with emphasis on cultural 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 context, 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.

155. Latinos in the U.S. (Same as Chicana and Chicano Studies M155.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Exploration of history and social conditions of Latinos in Los Angeles as well as particular emphasis on their location in larger social structure and on comparisons with other minority groups. Topics include migration, family, education, and work issues. P/NP or letter grading.

156. Race and Ethnicity in American Life. (4) Lecture, three hours; discussion, one hour. Race and ethnicity in the U.S., including interplay between racial and ethnic structures and meanings. Special attention to comparison of African American and European American experiences and to transformation of Asian American and Latino communities and the nation generally, brought by renewal of mass migration in second half of the 20th century. P/NP or letter grading.

157. Social Stratification. (4) Lecture, three hours; discussion, one hour. Analysis of American social structure in terms of evaluational differentiation. Topics include criteria for differentiation, bases for evaluation, types of stratification, composition of strata and status systems, mobility, consequences of stratification, and problems of methodology. P/NP or letter grading.

158. Urban Sociology. (4) Lecture, three hours; discussion, one hour. Analysis of urbanization and urbanism in the U.S. and world. P/NP or letter grading.

159. Comparative Studies of Jewish Communities in the U.S. and Abroad. (4) Lecture, three hours; discussion, one hour. History, distribution, structure, and functioning of major Jewish communities, with particular emphasis on North America and Israel. Inter-relationships and sources of conflict between Jews and Gentiles in Western countries. More generally, economic and social integration of Diaspora Jewish communities. Fieldwork may be required. P/NP or letter grading.

160. Comparative Studies of Jewish Communities in the U.S. and Abroad. (4) Lecture, three hours; discussion, one hour. History, distribution, structure, and functioning of major Jewish communities, with particular emphasis on North America and Israel. Inter-relationships and sources of conflict between Jews and Gentiles in Western countries. More generally, economic and social integration of Diaspora Jewish communities. Fieldwork may be required. P/NP or letter grading.


162. Sociology of Gender. (4) (Same as Women’s Studies M162.) Lecture, three hours; discussion, one hour. Comparative and historical study of gender roles and status, the organization of families, kinship, and gender relations in modern industrial societies. P/NP or letter grading.

163. Gender and Work. (4) (Same as Women’s Studies M163.) Lecture, three hours. Requisite: course 1 of Women’s Studies 10. Exploration of relationships of gender to work, concentrating on the U.S. experience but also including some comparative material. Particular emphasis on analysis of causes and consequences of job segregation by gender and of wage inequality. P/NP or letter grading.

164. Politics of Reproduction. (4) (Same as Women’s Studies M164.) Lecture, three hours; discussion, one hour. Title refers to intersection between political and life cycle. Topics include social construction of gender and population, reproductive issues, politicization of mothers, motherhood, and mothering, surrogacy, and new reproductive technologies. Letter grading.

165. Sociology of Race and Labor. (4) (Same as Afro-American Studies M156 and Work and Place Studies M165.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Exploration of relationship between race, gender, occupation, and 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 the workplace, 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. Impacts of globalization on these dynamics. P/NP or letter grading.

166. Women in Socialist and Post-Socialist States. (4) (Same as Women’s Studies M166.) Lecture, three hours; discussion, one hour. Exploration of diverse aspects of women’s lives in socialist and post-socialist states. Although transition from socialism occurs differently, gender 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 classic theories, current methods, and research on behavior of organizations in society. P/NP or letter grading.

169. Law and Society. (4) Lecture, three hours; discussion, one hour. Specific topics may include law in preindustrial and industrial societies, the 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 majors in Sociology and other social sciences, as well as students preparing for health sciences careers, with understanding of health-seeking behavior and interpersonal and organizational relations that are involved in receipt and delivery of health services. P/NP or letter grading.

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. Requisite: course 1. Description and analysis of entrepreneurship, with special reference to historical origins, identity, international comparisons, women and ethnic minority participation, legal and illegal forms, public and private auspices. P/NP or letter grading.
173. Economy and Society. (4) Lecture, three hours; discussion, one hour. Sociology of economic life, with emphasis on principal economic institutions of the U.S. P/NP or letter grading.

M174. Sociology of the Family. (4) (Same as Women’s Studies M174.) Lecture, three hours; discussion, one hour. Theory and research dealing with modern family, its variations, including historical changes, variant family patterns, family as an institution, and influence of contemporary society on the family. P/NP or letter grading.

M175. Sociology of Education. (5) (Same as Education M175.) Lecture, four hours. Study of social processes and interaction patterns in educational organizations; relationship of such organizations to aspects of society, social class, and power; social relations within school, college, and university; formal and informal groups, subcultures in educational systems; roles of teachers, students, and administrators. Letter grading.

M176. Sociology of Mass Communication. (4) (Same as Communication Studies M147.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Study of patterns of social change, interactional contexts shaping definition, enactment, and experience of self. Reading, discussion, and development of culminating project. Letter grading.

M177. Comparative and Historical Sociology. (5) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Comparative and historical sociology. Study of social forces that shape social institutions and behavior; political, economic, and cultural content and development of minority cultures. P/NP or letter grading.

M178. Sociology of Caribbean. (4) (Same as Afro-American Studies M178.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Historical and contemporary sociology of Caribbean, with emphasis on colonialism and decolonization, development and underdevelopment, race-making institutions and evolution of race relations, nationalism and migration. P/NP or letter grading.

179. Comparative East Asian Societies. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Compare and contrast three selected countries of East Asia, including China, Japan, Korea, and Vietnam, with focus on dynamic interactions between culture, state, and society in process of change. P/NP or letter grading.

180A-180Z. Special Topics in Sociology. (4 each) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Study of selected topics of sociological interest. Consult Schedule of Classes for topics and instructors. May be repeated for credit and may be applied as elective units toward Sociology major. P/NP or letter grading.

181. State and Society in China. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Historical and contemporary sociology of China, with emphasis on long-term evolution of China’s state and society from 1949 to present. P/NP or letter grading.

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. Study of patterns of social change, resistance to change, and change-producing agencies and processes. P/NP or letter grading.

185. American Society. (4) Lecture, three hours; discussion, one hour. Study 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 conflicts 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.

187. Population and Society in Middle East. (4) Lecture, three hours. Limited to juniors/seniors. Survey of Middle Eastern societies; their historic and environmental bases; contemporary demographic and cultural situation. P/NP or letter grading.


191DC. CAPPP Washington, DC, Research Seminar. (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, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.


191F. Undergraduate Seminar: Sociology of Globalization. (5) Seminar, three hours. Limited to juniors/seniors. Social and cultural aspects of globalization. How far has it transformed human societies, and how far will it go in future? Economic, cultural, political, and military aspects of globalization, with focus on extent to which global expansion of capitalism, nation-state system, and American imperialism reinforce or undercut each other, producing new lines of division and conflict across world. Reading, discussion, and development of culminating project. Letter grading.


191H. Undergraduate Seminar: Communication in Medical Care. (5) Seminar, three hours. In-depth introduction to process of producing scholarly sociological research for students who intend to write undergraduate thesis for departmental honors. Letter grading.

191I. Undergraduate Seminar: Health and Inequality. (5) Seminar, three hours. Limited to juniors/seniors. Sociology of health and illness. Social inequalities in health and survival were widening in the U.S. 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 contemporay Mexican society and vital transformations it has undergone in recent years. Reading, discussion, and development of culminating project. Letter grading.


191M. Undergraduate Seminar: Social Ecology. (5) Seminar, three hours. Limited to juniors/seniors. Fundamentals of sociological approach to social ecology, also known as human ecology. Study of adaptation and accommodation to its immediate and extended environment; density, maintaining personal space, space and territory, and effects of environment on humans. Reading, discussion, and development of culminating project. Letter grading.

191N. Undergraduate Seminar: Urban and Suburban Sociology. (5) Seminar, three hours. Limited to juniors/seniors. History and present condition of cities and suburbs in America, contrasting today’s urban/suburban neighborhoods with premodern cities. Examination of process of suburbanization as it began in the early 19th century and still continues. Reading, discussion, and development of culminating project. Letter grading.


191P. Undergraduate Seminar: Politics of Reproduction. (5) Seminar, three hours. Limited to juniors/seniors. Social and human reproduction is global policy issue. Government efforts to influence reproduction are of particular concern at global scale. Readings focus on causes and mechanisms of this process, how far will it go in future? Economic, cultural, political, and military aspects of globalization, with focus on extent to which global expansion of capitalism, nation-state system, and American imperialism reinforce or undercut each other, producing new lines of division and conflict across world. Reading, discussion, and development of culminating project. Letter grading.

191Q. Undergraduate Seminar: Communication in Medical Care. (5) Seminar, three hours. Limited to juniors/seniors. Sociology of patient care in primary care context. Use of microsociological methods to examine main facets of American primary care medical visits, including detailed analysis of interactional conduct of those visits and development of microanalytical constructs into quantitative measures. Emphasis on direct contact with empirical materials and development of observational and analytic skills. Reading, discussion, and development of culminating project. Letter grading.
191R. Undergraduate Seminar: Cultural Sociolo-
y. (5) Seminar, three hours. Limited to juniors/se-
riors. Introduction to classic theoretical approaches and
contemporary research in study of social worlds dedi-
cated to creating and handling cultural in-
sstitutions such as literature, journalism, film/television,
art, architecture, music, dance, and museums. Dis-
cussion of such issues as contemporary validity of distinc-
tion between high and popular/low culture, rela-
tionship of mainstream and marginal culture, how cul-
ture expresses and reinforces social inequality, orga-
nizational context of culture, and how people express
and decipher meaning in cultural objects. Reading,
discussion, and development of culminating project.
Letter grading.

191S. Undergraduate Seminar: Sociology of Gen-
der and Sexuality. (6) Seminar, three hours. Limited
to juniors/seniors. Sexuality is important site for en-
actment of gender and gender identity. Sexual prefer-
ence and sexual behavior can also form basis for so-
cial identity, repression, discrimination, and privilege,
independent of gender. Social factors such as social
class, ethnicity, generation, and networks shape our
sexual practices and choice of partners. Reading and
writing about variety of original sociological, historical,
and anthropological texts and development of culmi-
nating project. Letter grading.

191T. Undergraduate Seminar: War and Society.
(Seminar) Tutorial, three hours. Limited to juniors/se-
rors. Study of relationship between society’s military and
its social organization in general, with particular attention
to shock-bred civic militarism characteristic of the West.
Topics include honor, discipline, bureaucracy, conscrip-
tion, logistics, total war, guerilla war, terrorism,
and counterinsurgency. Reading, discussion, and
development of culminating project. Letter grading.

194. Research Group Seminars: Sociology. (2)
Seminar, two hours. Designed for undergraduate stu-
dents who are part of research group. Discussion of
research methods and current literature in field. May
be repeated for credit. P/NP grading.

M194DC. CAPPP Program Internship. (Same as
History M194DC and Political Science M194DC.) Seminar,
three hours. Limited to CAPPP Program students in Winter Quarter. Semi-
nars for undergraduate students in Center for Ameri-
can Politics and Public Policy’s program in Washing-
ton, DC. Focus on development and execution of orig-
nal empirical research based on experiences from Wash-
ington, DC-based field placements. Study of va-
niety of qualitative methods (observation, interviewing,
etc.), with comparison to quantitative analysis. Examina-
tion of features of solid and significant research; in-
tensive writing. Letter grading.

195. Community or Corporate Internships in Soci-
ology. (Tutorial) Tutorial, three hours. Limited to juniors/se-
rors. Internship in community agency or business to be
supervised jointly by Center for Community Learn-
ing and faculty adviser. Students meet on regular ba-
sis with instructor and provide weekly reports of their
experience. Normally only 4 units of internship are al-
lowed. Individual contract with supervising faculty member.
P/NP or letter grading.

M195DC. CAPPP Program Internships. (Same as
History M195DC and Political Science M195DC.) Tutorial, four hours. Limited to junior/senior
CAPPP Program students. Internships in Washing-
ton, DC, through Center for American Politics and
Public Policy. Students meet on regular basis with in-
structor and provide periodic reports of their experi-
ence. Individual contract with supervising faculty member.
P/NP or letter grading.

198A-198B. Honors Research in Sociology. (4,4-4)
Tutorial, one hour. Requisite: course 191H. Limited to
honors program students. May be repeated for credit.
Individual contract required. Letter grading.

198B. Design of research project to serve as student’s honors thesis. Research proposal,
detailed bibliography, and regular meetings with speci-
fying faculty member required. 198B. Requisite:
course 198A. Continuation of work initiated in course
198A. Development of honors thesis in consultation
with instructor. Requisite: course 198B. Com-
pletion of honors thesis under direct supervision of
honors faculty director.

199. Directed Research in Sociology. (2 to 4) (For-
merly numbered 197.) Tutorial, one hour. Preparation:
3.0 in sociology, 90 minutes; discussion, 90 minutes.
Limited to 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. Categorizing project or paper re-
quired. May be repeated for maximum of 8 units, with
no more than 4 in any one term. Individual contract
required. May be supervised by one undergraduate counselor. P/NP or letter grading.

Graduate Courses

210A-2018B. Proseminars: Sociology. (2-2-2)
Seminar, two hours every other week. Required of
first-year graduate sociology students. Introduction to
range of theoretical perspectives represent-
ed by department faculty members. S/U grading.

202A-202B. Theory and Research in Sociology. (4-
4) Lecture, two hours; discussion, two hours. Re-
quired of first-year graduate sociology students. Ex-
amination of interrelations of theory, method, and
substance in exemplary sociological works, with ana-
litical and skills-centered orientation. In Progress (202A) and S/U or letter (202B) grading.

204. Topic: Seminar in Theories Of The Race. (4) Semi-
nar, four hours. Examination of selected issues and
problems in classical or contemporary sociological
theory. S/U or letter grading.

205. Family and Social Change. (4) Lecture,
three hours. Examination of sources of change in family
and household organization, with major focus on relation-
ships among economic institutions, family structure,
and content of family life. Consideration of concepts,
thecories, and data about kinship. S/U or letter grading.

M206. Understanding Fertility: Theories and
Methods. (4) (Same as Community Health Sciences
M206.) Lecture, three hours. Preparation: one formal or
social demography course. Requisite: Biostatistics
100A. Application of demographic theories and meth-
ods to describe fertility trends and differentials and so-
cial and proximate determinants of fertility, with empha-
sis on understanding key proximate determinants. For
advanced students interested in population, demogra-
phy of health, and social demography.
Letter grading.

208A-208B. Social Network Methods. (4,4-4)
Lecture, three hours; laboratory, one hour. Requisite:
courses 210A, 210B. Techniques for measuring char-
acteristics of networks and positions in networks;
Centrality of positions, centralization and density of
networks, structural equivalence, cliques. Readings of
empirical research on network computer programs.
S/U or letter grading.

210A-210B. Intermediate Statistical Methods I, II.
(4,4-4) Lecture, three hours; discussion, two hours.
Requisite: course M18. Intermediate statistical meth-
ods using computers: probability theory, sampling dis-
tributions, hypothesis testing, interval estimation, mul-
tiple regression and correlation, experimental design,
analysis of variance and covariance, contingency ta-
tables, sampling theory. S/U or letter grading.

210C. Intermediate Statistical Methods III. (4) Lec-
ture, four hours. Requisite: course 210B. Survey of
advanced statistical methods used in social research,
with focus on problems for which classical linear re-
gression model is inappropriate, including categori-
al data, structural equations, longitudinal data, incom-
plete and erroneous data, and complex samples. S/U or letter grading.

211A-211B. Comparative and Historical Methods.
(4,4-4) Lecture, three hours. In Progress (211A) and S/U
or letter (211B) grading. 211A. Strategies of Research
and Conceptualization. Theory and fact to social sciences, logic of comparative
and historical analysis, and substantive paradigms of comparative and historical analysis. Reading involves
reflection and consultation with instructor on repre-
sentative problem areas. 211B. Research Techniques.
Requisite: course 211A. Topics include problem of evi-
dence, quantitative and qualitative data. Techniques of
data analysis, including use of manuscript census, content analysis, collective biography, and secondary analysis.

212A-212B. Survey Data Analysis. (4,4-4) Lecture,
three hours. Requisites: courses 210A, 210B. Course
212A is enforced requisite to 212B. Analysis and in-
terpretation of primarily noneventual quantitative data, with focus on sample survey and census data. Extensive practice at utilizing statistical methods en-
countered in previous courses in term paper in style of American Sociological Review or similar journal article. Topics include simple tabular analysis, log-linear analysis, ordinary least squares regression, robust regression, binomial and multino-

tial logistic regression, and scale construction. Logic of
analysis and problems of statistical inference, in-
cluding diagnostic procedures and methods for han-
dling complex sample designs. In Progress (212A) and letter (212B) grading.

212C. Study Design and Other Issues in Quantita-

tive Data Analysis. (4) Lecture, three hours. De-
sign for graduate and undergraduate students who
have had some exposure to statistics and quantitative methods. Introduction to study design, including ex-
periential, longitudinal, cohort, time-series designs, contextual, and other designs. Discussion of suitabili-
ity of various design classes for specific analytic goals, as well as their comparative strengths and weakness-
es. S/U or letter grading.

M213A. Introduction to Demographic Methods. (4)
(Same as Public Health Sciences M208, and Economics
M208.) Lecture, four hours. Preparation: one introductory statistics course. Introduction to methods of demographic analysis. Top-
ics include demographic rates, standardization, de-
composition of differences, life tables, survival analy-
sis, cohort analysis, birth interval analysis, models of
population growth, stable populations, population pro-
jection, and demographic data sources. Letter grading.

M213B. Applied Event History Analysis. (4) (Same
as Statistics M213.) Lecture, three hours. Prepara-
tion: 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 models; propor-
tional hazards; nonproportional hazards; paramet-
	ric survival models; heterogeneity; multilevel survival models. S/U or letter grading.

216A-216B. Survey Research Design. (4-4)
Lec-
ture, 90 minutes; discussion, 90 minutes. Requisite:
course 210A. History of survey method; facet meta-
theory and concept formation; questionnaire and item
design; scales, indices typologies; data collec-
tion — planning and management; network, snowball,
and experience sampling — probability sam-
ping, stratification and clustering. Students partici-
pate in survey research project. Letter grading.

217A. Analyzing Ethnographies. (4) Seminar, three
hours. Analysis of ethnographic monographs. S/U or letter grading.
217B-217C. Ethnographic Fieldwork. (4-4) Seminar, three hours. Recommended requisite: course 217A. Theories and techniques of ethnographic fieldwork. Knowledge of relevant theoretical, methodological, and interpretative approaches, methods, and techniques for doing fieldwork, and ethnical problems involved in such research. In Progress (217B) and letter (217C) grading.

220. Self and Society. (4) Lecture, three hours. Examination of social and cultural processes shaping definition and experience of the self, embodied interactional practices through which the self is constructed and concretized in context of formation and transformation of self during life course, and construction of collective identity. Letter grading.

222. Foundations of Ethnomethodological, Phe- nomenological, and Analytic Sociologies. (4) Lecture, three hours. Designed for graduate students. Basic issues, methods, and topics of ethnomethodological, phenomenological, conversation-analytic, and related varieties of inquiry. Central themes such as world of every day life, problem of rationality, rules/norms and tacit knowledge, problem of social order, speaking and discourse, constitutive practices, and production of ordinary interaction in first part; guest presentations by affiliated faculty in second part. S/U or letter grading.

223. Phenomenological and Interactionist Per- spectives on Selected Topics. (4) Lecture, three hours. Comparison of phenomenological and symbolic and perspectival traits of particular body of live or currently unresolved substantive issues. Topics vary: attention on development of phenomenological and interactionist thought on topic of concern, with special concern for ambiguities and divergences both within and between two approaches. When relevant, attention to logical and historical relations of phenomenology and interactionism. Interaction of relativism, existentialism, and ordinary language philosophies. S/U or letter grading.


228. Critical Issues in Macrosociology. (4) (Formerly numbered 228A.) Lecture, three hours. Conceptual introduction to area of macrosociology in which exemplary works are read, studied for substance and methods, and critiqued in seminar and 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 close relationships, households, workplaces, and public places in contemporary societies. Concurrently scheduled with course C146. Letter grading.

229B. People-Processing Institutions. (4) (Formerly numbered C229B.) Lecture, three hours; discussion, two hours. Course C229A is not requisite to 229B. Theory and research analyzing operation and decision-making processes of variety of people-processing institutions, including police, courts, schools, psychiatry, human service agencies, and medicine. Letter grading.

230A-230B. Comparative Ethnicity, Race, and Na- tionalism. (4-4) (Formerly numbered 230B.) Seminar, three hours. Preparation for independent research in area of comparative ethnicity, race, and nationalism through close reading of key theoretical and empirical works. S/U or letter grading.

230C. Comparative Ethnicity, Race, and National- ism. (4) Seminar, three hours. Introduction to comparative and historical analysis and practice of doing comparative sociological research on race and ethnicity, two hours. Designed for graduate students. Analysis of current American and other national ethnicities. Exploration of current trends in the study of ethnic and national identities. S/U or letter grading.

231. Production of Ordinary Interaction in First Part; Guest Issues, Methods, and Topics of Ethnomethodology. Three hours. Designed for graduate students. Survey of field of social theory and social research. In Progress (217B) and letter (217C) 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, age, race, and nationalism. Examination of contemporary “globalization” tendencies of capitalism. Letter grading.

233. Foundations of Political Sociology. (4) Lecture, three hours. Designed for graduate students. Survey of field of political sociology, oriented around critical themes in major theoretical traditions and contemporary examination of competing perspectives on power, theory of state, and relationship of class structure to politics. S/U or letter grading.

234. Sociology of Development. (4) Seminar, three hours. Discussion and discussion of theoretical, historical, and specific issues in sociology of development (e.g., world system theory, developmental state, import substitution industrialization, export promotion industrialization, neoliberalism in Latin America, new approaches). S/U or letter grading.

235. Theories of Ethnicity. (4) Lecture, one hour; discussion, two hours. Designed for graduate students. Examination of variety of theoretical approaches in understanding race and ethnicity in contemporary societies, with emphasis on recent debates among class analysis, pluralist, primordialist, and rational choice perspectives. Letter grading.

236A-236B-236C. International Migration. (4-4-4) Lecture, three hours. S/U or letter grading.

236A. (4) Lecture, three hours. Comprehensive overview of current theoretical debates in study of international migration, with focus on exploration of possibilities of comparative (historical and cross-national) research program in field, linking North American, European, and other global experiences of immigration. S/U or letter grading.

236B. (4) Lecture, three hours. Further exploration of current theoretical diversity of international migration, with emphasis on exploring both theoretical debates of the field and empirical data and case studies on which those debates hinge, to encourage students to undertake research in the field. S/U or letter grading.

236C. (4) Lecture, three hours. Designed for students beginning or undertaking original research in field of international migration. Outside lectures, oral presentations of student projects, circulation of completed or draft student papers. S/U or letter grading.


M238. Feminist Theory. (4) (Same as Women’s Studies M238.) Seminar, three hours. Designed for graduate students. Analysis of current American feminist theoretical and methodological traditions. 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 sociological research. S/U or letter grading.

239A-239B. Quantitative Research on Social Stratification and Social Mobility. (4) Lecture, three hours. Requisites: courses 210A and 210B. Introduction to English language research literature on quantitative social stratification and social mobility in the U.S. and abroad. In Progress (239A) and letter (239B) grading.

241. Theories of Gender in Society. (4) Lecture, one hour; discussion, two hours. Gender stratification in society and sociology; extent of gender diversity in human societies past and present; why gender is absent from classical macrosociology; can masculinist paradigms make space for gender or does feminist-informed sociology necessitate fresh approach? S/U or letter grading.

M242. Analysis of Data with Qualitative and Limited Dependent Variables. (4) (Same as Statistics M242.) Lecture, three hours. Requisites: courses 210A and 210B, or Statistics 100A, 100B, and 100C. Models for binary, polytomous, and ordered outcomes; censored and truncated outcomes; sample selection bias and qualitative response models; count outcomes; multilevel models; log-linear models. S/U or letter grading.

244A-244B-244C. Conversation Analysis I, II, III. (6-6-6) (Formerly numbered C244A-C244B.) Lecture, two hours; discussion, two hours. S/U or letter grading. 244A. Introduction to some structures basic to organization of conversational interaction: turn-taking, contribution and take-over, continuation, and interruption. S/U or letter grading. 244B and 244C. Continuation of introduction to some structures basic to organization of conversational interaction: practices of action formation, storytelling organization, and overall structural organization of single conversations. S/U or letter grading.

245. Cultural Sociology: Classical and Contempo- rary Approaches. (4) Seminar, three hours. Designed for graduate students. Theoretical and methodological issues in structural approach to culture. Examination of historical and contemporary theories of culture, economics, political economy, and production of culture. S/U or letter grading.


248. Selected Topics in Culture and Society. (4) Seminar, three hours. Designed for graduate students. Seminar on selected topics in culture and society. Consult Schedule of Classes for topics and instructors. May be repeated for credit. S/U or letter grading.

M249A. Health Professions. (4) (Same as Commu- nity Health Sciences M249A.) Lecture, three hours. Requisite: Community Health Sciences 210. Sociological examination of concepts “health” and “illness” and role of various health professionals, especially physicians. Attention to meaning of professionalism in health 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. Requisite: Human Behavior Sciences M211. Letter grading.

Sociology / 573
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 relevance of macro or micro 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 role of major 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 Women's Studies M252). Lecture, three hours. Discussion, two hours. Designed for graduate students. Seminar on selected topics in sociology of gender. May be repeated for credit. Letter grading.


M255. Cross-Cultural Perspectives on Gender. (4) (Same as Women's Studies M255) Seminar, three hours. How does gender manifest itself in lives of different groups in different societies? Are universal analytical categories or unified feminist movements possible or is gender too different cross-culturally? S/U or letter grading.


257. Demography of Marriage Formation and Dissolution. (4) Discussion, three hours. Requisite: course 210A. Extensive and intensive critical examination of major approaches to analysis of marriage formation and dissolution, with focus primarily on demographic literature. S/U or letter grading.

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. Currently 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. (4) Discussion, two hours. Designed for graduate students. Review and critique of major analytical traditions in economy and society. S/U or letter grading.


M262. Selected Problems in Urban Sociology. (4) (Same as Afro-American Studies M260C.) Seminar, three hours. 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 Conversation. (4) Lecture, three hours. Requisites: courses C244A, C244B. Variable topical formats course. Consultant instructor for topics and formats to be offered in specific term. May be repeated for credit with topic change. S/U or letter grading.

268. Seminar in Psychoanalytic Sociological Theory. (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 fieldwork and experimental use of psychoanalytic and sociological techniques. 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 Indian Studies M200C) Seminar, three hours. Introductions to most important issues facing American Indians as individuals, communities, tribes, and organizations in contemporary historical setting. Required of all students making historical background presented in American Indian Studies M200A and cultural and expressive experience of American Indians presented in American Indian Studies M200B. Letter grading.

276. Selected Topics in Sociology of East Asia. (4) Lecture, three hours. Designed for graduate students. Selected problems in China, or in China and Japan comparatively. Possible topics include (1) China's Great Proletarian Cultural Revolution, (2) internal contradictions in Chinese society: male/female relations, city and countryside, minority nationalities, class struggle under socialism, etc., (3) China and Japan: two models of development. S/U or letter grading.

278. Sociology of Latin America. (4) Lecture, one hour; discussion, two hours. Designed for graduate students. Selected topics in sociological study of Latin America. Possible topics include social movements, race and gender stratification, and social development. Letter grading.

281. Selected Problems in Mathematical Sociological Analysis. (4) Lecture, three hours. Exploration of some mathematical models or processes of social reality. 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, interactionism 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.


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 the development of health service systems for persons with AIDS. S/U or letter grading.

289A-289B. Practicum in Conversation Analysis. (2-4) Requisites: courses C244A, C244B. S/U 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.

M296A-M296B. Social Theory and Comparative History. (4-4) (Same as History M203A-M203B and Political Science M291A-M291B) Seminar, three hours and one-half hours every other week. Introduction to historically rooted social theory and theoretically sensitive history, following program of Center for Social Theory and Comparative History. Each course may be taken independently for credit. S/U or letter grading.

M296C. Theories in Cultural History. (4) (Same as History M203C) Seminar, three hours. Introduction to social, linguistic, semiotic, or other new interpretive theories and practices developed in other fields and applied to historical material. Letter grading.

297B. Urban and Suburban Sociology, (4) Seminar, three hours. History and present condition of cities and suburbs in America. Today's urban/suburban neighborhoods contrasted with premodern cities. Examination of process of urbanization as it began in the early 19th century and as it still continues; houses and architectural styles and changing patterns of family and social life associated with them; patterns of racial, ethnic, income, and social class distribution in city and suburb; origin and nature of today's urban ghettos; politics of cities and suburbs. Focus on urban/suburban megapolises associated with New York City, Los Angeles, Chicago, and Boston. GIS mapping. Letter grading.

298. Workshop in Culture and Society, (4) Seminar, two hours every other week. Interdisciplinary workshop for graduate students and faculty pursuing theory and research in topics related to interplay of culture and identity, social, cultural, or philosophical 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.

M402. Practices of Evaluation in Health Services: Theory and Methodology. (4) (Same as Health Services M422.) Lecture, four hours. Requisites: Health Services 200A, 200B. Introduction to evaluation of health services programs and policies. Exposure to basic theoretical concepts and specific evaluation methodologies and designs. Letter grading.

495. Supervised Teaching of Sociology. (2) (Formerly numbered 495A.) Seminar, two hours. Preparation: appointment as teaching assistant in Sociology Department. Special course for teaching assistants designed to deal with problems and techniques of teaching introductory sociology. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.
**Southeast Asian Studies**

**Interdepartmental Program College of Letters and Science**

UCLA
10357 Bunche Hall
Los Angeles, CA 90095-1487

(310) 825-5187
fax: (310) 206-3555
e-mail: idps@international.ucla.edu
http://www.international.ucla.edu/idps/southasia/

Akhil Gupta, Ph.D., Chair

Faculty Advisory Committee

Nile Green, Ph.D. (History)
Akhil Gupta, Ph.D. (Anthropology)
Stephanie W. Jamison, Ph.D. (Asian Languages and Cultures)
Gyanima Mahajan, Ph.D. (Asian Languages and Cultures)
Purnima Mankekar, Ph.D. (Asian American Studies, Women’s Studies)
Saloni Mathur, Ph.D. (Art History)
Aamir R. Mutti, Ph.D. (Comparative Literature)
Peter Nabakov, Ph.D. (World Arts and Cultures)
Gregory R. Schopen, Ph.D. (Asian Languages and Cultures)
Monica L. Smith, Ph.D. (Anthropology)
Sanjay Subrahmanym, Ph.D. (History)

**Scope and Objectives**

The minor in South Asian Studies seeks, through multidisciplinary approaches, to address the history and contemporary importance of South Asia, which is comprised of Sri Lanka, India, Pakistan, Nepal, Bhutan, Bangladesh, and the Maldives, and accounts for nearly 1.5 billion people. Studying South Asia as a region exposes students to the rich historical, cultural, and religious diversity of a major center of civilization. South Asia is the birthplace of half of the world’s religions, including Buddhism, Hinduism, Sikhism, and Jainism.

India, Pakistan, and Bangladesh together have more Muslims than the Middle East, and South Asian Islam, interacting with the other faiths of the subcontinent, has seen an efflorescence of philosophy, theology, poetry, and art. South Asia also has a growing importance as a regional power, a contributor to world literature and film, and a seedbed for philosophy and social activism.

---

**Undergraduate Study**

**South Asian Studies Minor**

The South Asian Studies minor is designed for students who wish to augment their major with a concerted study of the history, culture, society, and languages of South Asia. The minor includes the introductory study of one South Asian language, a lower division course in South Asian history, and five upper division courses that focus on some aspect of the history, culture, politics, religions, and artistic heritage of South Asia.

To enter the minor, students must (1) be in good academic standing with a 2.0 grade-point average or better, (2) have completed 45 units and at least one lower division course (other than a language course) in South Asian studies, and (3) consult with the academic counselor in 10357 Bunche Hall.

**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, C180C, Asian 151, 162, 163, 164, Asian American Studies M172, Ethnomusicology 146, 147, History 174A through 174E, 175A, M175B, 175C, 185B, 185C, Islamics 110, 130, 151, South Asian 115, 150, 175, 185.

Variable or selected topics courses (e.g., Comparative Literature 191) fulfill minor requirements only when the content focuses substantially on South Asia. Other courses with substantial South Asian content of at least 50 percent (as determined by the course instructor) may be applied only with prior approval of a petition filed with the academic counselor. Up to 12 units taken through a study abroad program may be applied toward the minor, though no more than 8 of the units may be applied toward the 20 units of upper division coursework.

Independent studies courses (197 or 199) may not be applied toward the minor. No more than one upper division course may be applied toward both this minor and a major or minor in another department or program.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
The Major

A minor in Southeast Asian Studies introduces students to the region's cultural and social diversity, encouraging interest in Southeast Asian cultures and histories through the study of Southeast Asian languages, literature, history, politics, and societies within the context of this unique region.

Transfer students to the Southeast Asian Studies major must complete the following: (1) twelve units of lower division courses in Southeast Asian language (or demonstrated equivalent ability), (2) six units on human rights, diasporic studies, gender studies, and/or methodological core course in the discipline, and (3) three additional courses on top-ics outside Southeast Asia.

Admission

To enter the minor, students must (1) be in good academic standing (minimum 2.0 grade-point average), (2) have completed at least one lower division core course in Southeast Asian studies, and (3) file a petition with and approved by the academic counselor. The courses must be selected in consultation with the academic counselor.

Breadth and Methods Requirement

Students are expected, whenever possible, to study for at least one term at a university in Southeast Asia.

Preparation for the Major

Required: History 9E, Southeast Asian Studies 1, 88; completion of six terms of either Vietnamese, Thai, Filipino/Tagalog, or Indonesian language courses (Southeast Asian 50A through 51C, or 60A through 61C, or 70A through 71C, or 80A through 81C) or demonstrated proficiency as determined by a placement examination. Proficiency in other Southeast Asian languages may be accepted by petition, pending completion of a placement examination or approval of an alternative course of language study.

Transfer Students

Transfer applicants to the Southeast Asian Studies major with 80 or more units must complete the following introductory courses prior to admission to UCLA: either one course on Southeast Asia or one year of study of a Southeast Asian language (or demonstrated equivalent ability).

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

The Major

Required: At least 14 upper division courses (56 units) must be completed, including 10 courses that must have substantial Southeast Asian content, as follows:

Three humanities and arts courses must be selected from Art History 114F, Ethnomusicology C159, 161B, 161H, 161M, Southeast Asian 130, 135, 152A, 152B, 152C, M155, 156A, 156B, 162A, 162B, 162C, 170A, 170B, 170C, 182A, 182B, 182C, Theater 102B, World Arts and Cultures 112B. For Ethnomusicology 161B, 161H, and 161M to count as one 4-unit upper division course to be applied toward the major, any two of the courses may be taken once or any one course may be taken twice.


Variable or selected topics courses (e.g., Asian American Studies 191) fulfill major requirements only when the content focuses substantially on Southeast Asia or a subregion of it. All majors must also successfully complete Southeast Asian Studies 191.

Three elective courses must be selected from the courses listed above and from those offered by the program. Other courses with substantial Southeast Asian content may be applied toward the major pending approval of a petition filed with the academic counselor.

Breadth and Methods Requirement

Four additional upper division courses on topics outside Southeast Asia must be taken to satisfy the breadth and methods requirement. The courses must be selected in consultation with and approved by the academic counselor. The requirement can be fulfilled by one of the following options:

1. Completing at least 16 units that focus on a single geographical region other than Southeast Asia (e.g., East Asia, South Asia, Europe, Middle East). All four courses must focus on the same country or region. This track provides students with an opportunity to analyze Southeast Asia from a comparative geographical perspective.

2. Completing at least 16 units with a single topic of study relevant to Southeast Asia (e.g., religion, economic development, gender studies, human rights, diasporic studies, popular culture). All four courses must concentrate on the same topic. This track provides students with an opportunity to view Southeast Asia from a comparative thematic approach.

3. Completing at least 16 units on subjects outside Southeast Asia from any one department (e.g., Anthropology, Art History, Asian American Studies, Comparative Literature, History, Political Science, Sociology) whose methodology or discipline can be applied to the study of Southeast Asia. One of the courses should be a theoretical or methodological core course in the discipline. This track provides students with a solid background in a particular field that can then be applied to the study of Southeast Asia.

At least one half the units required for the major must be in departments that offer undergraduate majors in the College of Letters and Science. Each course for the major must be taken for a letter grade and be successfully completed with a grade of C (2.0) or better. No more than two independent studies courses (197 or 199) may be applied toward the degree.

Study in Southeast Asia

Students are expected, whenever possible, to study in Southeast Asia for at least one term during their junior or senior year. The program considers study in Southeast Asia an important cultural experience and an opportunity to advance language proficiency, as well as a way to expand the range of formal classroom education. The University of California operates Education Abroad Programs (EAPs) in several Southeast Asian countries. See http://www.international.ucla.edu/eap/ for the current list. Majors may enroll in any of the UC-sponsored EAPs in Southeast Asia or they may petition to attend a university in Southeast Asia by making arrangements directly or by enrolling through another university's study abroad program. Majors may be eligible to apply for financial assistance, awarded on a competitive basis, to help support at least one term of study abroad.

Students majoring or minoring in Southeast Asian Studies who attend an EAP may be eligible to earn course credit (4 units) toward the upper division requirements by successfully completing Southeast Asian Studies 180 for a letter grade after they return to UCLA. The principal assignment in course 180 is to write a paper based on field experience or research collected while in Southeast Asia or to produce a creative work (fiction, memoir, art, performance) of equivalent note.

Honors Program

The honors program is designed to offer highly motivated Southeast Asian Studies majors 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 — Southeast Asian Studies 198A, 198B, 198C — culminating in an honors thesis.

Admission

To enter the honors program, students must (1) have completed Southeast Asian Studies 1 and 88, (2) have a 3.5 grade-point average in the major and a 3.5 overall GPA, and (3) obtain agreement from a faculty member to supervise their honors thesis. Application should normally be made during the junior year, after stu-
Southeast Asian Studies

Minor

The Southeast Asian Studies minor is designed for students who wish to augment their major with concerted study of language, culture, and society in Southeast Asia. The minor includes the introductory study of one Southeast Asian language, two lower division core courses on Southeast Asia as a region, and five upper division courses that may focus on one or more Southeast Asian cultures or societies.

To enter the minor, students must (1) be in good academic standing (minimum 2.0 grade-point average), (2) have completed 45 units and at least one lower division nonlanguage preparatory course in Southeast Asian studies, and (3) file a petition with the academic counselor in 10357 Bunche Hall.

Required Lower Division Courses (13 units): History 9E, Southeast Asian Studies 1, and completion of the third term of either Vietnamese, Thai, Filipino/Tagalog, or Indonesian language courses (Southeast Asian 50C or 60C or 70C or 80C) 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.


For Ethnomusicology 161B, 161H, and 161M to count as one 4-unit upper division course to be applied toward the major, any two of the courses may be taken once or any one course may be taken twice.

Variable or selected topics courses (e.g., Asian American Studies 191) fulfill minor requirements only when the content focuses substantially on Southeast Asia or a subregion of it. Other courses with substantial Southeast Asian content may be applied pending approval of a petition filed with the academic counselor.

Independent studies courses (197 or 199) may not be applied toward the minor. No more than two upper division courses may be applied toward both this minor and a major or minor in another department or program. Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Spanish and Portuguese / 577

Spanish and Portuguese

College of Letters and Science

UCLA

5310 Rolfe Hall
Box 951532
Los Angeles, CA 90095-1532
(310) 825-1036
fax: (310) 206-4757
e-mail: spoffice@humnet.ucla.edu
http://www.spanport.ucla.edu

John C. Dagenais, Ph.D., Chair
Scope and Objectives

The Department of Spanish and Portuguese is dedicated to the study and teaching of the languages, literatures, and cultures of the Hispanic heritage in all areas of the world, particularly on the continents of Europe and America. It maintains a strong commitment to the value of original research and professional instruction at all levels of its activities.

Whether studying for the B.A., M.A., or Ph.D. degree, students are given careful guidance in the choice of courses and in the preparation of a study program. The richness of Hispanic culture is amply represented in the extensive range of courses in language, linguistics, and literature. Although the literatures of Spain, Portugal, Brazil, and Spanish America predominate, courses are also offered in Chicano literature. The breadth of courses offered by the department allows undergraduate students to pursue many possible interests and enables graduate students to concentrate in depth in several areas of specialization.

The department's courses are primarily designed to serve the five B.A. programs: B.A. in Spanish, B.A. in Spanish and Community Culture, B.A. in Spanish and Linguistics, B.A. in Spanish and Portuguese, and B.A. in Portuguese, as well as to prepare students for its three graduate programs: M.A. in Spanish, M.A. in Portuguese, and Ph.D. in Hispanic Languages and Literatures. The courses are also functionally supportive of such interdepartmental programs as the B.A. program in Chicana and Chicano Studies, B.A. and M.A. programs in Latin American Studies, and M.A. and Ph.D. programs in Comparative Literature and Romance Linguistics and Literature.

Undergraduate Study

Undergraduate Courses

Spanish 1 through 3 use Castells’ Mosaicos. The method is inductive. Selected examples are given to enable students to inductively grasp the rules and develop their own grammar. This enables students to use language effectively and creatively. The courses are taught entirely in Spanish — students simultaneously learn to understand, speak, read, and write Spanish.

Students with one or more years of high school Spanish who plan to enroll in Spanish 1 through 25 must take the departmental placement examination. Consult the Schedule of Classes or the department office for test dates and location.

No credit is allowed for completing a less advanced course after successful completion of a more advanced course in Spanish and Portuguese grammar and/or composition.

Spanish B.A.

Preparation for the Major

Required: Spanish 25 or 27 or equivalent, and M42 and M44 or equivalent as determined by the undergraduate adviser. The courses must be passed with an average grade of C or better prior to beginning upper division work in the major.

Transfer Students

Transfer applicants to the Spanish and Community and Culture major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Spanish, one Spanish civilization course, and one Spanish American civilization course.

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

The Major

Required: (1) Two language and linguistics courses from Spanish 100A or 100B, and 105 or 107; (2) two community-based and experiential learning courses (8 to 10 units) selected from Chicana and Chicano Studies 100SL, Spanish M164SL, M165SL, M172SL, 195; (3) two Hispanic literature courses — Spanish 120A and 120B; (4) three Hispanic literature, language, and culture courses selected from 109, 120C, 140, 142, 143, 144A, 144B, 144C, M145A, M145B, M146, 147, 151A, 151B; (5) 2 units of 187A, 187B, 189HC, or 199 associated with at least one course from item 3 or 4; (6) two interdisciplinary studies courses selected from Chicana and Chicano Studies 100SL, M106, 119, 120, M121, M122, 131, M144, 149, 181, Sociology M155; (7) one upper division elective course (4 units) in Spanish or an additional course selected from item 6.

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 or equivalent as determined by the placement test; course M35 or Linguistics 20; course M42 or M44 or equivalent as determined by the undergraduate adviser; and three terms of study in one language other than Spanish and English, which may be taken concurrently with the major. The courses must be passed with an average grade of C or better.

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, one Spanish civilization course or one Spanish American civilization course, and one year of a language other than Spanish or English.

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.

Professors

Adriana J. Bergero, Ph.D.
Héctor V. Calderón, Ph.D.
Verónica Cortínez, Ph.D.
John C. Dagenais, Ph.D.
J. Randal Johnson, Ph.D.
Efraín Kratál, Ph.D.
Claudia Parodi-Lewin, Ph.D.
Susan J. Plann, Ph.D.
A. Carlos Quiñó, Ph.D.
Jesús Torrecilla, Ph.D.

Professors Emeriti

Shirley L. Arora, Ph.D.
Rubén A. Benítez, Ph.D.
E. Mayone Dias, Ph.D.
Joaquín Gimeno, Ph.D.
Claudia L. Hulet, Ph.D.
Gerardo A. Luzuriaga, Ph.D.
C. Brian Morris, Litt.D.
Paul C. Smith, Ph.D.
Vida A. yalnız, Ph.D.
Elizabeth A. Marchant, Ph.D.
José Pascual-Buxó, Ph.D.
C.P. Otero, Ph.D.
José M. Cruz-Saldivares, M.A.

Associate Professors

Maria T. De Zubiarrate, Ph.D.
Elizabeth A. Marchant, Ph.D.
José Luiz Passos, Ph.D.
A. John Skirius, Ph.D.

Assistant Professors

Michelle A. Clayton, Ph.D.
Jorge Marturano, Ph.D.
Anna H. More, Ph.D.

Lecturers S.O.E.

José M. Cruz-Saldivares, M.A.

Lecturers

Sylvia Sherman, Ph.D.
Victoria A. West, M.A.
The Major
Required: (1) Spanish 100A, 100B, 105, Linguistics 103, 120A, 120B, (2) one course from Linguistics 160 or 165A or 165B, and (3) three upper division Spanish electives, two of which must be in Spanish linguistics.

Spanish and Portuguese B.A.

Preparation for the Major
Required: Spanish 25, Portuguese 3 or 102B, M42 or M44 or equivalent, 46 or equivalent.

Transfer Students
Transfer applicants to the Spanish and Portuguese major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Spanish, one year of Portuguese, one Spanish civilization course or one Spanish American civilization course, and one Brazilian culture course.

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

The Major
Required: (1) Four upper division language and linguistics courses: Portuguese 100A, 100B, 105, Spanish 105; (2) four upper division literature courses selected as follows: two courses from Spanish 119A, 119B or from 120A, 120B, 120C and two courses from Portuguese 120A, 120B or from 130A, 130B; (3) six upper division electives, three of which must be in Spanish and three in Portuguese (numbered C124 and above). Only upper division courses taught in the target language may be applied toward the major.

Portuguese B.A.

Preparation for the Major
Required: Portuguese 3, M35, M42 or M44, 46, or equivalent.

Transfer Students
Transfer applicants to the Portuguese major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Portuguese, one nature of language course, one Portuguese civilization course or one Brazilian civilization course, and one Brazilian culture course.

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

The Major
Portuguese Language and Literature Concentration
Required: Thirteen upper division courses, including Portuguese 100A, 100B, 105, either 120A and 120B, or 130A and 130B, and eight elective courses in Portuguese, or six electives in Portuguese plus two courses from areas that complement the program approved by the undergraduate adviser in Portuguese.

Portuguese and Linguistics Concentration
Required: Completion of six terms of study in one other foreign language or three terms in each of two other foreign languages, in addition to the preparation for the major courses.

Spanish is recommended.

The concentration consists of 13 upper division courses, including Portuguese 100A, 100B, 105, M118A, M118B, Linguistics 100, 103, 110, 120A, 120B, and three electives, two of which must be in Luso-Brazilian literature.

Double Majors
Through judicious use of electives, students may find it possible to secure the B.A. degree with two complete majors (e.g., Portuguese/Spanish, 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 honors program is open to all departmental majors who have completed the required nine upper division core courses with a 3.5 grade-point average. Eligibility is verified by the departmental counselor.

Two honors projects and an honors thesis are required. To graduate with departmental honors, students must first complete an honors project in each of two of their upper division Spanish elective courses. The honors project is a 12- to 15-page term paper on a special topic, selected in consultation with the instructor, to be completed in addition to the normal course requirements. On the basis of the coursework and special interests, students then consult a faculty member in that field and formulate a research project that they pursue under the faculty member’s guidance through Spanish 198. Students research and write an honors thesis (not to be confused with an honors project) of approximately 25 pages on the selected topic. Approval of the honors thesis is the final requirement for departmental honors.

Mexican Studies Minor
The Mexican Studies minor allows students with an interest in Mexico to augment their major programs with courses that expose them to the history, literature, and culture of Mexico. Given Southern California’s proximity to Mexico, the demographics of Los Angeles, and the shared history of Mexico and the Southwest, the minor is a natural complement to many majors.

To enter the minor, students must have an overall grade-point average of 2.0 or better and must complete or show proficiency equivalent to two years of college-level Spanish. A petition to declare the minor should be filed with the undergraduate counselor in 5314 Rolfe Hall.

Required Lower Division Courses (8 units):
Spanish 25 or 27, and one course from History 8A, 8B, 8C, or Spanish M44.

Required Upper Division Courses (20 units):

No more than two upper division courses may be applied toward both this minor and a major or minor in another department or program. By petition and after consultation with the undergraduate adviser, one 4-unit 197 or 199 course may be applied toward the minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Portuguese Minor
To enter the Portuguese minor, students must have an overall grade-point average of 2.0 or better and must complete Portuguese 3 or 102B.

Required Lower Division Course (4 units): Portuguese 46.

Required Upper Division Courses (24 units):
Portuguese 105 and five Portuguese courses selected from 100A through 199 (except 102A, 102B). Only one 4-unit Portuguese 197 or 199 course may be selected.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

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 (8 units):
Spanish 25 or 27, and M42 or M44.

Required Upper Division Courses (24 to 25 units):
Six courses in literature, of which four (22 units) must be selected from Spanish 119A through 191B (one of the four must be either 119A or 119B or from 120A, 120B, or 120C).
Spanish Linguistics Minor

To enter the Spanish Linguistics minor, students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Spanish and Portuguese offers the Master of Arts (M.A.) degree in Spanish, Master of Arts (M.A.) degree in Portuguese, and Doctor of Philosophy (Ph.D.) degree 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.
4. Portuguese Conversation. (2-2) Discussion, three hours. Enforced requisite: course 3 with grade of B or better. P/NP or letter grading.

M35. Spanish, Portuguese, and Nature of Language. (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 uses. Study of language and its relation to other areas of human knowledge. P/NP or letter grading.


129. 20th-Century Portuguese Literature. (4) Lecture, three hours. Requisite: course 105. Study of representative trends and authors. May be repeated for credit with topic change. Concurrently scheduled with course C229. P/NP or letter grading.

130A-130B. Brazilian Literature and Identity: Introduction. (4-4) Lecture, three hours. Requisite: course 105. Introduction to principal periods, currents, and authors of Brazilian literature. P/NP or letter grading.

131. Colonial Brazilian Literature and Culture. (4) Lecture, three hours. Requisite: course 105. Study of most important authors to 1830. May be repeated for credit with topic change. Concurrently scheduled with course C231. P/NP or letter grading.

132. 19th-Century Brazilian Literature and Culture. (4) Lecture, three hours. Requisite: course 105. Study of representative trends and authors. May be repeated for credit with topic change. Concurrently scheduled with course C232. P/NP or letter grading.


135. 20th-Century Brazilian Literature. (4) Lecture, three hours. Requisite: course 105. Study of representative trends and authors. May be repeated for credit with topic change. Concurrently scheduled with course C235. P/NP or letter grading.

141. Brazilian Film and Literature. (4) Lecture, three hours. Conducted in English. Topical analysis of main literary and historical themes of Brazilian culture, through films and literary texts. P/NP or letter grading.

191. Undergraduate Variable Topics Seminars: Portuguese. (4) Seminar, three hours. Requisite: course 105. Research seminar on selected topics in Portuguese. Reading, discussion, and development of culminating project. Consult Schedule of Classes or department counselor for topic to be offered in specific term. P/NP or letter grading.

197. Individual Studies in Portuguese. (2 to 4) Tutorial to be arranged. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. Eight units of courses 107 and/or 198 may be applied toward major requirements. May be repeated for a maximum of 8 units. Individual contract required. P/NP or letter grading.
Schedule with course C133. S/U or letter grading. Requisite: course 105. Study of selected works by the most important authors to 1830. May be repeated for credit with topic change. Concurrently scheduled with course C134. S/U or letter grading.

Course C249. Folk Literature of Spanish and Portuguese Worlds. (Same as Spanish M249.) Lecture, three hours. Intensive study of folktale literature of Spanish and Portuguese cultures as represented in (1) ballad and poetry. (2) narrative and drama, (3) speech. S/U or letter grading.

Course C251A-M251B. Studies in Galician-Portuguese and Old Spanish. (4-4) (Same as Spanish 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.


Course 254. Courses in Early Brazilian Literature. (4) Discussion, two hours. S/U or letter grading.

Course 255. Courses in Modern Brazilian Literature. (4) Discussion, two hours. S/U or letter grading.


Course 290. Special Topics. (4) Discussion, two hours. Designed for graduate students. Consult Schedule of Classes or departmental circular for topics to be offered in a specific term. S/U or letter grading.


Course 229. 20th-Century Portuguese Literature. (4) Lecture, three hours. Requisite: course 105. Study of representative trends and authors. May be repeated for credit with topic change. Concurrently scheduled with course C129. S/U or letter grading.

Course 231. Colonial Brazilian Literature and Culture. (4) Lecture, three hours. Requisite: course 105. Study of most important authors to 1930. May be repeated for credit with topic change. Concurrently scheduled with course C131. S/U or letter grading.


Course 235. 20th-Century Brazilian Literature. (4) Lecture, three hours. Requisite: course 105. Study of representative trends and authors. May be repeated for credit with topic change. Concurrently scheduled with course C135. S/U or letter grading.

Course 249. Folk Literature of Spanish and Portuguese Worlds. (Same as Spanish M249.) Lecture, three hours. Intensive study of folktale literature of Spanish and Portuguese cultures as represented in (1) ballad and poetry. (2) narrative and drama, (3) speech. S/U or letter grading.

Course 251A-M251B. Studies in Galician-Portuguese and Old Spanish. (4-4) (Same as Spanish 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.


Course 254. Courses in Early Brazilian Literature. (4) Discussion, two hours. S/U or letter grading.

Course 255. Courses in Modern Brazilian Literature. (4) Discussion, two hours. S/U or letter grading.


Course 290. Special Topics. (4) Discussion, two hours. Designed for graduate students. Consult Schedule of Classes or departmental circular for topics to be offered in a specific term. S/U or letter grading.


Course 275. 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.

Course 296. Directed Individual Study or Research. (4 to 8) Tutorial, to be arranged. Study or research in areas of subjects not offered as regular courses. No more than 8 units may be applied toward M.A. course requirements. S/U or letter grading.

Course 297. 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, 20 hours; laboratory, five hours. Enforced requisite: course 1 or one year of high school Spanish. Intensive basic course in Spanish, with cultural activities, field trips, lunches. 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, 20 hours; laboratory, five hours. Enforced requisite: course 1 or one year of high school Spanish. Intensive basic course in Spanish, with cultural activities, field trips, lunches. Offered in summer only. P/NP or letter grading.


4A. Intensive Spanish. (4) Discussion, five hours; laboratory, one hour. Enforced requisite: course 4. P/NP or letter grading.

5. Intermediate Spanish. (4) Discussion, five hours; laboratory, one hour. Enforced requisite: course 4A. P/NP or letter grading.

6. Intermediate Spanish. (4) Discussion, five hours. Enforced requisite: course 5. Review and analysis of more sophisticated and complex syntactic structures of Spanish, verb morphology, and lexical discrimination. Students who have completed course 5 with grade of A- or better may enroll directly in course 25. 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 9B. P/NP or letter grading.

10. Intensive Elementary Spanish. (12) Lecture, 20 hours. Intensive elementary instruction in speaking, listening, reading, and writing equivalent to courses 1, 2, and 3, with emphasis on oral proficiency in Spanish and Hispanic culture. Offered in summer only. P/NP or letter grading.


28A. Spanish for Special Purposes: Medical. (4) Lecture, three hours. Enforced requisite: course 6. Practice in speaking, reading, and writing Spanish using appropriate vocabulary and cultural situations for students with special interest in fields such as medicine, business, law, etc. P/NP or letter grading.

M35. Spanish, Portuguese, and Nature of Language. (5) (Same as Portuguese M35.) Lecture, three hours; discussion, one hour. Introduction to language study within context of Romance languages, focusing on Spanish and Portuguese. Nature of language: structure, diversity, evolution, social and cultural settings, literary uses. Study of language and its relation to other areas of human knowledge. P/NP or letter grading.
109. Spanish of Southern California. (4) Lecture, three hours. Requisites: courses M35, 100A, 100B. Analysis of pronunciation, word formation, syntax, and sociolinguistic variation within the Spanish of Southern California with attention to regional features, social and age levels of speech, and interference from English. P/NP or letter grading.


119C. Introduction to Study of Literature: Drama. (4) Lecture, three hours. Requisite: course 25. Introduction to basic features and components of drama through detailed study of texts from different periods. Letter grading.

120A-120D. Literature in the Hispanic World. (5 each) Lecture, four hours; discussion, one hour. Requisite of Spanish majors; must be taken in sequence. Letter grading.


121A. Topics in Medieval Iberian Literature. (4) Lecture, three hours. Requisite: course 25 or 27. Varying topics on multilingual and multicultural medieval Iberia, including Hispanic-Arabic and Hispanic-Jewish traditions, Ladino, Adjamiya texts, Hispano-Latin, Occitan, Galician-Portuguese, Catalan, and Castilian. Oral versus written traditions, Convivencia, Europe versus Orient. Sephardic romancero, end of medieval Iberian civilization, and New World. May be repeated for credit with topic change. P/NP or letter grading.

122. Medieval Literature: El Camino de Santiago. (4) Lecture, three hours. Study of medi eval Spanish literature following route of imaginary pilgrimage through northern Spain in the year 1300, from French border near Roncesvalles to shrine of St. James in Santiago de Compostela. Reading works of literature (and viewing slides, listening to music, etc.) associated with each stop along the way. Letter grading.

123. Three Masterpieces of Spanish Medieval Literature. (4) Lecture, three hours. Enforced requisite: course 25 or 27. Recommended: course 120A. Reading and understanding of three masterpieces of medieval Spanish literature: Conde Lucanor by Don Juan Manuel (collection of folk tales and fables from both European and Oriental sources), Libro de buen amor by Juan Ruiz (disastrous love adventures of rural archpriest, in verse), and Celestina by Fernando de Rojas (dark drama of lust, sorcery, and murder set against a new urban backdrop of Renaissance and Spain's nascent empire). P/NP or letter grading.


128. The Enlightenment and Romanticism in Spain. (4) Lecture, three hours. Recommended preparation: course 120B. Study, through representative works, of main manifestations of thought and literature from 1770 to 1850.


132. 20th-Century Spanish Prose. (4) Lecture, three hours. Recommended preparation: course 120C. Study of several representative works of Spanish prose literature since 1898.

133. 20th-Century Spanish Poetry and Drama. (4) Lecture, three hours. Recommended preparation: course 120C. Study of several representative works of Spanish poetry and drama since 1898.

137. Literature of Colonial Spanish America. (4) Lecture, three hours. Recommended preparation: course 120A. Study of most important genres and authors from the Conquest to 1810.

139. Romanticism and Realism in Spanish-American Literature. (4) Lecture, three hours. Recommended preparation: course 120B. Study, through representative literary works, of most important currents of thought and literary trends from 1810 to 1880.

140. Modernismo. (4) Lecture, three hours. Recommended preparation: course 120B. Study, through representative literary works, of principal characteristics of modernismo in Spanish-American literature.


144A. Mexican Literature. (4) Lecture, three hours. Requisite: course 25 or 27. Study of major movements and authors of Mexican literature. P/NP or letter grading.

144B. Mexican Culture. (4) Lecture, three hours. Requisite: course 25 or 27. Study and analysis of Mexican culture and society through variety of cultural expressions such as film, music, literature, and other popular genres. Letter grading.

144C. Special Topics in Mexican Studies. (4) Lecture, three hours. Requisite: course 25 or 27. Variable topics course with readings, discussions, and papers; consult Schedule of Classes or department counselor for topic to be offered in a specific term. P/NP or letter grading.

M145A-M145B. Introduction to Chicano Literature. (4-4) (Same as Chicana and Chicano Studies M145A-M145B.) Lecture, three hours. Requisite: course 25 or 27. Introduction to texts representative of the Chicano literary heritage. Sampling of genres, as well as historical and geographical settings and points of view characteristic of work written by Chicanos during the 20th century. Most required reading is in Spanish. Bilingual and English works are included and discussed. Reading and analysis of a number of important scholarly and critical statements pertaining to characteristics and development of the Chicano literary corpus. Letter grading. M145A. Literature to 1960. M145B. Literature after 1960.

M146. Chicano Narrative. (4) (Same as Chicana and Chicano Studies M146.) Lecture, three hours. Introduction to major narrative genres in Chicana/Chicano literary tradition—Corrido, Semblanza, chronicle, autobiography, novel, romance, and satire. Emphasis on way in which narrative forms are formed by and address specific social/historical problems. P/NP or letter grading.

147. Central American Literature. (4) Lecture, four hours. Study of representative novels, short stories, poems, testimonio writings, and essays by contemporary Central American authors and authors of Central American heritage. P/NP or letter grading.

148. Folk Literature of Spanish America. (4) Lecture, three hours. Study of history and present dissemination of principal forms of folk literature throughout Hispanic countries. P/NP or letter grading.

151A-151B. Women in Hispanic Literature. (4-4) Discussion, three hours. Recommended preparation: courses 120A, 120B, 120C. Study of works by and about women, with emphasis on portrayal of women, women's roles, and myths of womanhood within the Hispanic socio-ideological context. 151A. Spain. 151B. Spanish America.

161. Film and Literature of Spanish-Speaking World. (5) (Formerly numbered M161.) Lecture, three hours; discussion, one hour. May be taught in either English or Spanish. Exploration of perceptions of reality offered by different authors and filmmakers from Spain, Latin America, and Chicano community. P/NP or letter grading.

M164SL. Spanish/English Exchange. (5) (Same as Chicana and Chicano Studies M164SL.) Seminar, three hours; fieldwork at Venice High School, four hours. Preparation: two years of college or university Spanish. Students are paired with one or more English as a Second Language (ESL) Venice High students and converse for two hours in Spanish and two hours in English. Topics for Spanish portion provided in APS manual; topics for English exchange selected by ESL teacher. Encounters form basis for student compositions and oral reports and supply raw data for learner’s journal. Review of key areas of Spanish grammar to allow UCLA students to improve language skills, increase knowledge of Latino community and new immigrant Latino youth, and help Venice’s students improve their English. Share discussions concerns U.S. culture, importance of higher education, student adaptation to life in the U.S., and utilization of their interest in higher education. P/NP or letter grading.

M166SL. Taking It to Street: Spanish in Community. (5) (Formerly numbered 166SL.) Same as Applied Linguistics and TESL M166SL. Seminar, three hours; fieldwork, 10 hours. Requisite: course 25 or 27. Service learning course to give students opportunities to use cultural and linguistic knowledge acquired in Spanish classes in real-world settings. Students required to spend minimum of eight to 10 hours per week at site agreed on in Latino community. P/NP or letter grading.

M172SL. Latinos, Literatures, and Literacy. (5) (Formerly numbered M172.) (Same as Chicana and Chicano Studies M172SL.) Seminar, four hours; field project, four to six weeks. Recommended requisite: course 100A. In-depth study of various topics related to literacy, including different definitions of literacy, programs for adult preliterates, literacy and gender, approaches to literacy (whole language, phonics, Freire’s liberation pedagogy). History of writing systems, phonemes as basis for phonological and phonetic analyses. Required field project involving Spanish-speaking adults in adult literacy programs. P/NP or letter grading.

187A-187B. Advanced Tutorial in Community and Culture I, II. (1-2) Tutorial, one hour. Requisite: course 25 or 27. Designed as adjunct to upper division course in Hispanic literature, language, and culture. Exploration of topics in greater depth through supplemental readings, papers, community service, or other activities. Course 187A may be repeated once for credit. P/NP or letter grading.

191A. Variable Topics in Spanish: Studies in Hispanic Literature and Linguistics. (4) Seminar, three hours. Limited to 15 juniors/senior Spanish majors. Variable topics course with readings, discussions, and development of culminating paper. Consult Schedule of Classes or department counselor for topic to be offered in specific term. P/NP or letter grading.


195. Community Internships in Spanish. (4) Tutorial, one hour; fieldwork, 10 hours. Requisite: course 25 or 27. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide journal of their experience. Final research paper required. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

197. Individual Studies in Spanish. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. Eight units of courses 197 and/or 199 may be applied toward major requirements. May be repeated for credit. Individual contract required. Letter grading.

198. Senior Honors Research in Spanish. (4) Tutorial, to be arranged. Preparation: completion of required nine upper division major courses with a 3.5 grade-point average. Limited to juniors/seniors. 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 Spanish. (2 to 4) Tutorial, to be arranged. Requisite: course 25. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. Eight units of courses 197 and/or 199 may be applied toward major requirements. May be repeated for credit. Individual contract required. 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 structure of Spanish and main phonological processes that map underlying representations into surface representations. Bearing of phonological theory on study of meter.

202B. Morphology. (4) Lecture, three hours. Study of derivational and inflectional word formation processes and their interaction with syntactic structure.

204A-204B. Generative Syntax and Semantics. (4-4) Lecture, three hours. Study of syntactic structure of Spanish and relation between underlying representations and logical form within a principles-and-parameters framework. Bearing of syntactic and semantic structure on study of literature.

M205A-M205B. Development of Portuguese and Spanish Languages. (4-4) (Same as Portuguese M205A-M205B.) Lecture, three hours. Intensive study of 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.

211. Medieval Lyric Poetry. (4) Lecture, three hours. Readings of and lectures on Spanish lyric poetry from the beginning to 1500.

212. Medieval Epic and Narrative Poetry. (4) Lecture, three hours. Readings of and lectures on Spanish epic and narrative poetry from the beginning to 1500.

213. Medieval Prose. (4) Lecture, three hours. Readings of and lectures on Spanish prose from the beginning to 1500.

226. Prose of the Golden Age. (4) Lecture, three hours. Readings of and lectures on Spanish prose from the beginning to 1500.

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 works of the period.

236. Literature of the Spanish Conquest. (4) Lecture, three hours. Poetry, readings of and lectures on chronicles, poems, and indigenous accounts of the Spanish Conquest.

238. Baroque, Enlightenment, and Neoclassicism in Colonial Literature. (4) Lecture, three hours. Readings of and lectures on representative works of the period.


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.
ense 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

Undergraduate Courses

Students planning to pursue advanced degrees in statistics should enroll in the Statistics 100 sequence. Most courses are offered once or twice each year; students interested in either the major or minor in Statistics should meet with the student affairs officer early in their careers.

Statistics B.S.

The Statistics major is designed to provide a general introduction to the practice of statistics for students who intend to pursue study at the graduate level or seek employment in industry or government. Courses are selected to provide sufficient theoretical background for future graduate-level research work, exposure to modern techniques and practices, and experience in fields of application.

To enter the major, students should have successfully completed one lower or upper division Statistics Department course with a letter grade, have an overall grade-point average of 2.0 or better, and declare the Statistics major with the undergraduate adviser in 8117A Math Sciences, (310) 206-3742. Elective courses from outside the department are selected in consultation with the undergraduate faculty 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.

Statistics Minor

The Statistics minor is designed to provide a solid background in statistics for students majoring in other disciplines.

To enter the minor, students should have successfully completed one course from Statistics 10 through 14 with a letter grade, have an overall grade-point average of 2.0 or better, and file a petition with the undergraduate adviser in 8117A Math Sciences, (310) 206-3742. Required Lower Division Courses (8 units): Statistics 35A or 35B or 35C, and Mathematics 3B or 31B. Required Upper Division Courses (28 units): Seven upper division courses selected from one of the following options: (1) any two sequences from Statistics 10A, 10B, 100C, and 101A, 101B, 101C, and 102A, 102B, 102C, and four upper division elective courses (at least two from statistics and at least one from mathematics) selected from 130A, 130C, 150 through 199, Mathematics 131A, 131B, 151A, 151B, 170B, 171, 172A, 172B. Elective courses from outside the department are selected in consultation with the undergraduate faculty adviser. Only 8 units of course 199 may be applied toward the major. Courses 110A, 110B, 189, and 189HC may not be applied toward any of the major requirements.

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, 140SL, 141SL, and four upper division elective courses (at least two from statistics and at least one from mathematics) selected from 130A, 130C, 150 through 199, Mathematics 131A, 131B, 151A, 151B, 170B, 171, 172A, 172B. Elective courses from outside the department are selected in consultation with the undergraduate faculty adviser. Each major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.
Lower Division Courses

10. Introduction to Statistical Reasoning. (5) (Formerly numbered 10A.) 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 10H, 11, 12, 13, or 14. Limited to 20 lower division students. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

10H. Introduction to Statistical Reasoning (Honors). (4) Lecture, three hours; discussion, two hours. Preparation: three years of high school mathematics. Not open for credit to students with credit for course 10H, 11, 12, 13, or 14. Limited to 20 lower division students. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

35A. Interactive and Computational Probability. (4) (Formerly numbered 35.) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 10, 10H, 11, 12, or 13. Preparation: three years of high school mathematics. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

35B. Introduction to Probability with Applications to Poker. (4) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 35B. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

88. Sophomore Seminars: Statistics. (2) Seminar, two hours. Requisite: one course from 10, 10H, 11, 12, 13, or 14. Limited to 20 lower division students. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

35C. Applied Sampling. (4) (Formerly numbered 34.) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 35C. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

101A. Introduction to Design and Analysis of Experiment. (4) Lecture, three hours; discussion, one hour. Requisite: one course from 10, 11, 12, 13, or 14. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

101B. Introduction to Data Analysis and Regression. (4) (Formerly numbered 120A.) Lecture, three hours; discussion, one hour. Enforced requisite: one course from 101B. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

101C. Introduction to Regression and Data Mining. (4) (Formerly numbered 120B.) Lecture, three hours; discussion, one hour. Enforced requisite: one course from 101C. This course is designed to teach fundamental probability concepts and thinking and understanding, including strengths and limitations of basic experimental designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.
110A-110B. Applied Statistics. (4-4) Lecture, three hours; discussion, one hour. P/NP or letter grading.
110A. Requisites: course 35A or 35B or 35C and of Mathematics 3B or 31B, or Mathematics 32B and 33A. Not open to students with credit for Electrical Engineering 131A. Students may receive credit for only one of the following: courses 100A, 110A, Biostatistics 100A. Probability, distributions, expectation, estimation, central limit theorem, confidence intervals, testing.
110B. Requisite: course 110A. One- and two-sample problems, goodness of fit and contingency tables, correlation and regression, analysis of variance, nonparametrics.


130A. Statistical Analysis with STATA. (4) Lecture, three hours; discussion, one hour. Requisite: one course from 10, 10H, 11, 12, 13, 14, 100A, or 110A. How to manage and analyze quantitative data using STATA statistical software. Graphical analysis and programming and extensions to basic package. P/NP or letter grading.

130B. Statistical Analysis with SAS. (4) Lecture, three hours. Requisite: one course from 10, 10H, 11, 12, 13, 14, 100A, or 110A. How to manage and analyze quantitative data using Statistical Analysis System (SAS) Institute, Inc. Discussion of many statistical techniques available in SAS and ways to extend basic system by SAS programming. P/NP or letter grading.

130C. Statistical Analysis with SPSS. (4) Lecture, three hours. Requisite: one course from 10, 10H, 11, 12, 13, 14, 100A, or 110A. Overview of Statistical Package for Social Sciences (SPSS) software intended for students in any major who have interest in data analysis. Though original design catered to students in social sciences, current development has considerably wider application, with vast range of functionality from simple to more advanced data manipulation and analysis. Ease of use maintained that is popular with students not accustomed to statistical programming. Ability of program to combine ease of use with varied levels of data exploration and inference has made it popular. P/NP or letter grading.

130D. Statistical Programming, Computation, and Visualization in C/C++/VTK. (4) Lecture, three hours. Requisite: Program in Computing 10A or 10B or 10C or 20A. Intermediate programming and computation course, with emphasis on statistical and visualization aspects of research in biomedical, optical imaging, and high-dimensional data analysis. P/NP or letter grading.

140SL. Practice of Statistical Consulting. (4) Lecture, one hour; discussion, two hours. Enforced requisites: courses 88, 100B, 101B, one course from 130A through 130D. 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. Students work in small groups with faculty member and client to frame client’s question in statistical terms, create statistical model, analyze data, and report results. Weekly meetings in classroom setting to study basic consulting skills, share experiences, exchange ideas, and make reports. On-site visits as necessary. Courses 140SL and 141SL must be taken in consecutive terms. In Progress grading (credit to be given only on completion of course 141SL).

141SL. Practice of Statistical Consulting. (Seminar, one hour; research group meeting, two hours. Enforced requisites: limited to seniors. Opportunity to solve real data analysis problems for real community-based or campus-based clients. Students work in small groups with faculty member and client to frame client’s question in statistical terms, create statistical model, analyze data, and report results. Weekly meetings in classroom setting to study basic consulting skills, share experiences, exchange ideas, and make reports. On-site visits as necessary. Courses 140SL and 141SL must be taken in consecutive terms. Letter grading.

150. Data Analysis. (4) Lecture, three hours. Requisites: courses 100A and 100B, or 101B and 101C, or 130A and 110B, or one course from 110A, 110B, or 110C and one upper division statistics course. Practice in solving statistical problems, with coverage of basics of cleaning and checking data, exploratory analysis, model building, model checking, reporting results, working with “clients.” P/NP or letter grading.

C151. Experimental Design. (4) Lecture, three hours. Requisite: course 100C or 101B or 110B. Basic principles, analysis of variance, randomized block designs. Latent and complete block designs, factorial designs, fractional factorial designs, minimum aberration designs, robust parameter designs. Concurrently scheduled with course C225. P/NP or letter grading.

C152. Bootstrap, Jackknife, and Resampling Methods. (4) Lecture, three hours; discussion, one hour. Requisite: one course from 10, 10H, 11, 12, 13, 14, 100A, or 110A. Simple intuitive introduction to practical application of statistics for experiments and surveys in business and biological, medical, physical, and social sciences. Resampling methods — bootstrap and permutation test — are table-free and distribution-free, require common sense (not calculus), yet have broader range of applications than classical parametric statistical procedures. Concurrently scheduled with course C270.

153. Statistical Analysis with Missing Data. (4) Lecture, three hours. Requisite: course 102A. Study of methods dealing with nonresponse and missing data, including introduction to terminology, limitations of simple methods, and modern methods for dealing with missing data, such as EM algorithm and multiple imputation. P/NP or letter grading.

M154. Measurement and Its Applications. (4) (Same as Psychology M144.) Lecture, three hours. Requisite: one course from 10, 11, 12, 13, 14, Psychology 100A. Selected theories for quantification of psychological, educational, social, and behavioral science data. Classical test, factor analysis, generalizability, item response, optimal scaling, ordinal measurement, computer-adaptive, and related theories. Construction of tests and measures and their reliability, validity, and bias. P/NP or letter grading.

C155. Introduction to Statistical Analysis of Environmental Data. (4) Lecture, three hours. Requisite: course 10. Routine intermediate applied statistics course, with emphasis on applications to environmental data and statistical computing with the language R. Statistical analysis and scientific report from real data required. Concurrently scheduled with course CM255. P/NP or letter grading.


158. Statistical Analysis of Internet and World Wide Web Data. (4) (Formerly numbered C158.) Lecture, three hours. Requisite: course 100B or 100C or 101B or 110B. Demography and statistical models of browsing behavior of World Wide Web users, models of Internet traffic data, and statistics methods for creating better Web search engines and spam filters. Use of large data sets and current issues and statistical solutions. Statistical software, some programming, handling of large data sets, and text mining, with emphasis on requiring hands-on experience and on becoming active participants in current research debates. 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 a 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 (visual, computational, or simply informal), decisions that are made, and actions that are taken on basis of these data, whether they be human or automated responses. Documentation of how patterns of data acquisition and analysis dictate behaviors, enable or restrict movements, and shape local community. Alterations or additions to data flows that could improve quality of life for inhabitants of or visitors to these areas may be repeated or improved 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) (Formerly numbered C161.) Lecture, three hours. 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.

165. Statistical Methods and Data Mining. (4) Lecture, three hours. Requisite: one course from 10, 11, 12, 13, or 14. Introduction to pattern recognition and data mining, graphical methods, methods for dealing with large data sets, and text mining, with emphasis on requiring hands-on experience and on becoming active participants in current research debates. P/NP or letter grading.

170. Introduction to Time-Series Analysis. (4) Lecture, three hours; discussion, one hour. Requisite: course 100C or 110B or 120A. Exploration of standards methods in temporal and frequency analysis used in analysis of numerical time-series data. Examples provided throughout, and students implement techniques discussed. P/NP or letter grading.

M171 Introduction to Spatial Statistics. (4) (Same as Geography M171.) Lecture, three hours; laboratory, one hour. Requisite: one course from 10, 11, 12, 13, 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 or 110B. Geostatistics can be applied to problems in other disciplines such as hydrology, traffic, air and water pollution, epidemiology, economics, geography, waste management, forestry, oceanography, meteorology, and agriculture and, in general, to every problem where data are observed at geographic locations. Acquisition of knowledge from different areas that can be used to analyze real spatial data problems and to connect geostatistics with geographic information systems (GIS). Concurrently scheduled with course C273. P/NP or letter grading.
C180. Introduction to Bayesian Statistics. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 32B, 33B. Designed for juniors/seniors. Introduction to Bayesian statistics based on use of Bayes theorem, covering foundational aspects, current applications, and computational issues. Topics include Stein paradox, nonparametric Bayesian, and statistical learning. Examples of applications vary according to interests of students. May not be applied toward Ph.D. in Statistics. Concurrently scheduled with course C236. P/NP or letter grading.

C182. Fundamentals of Scientific Writing. (2) Seminar, one hour. Development and perfection of student written communication skills through variety of scientific writing and reading assignments. Objectives and techniques of scientific writing and practice with different forms of professional writing. Analysis of quality of writing, including control, clarity, grammar, and mechanics. Concurrently scheduled with course C236. P/NP or letter grading.


CM185. Statistical Methods for Physical Sciences. (4) (Same as Atmospheric and Oceanic Sciences CM185.) Lecture, three hours. Designed for juniors/seniors. Statistical framework for data analysis in fields of atmospheric sciences, astronomy, geology, and chemistry, depending on class composition. Presentation of popular techniques in all fields, with emphasis on applications and data, not theory; although some understanding of theory is needed. Concurrently scheduled with course CM252. 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, economics, ethics, 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 experience. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

199. Directed Research in Statistics. (1 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Course paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


201A. Research Design, Sampling, and Analysis. (4) Lecture, three hours. Enforced prerequisite: course 200B. Analysis of the basic techniques of elementary applied statistics and data, not theory, although some understanding of theory is needed. Concurrently scheduled with course C296. P/NP or letter grading.

201B. Regression Analysis: Model Building, Fitting, and Criticism. (4) Formerly numbered 201A.) Lecture, three hours. Enforced prerequisite: course 201A. Designed for graduate students. 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. S/U or letter grading.

201C. Advanced Modeling and Inference. (4) Formerly numbered 201B.) Lecture, three hours. 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 techniques used and developed for these models and problems, such as EM algorithm, data augmentation, dynamic programming, and belief propagation. S/U or letter grading.

202A. Advanced Methods in Numerical Analysis. (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 complex data types, including large collections of textual data, GPS traces, network logs, and various online sources. S/U or letter grading.

202B. Matrix Algebra and Optimization. (4) Lecture, three hours. Recommended prerequisite: course 202A. Survey of computational methods that are especially useful for statistical analysis, with implementation in statistical package R. Topics include matrix analysis, multivariate regression, principal component analysis, multivariate analysis, and deterministic optimization methods. S/U or letter grading.


204. Nonparametric Function Estimation and Modeling. (4) Lecture, three hours. Requisite: course 200A. Introduction to many useful nonparametric techniques such as nonparametric density estimation, nonparametric regression estimation, and high-dimensional statistical modeling. Some semiparametric techniques and functional data analysis. Letter grading.

211. Analysis of Data with Qualitative and Limited Dependent Variables. (4) (Same as Sociology M211.) Lecture, three hours. Requisites: courses 100A, 100B, and 100C, or Sociology 210A and 210B. Models for binary, polytomous, and ordered outcomes; censored and truncated dependent variables; sample selection bias and qualitative response models; contagion models; and duration models. S/U or letter grading.

212. Program Evaluation and Policy Analysis. (4) Lecture, three hours. Requisite: course 101C. Primarily focuses on methods of program evaluation. Randomized experiments, observational studies, and topics such as matching, stratification, covariance adjustments, and sensitivity analyses. Letter grading.

213. Applied Event History Analysis. (4) (Same as Sociology M213B.) Lecture, three hours. Preparation: exposure to binary response models. Requisites: Sociology 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 models; proportional hazards; nonproportional hazards; parametric survival models; S/U or letter grading.

216. High-Dimensional Data Analysis. (4) Lecture, three hours. Requisites: courses 100A, 100B, 100C. Designed for graduate students. Discussion of several statistical methodologies and various techniques used for exploring voluminous data, including principle component analysis, clustering and classification, tree-structured analysis, neural network, hidden Markov models, sliced inverse regression (SIR), and principal Hessian direction (PHD). S/U or letter grading.


221. Time-Series Analysis. (4) (Same as Earth and Space Sciences M221.) Lecture, three hours. Designed for graduate students. Exploration of methods for analyzing numerical time-series data. Basic topics in temporal and frequency analysis, followed by more recent topics. Examples in various fields includ- ing economics, signal processing, and atmospheric sciences. S/U or letter grading.

222. Spatial Statistics. (4) (Same as Geography M222 and Urban Planning M215.) Lecture, three hours. Designed for graduate students. Survey of modern methods used in analysis of spatial data. Implementation of various techniques using real data sets from diverse fields, including neuroimaging, geography, seismology, demography, and environmental sciences. S/U or letter grading.

225. Experimental Design. (4) Lecture, three hours. Requisite: course 100C or 101B or 108B. Basic principles, analysis of variance, randomized block designs, Latin squares, balanced incomplete block designs, factorial designs, fractional factorial designs, minimum aberration designs, robust parameter designs. Concurrently scheduled with course C151. S/U or letter grading.

226. Bootstrap, Jackknife, and Resampling Methods. (4) Lecture, three hours; discussion, one hour. Designed for graduate students. Simple intuitive introduction to practical application of statistics for experiments and surveys in business and biological, medical, physical, and social sciences. Resampling methods — bootstrap and permutation test — are table-free and distribution-free; they require common sense (not calculus), yet have a broader range of applications than classical parametric statistical procedures. Concurrently scheduled with course C152. S/U or letter grading.

M231. Pattern Recognition and Machine Learning. (4) (Same as Computer Science M276A.) Lecture, three hours. Designed for graduate students. Fundamental concepts, theories, and algorithms for pattern recognition and machine learning that are used in computer vision, image processing, speech recognition, data mining, statistics, and computational biology. Topics include Bayesian decision theory, parametric and nonparametric learning, clustering, complexity (VC-dimension, MDL, AIC), PCA/ICA/ICA, MDS, SVM, boosting. S/U or letter grading.


M232B. Statistical Computing and Inference in Vision and Image Science. (4) Lecture, three hours. Preparation: basic statistics, linear algebra (matrix analysis), computer vision. Introduction to broad range of algorithms for statistical inference and learning that could be used in vision, pattern recognition, speech, text, and computer vision problems. Topics include Markov chain Monte Carlo computing, sequential Monte Carlo methods, belief propagation, partial differential equations. S/U or letter grading.


M234. Statistics and Information Theory. (4) Lecture, three hours. Preparation: introductory probability theory course. While data compression and transmission are fundamental problems in information theory, this 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.


M236. Introduction to Bayesian Statistics. (4) Lecture, three hours; discussion, one hour. Designed for graduate students. 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. May not be applied toward Ph.D. in Statistics. Concurrently scheduled with course C180. S/U or letter grading.

M237. Data and Media Arts. (4) (Same as Design I Media Arts M239.) Studio, six hours. Through expanding inter-disciplinary perspectives and 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 and statistical analysis. Topics include databases and data warehousing, exploratory analysis and visualization, clustering and pattern finding, sampling, and various data mining techniques. 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.

M238. Visual Analytics. (4) (Same as Computer Science M276A.) Lecture, three hours. Requisite: course 100A or 200A. Formulation of vision as Bayesian inference using models developed for designing artificial vision systems. Applied to statistics, they define ideal observer models that can be used to model human performance and serve a benchmark. S/U or letter grading.

M239. Probabilistic Models of Cognition. (4) Seminar, three hours; discussion, one hour. Requisites: course 100A or 100B. Introduction to probabilistic models of human cognition. Topic of human cognition. Principal components, canonical correlation, discriminant analysis. Introduction to linear structural relations and factor analysis. Letter grading.


M245. History of Statistics. (4) (Same as History M236.) Seminar, three hours. History of statistics ranges over vast and diverse territory. Development of mathematical methods; philosophical, political, and social issues that preceded to their emergence and use. S/U or letter grading.

M250. Statistical Methods for Epidemiology. (4) (Same as Biostatistics M211 and Epidemiology M211.) Lecture, four hours. This course focuses on the fundamental terms of statistical methods (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. Exploration of topics introduced in Epidemiology 200B and 200C and introduction of new topics, including principles of epidemiologic analysis, trend analysis, smoothing and regression 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 inferences for continuous and categorical data (estimation, testing of means and proportions, ANOVA) study design, linear regression, and introduction to principle components analysis. Methods to be implemented on computer with SAS. S/U or letter grading.

M252. Statistical Methods for Physical Sciences. (4) (Same as Atmospheric and Oceanic Sciences M221.) Lecture, three hours. Designed for graduate students interested in statistical methodology in fields of atmospheric sciences, astronomy, geology, and chemistry, depending on class composition. Presentation of popular techniques in all fields, with emphasis on applications and data mining; although some understanding of theory is needed. Concurrently scheduled with course CM185. S/U or letter grading.


M255. Introduction to Statistical Analysis of Environmental Data. (4) (Same as Environmental Science and Engineering M255.) Lecture, three hours. Designed for graduate students. Routine intermediate applied statistics course, with emphasis on applications to environmental data and statistical computing with R. Preparation: Basic R and intermediate scientific report from real data required. Concurrently scheduled with course C155. S/U or letter grading.

M275. Design, Analysis, and Modeling for Embed- ded Sensing. (4) Lecture, three hours; discussion, one hour. Recommended previously taken knowledge of probability and regression analysis. Limited to graduate students. Analysis of data produced by embedded sensing, which is one of several technological advances 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 (visual, computational, or simply informal), decisions that are made, and actions that are taken based on these data, whether they are human or automated responses. Documentation of how patterns of data acquisition and analysis dictate behaviors, enable or restrict movements, and shape local community actions or addictions that could improve quality of life for inhabitants or visitors to sites. May be repeated for credit; however, only one C260 may be applied toward any graduate degree. Concurrently scheduled with course C150. 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, waste management, forestry, oceanography, meteorology, and agriculture and, in general, to every problem where data are observed at geographic locations. Acquisition of knowledge from different areas that can be used to analyze real spatial data problems and to connect geostatistics with geographic information systems (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 (open to undergraduate students with consent of instructor). With high-throughput technologies such as genomic sequencing, microarray gene expression, Chromatin-Immunoprecipitation DNA chip (ChIP-chip), and mass spectrometry (MS/MS) proteomics, scientists are collecting genetic, genomic, and pathway data at rates far beyond imagination one decade ago. Such gigantic volumes of data produced cannot be analyzed and understood without highly sophisticated computational methods guided by mathematical and statistical principles. Cutting-edge genomics research from statistical data analytic point of view. S/U or letter grading.

290. Current Literature in Statistics. (2) Seminar, one hour. Topics in various statistical areas by means of lectures and informal conferences with staff members. S/U grading.

291. Statistics Consulting Seminar. (4) Seminar, three hours. Preparation: at least one UCLA graduate-level statistics course. Exposure to realistic statistical and scientific problems that appear in typical interactions between statisticians and researchers, with lectures centered on case studies presented by faculty members and invited speakers from business and academic fields. Applied regression analysis and design of experiments together with basic statistical programs. Presentations and written reports required. S/U or letter grading.

292. Graduate Student Statistical Packages Seminar. (1 to 2) Seminar, two hours. Introduction to various statistical packages. How to handle data in different packages (input, output, data management, treatment of missing data), general syntax of different programming languages, and good practice for writing own statistical functions. S/U grading.

293. Graduate Student Research Seminar. (2) Seminar, two hours. Designed for graduate statistics students. Participating seminar in which various aspects of performing research are discussed by variety of faculty members. Exposure to current research topics with statistical implications to help students select possible thesis or dissertation topics. May not be applied toward degree course requirements. S/U grading.


295. Fundamentals of Scientific Writing. (2) Seminar, one hour. Development and perfection of student written communication skills through variety of scientific writing and reading assignments. Objectives and techniques of scientific writing and practice with different forms of professional writing. Analysis of quality of writing, including control, clarity, grammar, and mechanics. Concurrently scheduled with course C185. S/U or letter grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, two hours. To be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495A. Teaching College Statistics. (2) Seminar, two hours; intensive training at beginning of Fall Quarter. Required of all potential departmental teaching assistants and new Ph.D. students. Practical and theoretical issues in teaching of statistics. S/U grading.

495B. Teaching College Statistics. (2) Seminar, two hours. Weekly discussion and intensive training for first-year teaching assistants that addresses practical and theoretical issues in utilizing technology to teach statistics, including use of statistical software as education tool. S/U grading.

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

David Geffen School of Medicine
UCLA
72-131 Center for the Health Sciences
Box 951749
Los Angeles, CA 90095-1749
(310) 206-2567
tax: (310) 267-0369
http://www.surgery.medsch.ucla.edu

Chairs
Ronald W. Busuttil, M.D., Ph.D. (Dumont-UCLA Professor of Transplantation Surgery and William P. Longmire, Jr., Professor of Surgery), Executive Chair
Richard J. Shemin, M.D. (Robert and Kelly Day Professor of Cardiothoracic Surgery), Vice Chair, Clinical Affairs
Jonathan R. Hiatt, M.D. (Robert and Kelly Day Professor of General Surgery), Vice Chair, Surgical Education
Peter F. Lawrence, M.D., Vice Chair, Clinical Practice and Strategic Planning
Jerzy W. Kupiec-Weglinski, M.D., Ph.D. (Joan S. and Ralph N. Goldwyn Professor of Immunobiology and Transplantation Research), 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., M.S.H.S., Vice Chair, Harbor-UCLA
Jesse E. Thompson, Jr., M.D., M.S., Vice Chair, Olive View-UCLA
Bruce Gewertz, M.D., Chief of Surgery, Cedars-Sinai
Nand Datta, M.D., Chief of Surgery, King/Harbor

Scope and Objectives

The Department of Surgery instructs medical students during all four years of medical school. Students are expected to obtain broad knowledge of diseases treated by surgical means and to understand the pathophysiology of these conditions, the therapy that may be applied, and the anticipated results of treatment. They are also encouraged to learn about the effects of surgical illness on the patient and the patient’s family and environment.

Third-year students participate in one 12-week core clerkship in clinical surgery and are assigned to rotations at a combination of Reagan UCLA, Harbor-UCLA, West Los Angeles VA, and Olive View-UCLA Medical Centers. Each facility has a special orientation depending on the patient population and the individual staff. During the fourth year students may elect to take additional clinical rotations with increasing responsibilities. Additional in-depth elective courses are offered in collaboration with other departments.

For further details on the Department of Surgery and a listing of the courses offered, see http://www.surgery.medsch.ucla.edu
Surgery

Upper Division Course

199. Directed Research in Surgery, (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

THEATER

School of Theater, Film, and Television

UCLA
103 East Melnitz Building
Box 951622
Los Angeles, CA 90095-1622
(310) 825-5761
fax: (310) 825-3383
e-mail: info@tft.ucla.edu
http://www.tft.ucla.edu/dot.cfm

William D. Ward, M.F.A., Chair

Professors
Ailan M. Armstrong, M.F.A.
Sue-Elle Case, Ph.D.
Gilbert Cates, M.A.
Gary A. Gardner, Ph.D.
Hanay L. Geogamah, B.F.A.
Michael J. Hackett, Ph.D.
Patricia M. Haner, Ph.D.
Neil P. Jampolis, B.F.A.
Michael S. McLain, Ph.D.
Richard S. Rose, M.F.A.
Mel Shapiro, M.F.A.
Carol J. Sorgenti, Ph.D.
José Luis Valenzuela, B.A.
Edit E. Villarreal, M.F.A.
William D. Ward, M.F.A.

Professors Emeriti
John R. Cauble, M.A.
Donald B. Crabbe, M.A.
Henry Goodwin, Ph.D.
Robert H. Hetthom, Ph.D.
John H. Jones, M.A.
Anna Krajewska-Wieczorek, Ph.D.
Joanne T. McMaster, M.F.A.
Sylvia E. Moss, B.A.
Norman F. Welsh, B.A.
William T. Wheatley, Ph.D.
Margaret L. Wilbur, M.F.A.

Associate Professor
Joseph M. Olivieri, M.F.A.

Assistant Professor
Shellei J. Salamensky, Ph.D.

Lecturers
Jonathan A. Burke
Paul E. Girard
Daniel A. Ionazzi, Jr., M.B.A.
Thomas J. Orth

Adjunct Professor
F. Nicholas Gunn

Adjunct Associate Professors
Sandra Caruso, M.A.
Lynn M. Dally, M.A.

Adjunct Assistant Professors
Dan T. Beizer, M.F.A.
Hak K. Choi, M.F.A.
Christine Kellogg
Linda Kemna
Jeremy L. Mann
Ed J. Monaghan, M.F.A.
Judith E. Moreland, M.F.A.
Jean-Louis Rodrigue
Amen Santo
April Shawhan
Bruce Vaughn
Paul M. Wagman

Visiting Professor
Jonathan Deans

Visiting Associate Professors
Eduardo Castro
Ellen Geer
Amy Lieberman
Arne Zaslove

Visiting Assistant Professors
Phil Allen
Tim Battle
Dan Bonnell
David F. Bridel
Liz Brohm
Adèle Cabot
Gar C. Campbell
Scott Cress
Michael Donovan
Mary Jo DuPrey
Marlyn E. Fox
Brian M. Freeman
Evelyn Halus
Peggy Hickey
Nancy L. Keystone
Brian E. Kite
Jessica Kubiansky
Guil Monteiro
Matt Pelty
Jeanneke B. Prosperi
Benedicte Schoyen
Jonathan Wang
Jacqueline L. Wazir

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 the vibrant heritage, the curriculum promotes an awareness of theater as a global phenomenon embodying the contributions of diverse cultures and explores theater as a forum for reflecting the human experience as revealed through the dynamics of theater production. With this in mind, students engage in the presentation of dramatic work in a community where creativity and critical thought combine in the exploration of the artistic and intellectual challenges inherent in the making of theater.

Manifesting talent and promise as well as representing a wide range of backgrounds and interests, prospective students are selected by the faculty through auditions and interviews in cities throughout the U.S. At the undergraduate level, students receive education in acting, 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 theatrical 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/dot.cfm.

Undergraduate Study

Theater B.A.

The Theater B.A. provides a liberal education by combining critical study of theater with experiential practice in one or more of its components. 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/dot.cfm. There is a $50 fee for all auditions/interviews. Applicants may submit materials for consideration in one or more of the following areas: acting, design and production, directing, history and criticism, musical theater, and playwriting.

Preparation for the Major

Required: Theater 11, 12, 13, 14A, 14B, 14C, 50 (must be taken for 4 units total).

The Major

Required: A total of 61 upper division units, including Theater 101A, 101B, 101C, 150 (must be taken for 4 units total), and 38 upper division elective units selected from courses 101A through 199 within the elective sequences listed below.

Through some of these required courses, students are responsible for completing specific production assignments related to production activity of the theater curriculum. The acting electives include fundamental and advanced courses in all aspects of performance training that prepare students for careers in performance. There is some performance in projects, but emphasis is on class.
and studio work. Upper division advanced courses explore verse, scene study, comedy, cabaret, movement, and combat.

The design and production electives introduce design principles and investigate the design of scenery, lighting, costumes, and sound for theater, film, and television in lower division courses. Four design and production areas of study are available at the upper division level — scenic design, costume design, lighting design, and sound design. Students select from an array of design skills courses to develop proficiency in essential areas of rendering, drafting, painting, computer-aided design, and technology. Courses in art, history, and philosophy build an understanding of the social history of visual ideas. A sequence of courses in each area of study examines design principles and practice specific to each field.

The directing electives explore the basic theories of play direction, as well as text analysis and craft fundamentals. Advanced courses emphasize psychological aspects of director—actor communication and development of specific directorial and production styles.

The history and criticism of theater and drama electives include the study of fundamental cultural, social, ethical, and political issues in the context of artistic expression enriched by historical perspective. The curriculum promotes an awareness of the theater as a global phenomenon embodying the contributions of diverse cultures and explores the verbal and visual elements of its language as revealed through the dynamics of theater production.

The Ray Bolger Musical Theater Program electives train selected students in acting, singing, and dance for the musical theater and provide knowledge of musical theater history. Additional courses provide hands-on training with professional artists and a range of performing experiences from workshops to full productions.

The 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.

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, 13B, 139, C146A, C146B, C146C, 149, 195.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to department approval.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Theater offers Master of Arts (M.A.) and Master of Fine Arts (M.F.A.) degrees in Theater and the Doctor of Philosophy (Ph.D.) degree in Theater and Performance Studies.

Theater

Lower Division Courses

1A-1B-1C. Introduction to Dance for Music Theater. (1-1-4) Studio, four hours. Designed for Theater majors. Introduction to basic music theater dance technique. Each course may be repeated once for credit. Letter grading.

2. Theater in Performance: International Theater Festival. (5) Lecture, three hours; discussion, two hours. Exploration of theater in performance as revealed in productions and guest artists of UCLA International Theater Festival, with emphasis on collaborative role of theater artists and active role of audience. Students view selected productions, go back stage to discover how they are realized, and meet creative team. Letter grading.

10. Introduction to Theater. (5) Lecture, three hours; discussion, one hour. Exploration of theater in production, with emphasis on collaborative role of theater artists and active role of audience. Understanding of and access to live theatrical event and enhanced appreciation of value of theater to society; development of critical skills through consideration of representative examples of theatrical production from Europe, America, Asia, and Africa. Letter grading.

11. Approaches to Interpretation of Theater and Performance. (5) Lecture, four hours. Introduction to basic 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 the performer in the theatrical event, including interpretation of drama through performance. Examination of various forms of theatrical performance and styles of expression, and development of acting, voice, and movement skills. Letter grading.

13. Play Reading and Analysis. (5) Lecture, three hours. Provides base for subsequent study in theater. Development of techniques of play reading and habits of scholarship useful to further study in each of theater's subdisciplines, including acting, directing, design, playwriting, and critical study. Letter grading.

14A-14B-14C. Introduction to Design. (5-5-5) Lecture, three hours; studio, six hours. Exploration of visual interpretation of drama. Study of styles and techniques of design, collaborative role of designer, principles of design for scenery, lighting, costumes, and sound. Both technical and aesthetic groundwork for further study. Letter grading.

15. Introduction to Directing. (4) Lecture, two hours; studio, four hours. Required of course 11. Investigation of role of the 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 reading and understanding musical notation, musical terminology, and basic to complex rhythm-reading and sight-singing in C major. Letter grading.


26. Alexander Techniques. (2) Studio, three hours. Study and practice in Alexander techniques as method of developing balance, poise, and coordination of body and mind. Exploration of 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.
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 oral and archival methods; cross-cultural forms of history. Examples may include classical Greek tragedy, Noh and Kyogen, Za ja and Chuanchi, Quem Quem’s English medieval plays, Sanskrit drama, Noh/EGungun, Yoruba dance, depending on faculty and resources available. Letter grading.

101B. Reconstructing Theatrical Past. (5) Lecture, three hours; discussion, one hour. Reconstructing the theater is understood in several ways: reconstruction of performance spaces such as New Globe and of specific productions and traditions such as neoclassicism that seek to reestablish classical traditions. Letter grading.

101C. Deconstructing Theater. (5) Lecture, three hours; discussion, one hour. Exploration of deconstructive practices such as fragmentation, abstraction, and absurdism, with focus on theatrical movements, directorial adaptations, cultural translations, and new forms, Letter grading.

102A. Theater of Japan. (5) Lecture, three hours. Exploration of major theater traditions of Japan from emergence of earliest theatrical activity to the 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 genre from various geographical areas in Southeast Asia to illustrate importance and contribution that theater plays in society. Letter grading.

102C. Cross-Cultural Currents in Theater. (5) Lecture, three hours. Exploration of interculturalism in the theater as a means for investigating cultural and social identities. 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. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from slavery to mid-1800s. Letter grading.

103B. African American Theater History: Minstrel Stage to Rise of American Musical. (4) (Same as Afro-American Studies M103B.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from minstrel stage to rise of American musical. Letter grading.

103C. Origins and Evolution of Chichano Theater. (5) (Same as Chicana and Chicano Studies M103C.) Lecture, three hours. Designed for juniors/seniors. Exploration of development of Chicano theater from its beginning in legends and rituals of ancient Mexico to work of Luis Valdez (late 1960s). P/NP or letter grading.

103D. Contemporary Chicano Theater: Beginning of Chichano Theater Movement. (5) (Same as Chicana and Chicano Studies M103D.) Lecture, three hours. Analysis and discussion of historical and political events from 1965 to 1980, as well as theatrical traditions that led to emergence of Chicano theater. Letter grading.

103E. African American Theater History: Depression to Present. (4) (Same as Afro-American Studies M103E.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and literature of theater as developed and performed by African American artists in America from Depression to present. P/NP or letter grading.


108. Undergraduate Seminar: History and Criticism. (5) Seminar, four hours. Limited to 15 students. Selected topics in history and criticism of theater and performance. Study of how experimental theaters originate, how they imagine their form of performance, their audience, and their goals. Concentration on theaters that regarded themselves, in some way, as experimental. Examples primarily from theaters within the U.S. from the 1960s to the present, although examples from other countries, specifically Poland, also considered. Letter grading.

M109. Art and Performance: Interdisciplinary Approach to Collections of Getty Center. (4) (Same as Honors Collegium M120.) 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 philosophy of the age is examined in musical and dramatic performance. Letter grading.

110. History of American Musical Theater. (5) Lecture, three hours. Survey of history of American musicals, its composers, writers from musical theatre, with focus on musical theatre’s emergence in immigrant cultures to Broadway and Off-Broadway. With its roots in British music halls and comic opera, Viennese operetta and African American jazz, American musical theatre emerged as a vivid and popular art form with its own culture and identity. Letter grading.

111A-111B-111C. Selected Topics in European Theater. (5-5-5) Lecture, three hours. Investigation in depth of selected areas of study in traditions of European performance to be arranged by historical period, nation of tradition, genre, or other categories. May be repeated twice for credit. P/NP or letter grading.

M112. Interpreting Performance: Examination of Social, Historical, and Cultural Models for Performing Arts. (5) (Same as Honors Collegium M154.) Lecture, two hours; discussion, two hours. Examination of nature of performance in theory and practice and of social, historical, and cultural contexts in which performance traditions have evolved. Attendance at approximately five designated performances/events required. P/NP or letter grading.

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.


116A-116B-116C. Acting II. (4-4-4) Studio, six hours. Development of acting skills through scene study, use of self, and personalization. Examination of characterization exercises and their application to contemporary American scenes. Letter grading.

118A. Creative Dramatics. (4) Lecture/laboratory. Studies of principles and procedures of improvisational approach to drama as done with children from nursery school to junior high. 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 the arts to traditional disciplines of learning. May be repeated once for credit.
118C. Interactive Theater. (4) Laboratory. Active, problem-solving process of theater exercises and games designed to examine racial stereotypes, sexual harassment, gender roles, and other issues which divide members of the campus community, as well as issues which divide the campus from the Los Angeles community. Selected to increase social and political awareness. Participation fundamental to intellectual development, exercises and games nurture skills and attitudes useful in facilitating discussions between actors and non-actors. 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 a K-12 integrated materials to integrate theater with specific core curricula. Collaboration with classroom teacher to identify core subject to be taught. Language arts, science, history, mathematics, and social sciences are possible curricular areas. Development of evaluation tools to measure effectiveness of incorporating theater materials into curriculum. Weekly meetings to discuss teaching strategies and preparation of one-class lesson plans teaching portions of California Teaching Content Standards, objectives, motivation, detailed implementation of lesson plan, and ideas for assessment. Classroom work culminates in a final project evaluated by the Prague ArtsBridge student, classroom teacher, and UCLA faculty members. P/NP or letter grading.


119B. Theater for the Child Audience: Performance. (4) Lecture, two hours; laboratory, four hours. Preparation: audition prior to first class meeting. Designed to provide opportunity to work together as an ensemble, creating dramatic spaces. Letter grading.

120A-120B-120C. Acting and Performance in Film. (5-5-5) (Formerly numbered 120A-120B.) Lecture, six hours. Exploration of acting and performance in film. Through screenings of performance-driven films, class discussion, and acting exercises, examination of methods, styles, and performances of some of world's most highly regarded actors and their work. Letter grading.

121. Acting Workshop. (2) Laboratory, to be arranged. Requisite: course 20. Courses 160, 163A, 163B, and 163C may be taken concurrently. Workshop which gives students opportunity to rehearse, perform, and criticize scenes. May be repeated once for credit.


125A-125B-125C. Movement and Combat II. (1-1-1) (Formerly numbered 125A, 125B, 125C.) 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.


127A-127B-127C. Advanced Acting. (2-2-2) Studio, four to six hours. Study of advanced acting technique, scene study, and development of voice and movement skills. May be repeated for a maximum of 12 units. Letter grading.

128A-128B-128C. Acting, Voice, and Movement Workshops II. (2-2-2) Studio, six hours. Study of advanced acting technique, scene study, and development of voice and movement skills. May be repeated for a maximum of 12 units. Letter grading.

CM129. Contemporary Topics in Theater, Film, and Television. (2) (Same as Film and Television CM129.) Lecture, two hours; screenings, two hours. Limited to junior/senior and graduate theater/film and television students. Examination of creative process in theater, film, and television. Consideration of writing, direction, production, and performance. Overview of individual contributions in the collaborative effort: examination of distinctive and interrelationships among these arts. Includes participation of leading members of theater, film, and television professions. May be repeated twice for credit. Concurrently scheduled with course CM229.

130A. Fundamentals of Playwriting I. (5) Lecture, three hours; discussion, one hour. Study and analysis of dramatic structure, characterization, and narrative leading to guided completion and critique of student-written one-act play. Letter grading.

130B. Fundamentals of Playwriting II. (4) Lecture, three hours plus discussion. Requisite: course 130A. Study in original material for the theater, its preparation and development. Designed to give further insight into creative and social aspects of short and full-length play and guidance in completion of one-act and full-length plays. May be repeated twice for credit.

130C. Writing for American Musical Theater. (4) Lecture/Laboratory, three hours. Study of practice and techniques used in writing a libretto for musical theater: opening numbers, romance, subplots, and comedy. May be repeated once for credit.

131A-131B-131C. Intermediate Playwriting. (5-5-5) Lecture, five hours. Letter grading. 131A, Play Strategies and Structure, three hours; 131B, Exploration of play forms and writing of one-act play, one hour; 131C, One-Act Play, Requisite: course 131A. Preparation and writing of one-act play and/or outlining of full-length play. 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-133B-133C. 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 a maximum of 8 units. Concurrently scheduled with courses C433A-C433B-C433C. Letter grading.


136. Advanced Acting for the Stage. (4) Lecture/Laboratory. Requisite: course 123. Study and practice of art of acting through a progression to more advanced acting problems. May be repeated twice for credit. Course may be repeated as executive work with same instructor. Total units for courses 136, 137A, 137B, and 137C may not exceed 12 units. Letter grading.

137A-137B-137C. Continuum Study in Acting for the Stage. (4-4-4) Studio, six hours. Requisite: course 123. Technique of characterization and performance in advanced and complex acting styles. May be repeated once for credit.

138. Special Problems in Performance Techniques. (4) Lecture/Laboratory. Study of complex problems in voice, movement, and acting. May be repeated twice for credit.

139. Play Reading and Analysis. (5) Lecture, three hours. Investigation of dramatic texts, with focus on play structure, plot, characterizations, and various other elements essential to effective theatrical interpretation and evaluation. Letter grading.


C40B. Advanced Programming for Entertainment Design. (4) Studio, three hours. Study and practice in object-based programming using MAX/MSP programming language to control sound and video. May be repeated once for credit. Concurrently scheduled with course C440B. Letter grading.

C44A-C44B-C44C. Advanced Sound Design. (4-4-4) Lecture, four hours; laboratory, four hours. Concurrently scheduled with courses C444A-C444B-C444C. Letter grading.

C44A. (4) Lecture, four hours; laboratory, four hours. Sound and acoustics as they relate to performance environments, techniques associated with recording, mixing, post-production, and reproduction of dialogue, effects, and music tracks for theater sound design. May be repeated once for credit. Letter grading.

C44B. (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 the design, and multitrack recording techniques to realize the design. May be repeated once for credit. Letter grading.

C44C. (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 the theater. Students will be introduced to multichannel effects, control of MIDI data, and design techniques for music theater. May be repeated once for credit. Letter grading.

145. Costume Design for the Theater. (4) Lecture/Laboratory. Design of costumes for theatrical presentations. Study of use of costume, fabrics, color, and decoration as related to theatrical circumstances. May be repeated once for credit.

146. Costume Construction for the Theater. (4) Lecture/Laboratory. Design of costumes for theatrical presentations. Study of use of costume, fabrics, color, and decoration as related to theatrical circumstances. May be repeated once for credit.


C153A. Costume Design. (4) Formerly numbered 153A.) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Imagination as impetus for design, text analysis, metaphor, and conceptualization. Investi- gation of design research process, composition, and style leading to visual presentation of design. May be repeated once for credit. Concurrently scheduled with course C453A. Letter grading.


C154A. Sound Design. (4) (Formerly numbered 154A.) 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 in sound recording, editing, and creating soundscapes. May be repeated once for credit. Con- currenty scheduled with course C454A. Letter grading.

C154B. Sound Design for Theater. (4) (Formerly numbered 154B.) Lecture/studio, four hours. Requir- es: courses 14A, 14B, 14C. Exploration of sound design for theater and techniques for mixing, rein- forcement, and signal processing. Topics include use of delay, equalization, and microphone placement for theater sound reinforcement, recording, and editing. Study of creative of sound effects, control of MIDI data, and design tech- niques for musical theater. May be repeated once for credit. Concurrently scheduled with course C454B. Letter grading.


C155B. Watercolor Rendering. (2) Studio, four hours. Requisite: course 14A7 or 14B7. Study of watercolor techniques as they relate to interpretation of scenic designs, including painting of brick, wood, stone, fab- rics, and other surfaces. Letter grading.


C155D. Model Making. (2) Studio, four hours. Requi- site: course 14A7 or 14B7. Study of the model for re- presentation of scenic designs from initial working pro- totypes to finished color models. Use of wide variety of materials and techniques for execution of the mod- el. Letter grading.


C155F. Costume Rendering. (2) Studio, four hours. Requisite: course 14A7 or 14B7. 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 14A7 or 14B7. Study of sce- nic painting techniques and materials and their real- ization of color design and elevations. May be repeat- ed once for credit. Letter grading.

C155H. Selected Topics in Graphic Representation of Design. (2) Studio, six hours. Study of selected subjects in techniques for interpretation of design for theater. May be repeated once for credit. Letter grading.

C156A. Introduction to Computer-Assisted Draft- ing. (4) Studio, four hours. Introduction of drawing and editing techniques, drawing floor plan sections, and elevation drawings using AutoCAD. Concurrently scheduled with course C456A. Letter grading.


C157A-C157B-C157C. Costume Construction Techniques. (2-2-2) Studio, four hours. Study of the- ory and application of drafting, pattern making, fitting, and construction techniques for period costumes and undergarments to achieve historical costuming cos- tume using contemporary methods. May be repeated once for credit. Concurrently scheduled with courses C457A-C457B-C457C. P/NF or letter grading.


160. Fundamentals of Play Direction. (5) Lecture, two hours; laboratory, four hours. Required of Theater majors. Course 121 may be taken concurrently. Basic theories of play direction and their application through preparation of scenes under rehearsal conditions.

163A-163B-163C. Directing for the Stage. (4-4-4) Lecture/studio. Requisite: course 15. Letter grading:

163A. (4) Lecture/studio. Requisite: course 15. Intensive development of primary directing skills and pro- cesses, including text analysis and exploration of craft fundamentals as a basis for director/actor communi- cation and effective staging. Students direct scenes from plays under faculty supervision. Letter grading.


C163D. Directing Project for the Stage. (5) Discussion, three hours; laboratory, four to eight hours. Requi- sites: courses 163A, 163B, 163C. Application of stage directing techniques in production of short play or project. Students direct one-act play or project. May be repeated once for credit. Concurrently sched- uled with course C263D. Letter grading.

170. Design and Production Project. (4) Laborato- ry, eight hours. Requisites: courses 14A, 14B, 14C. Experience as stage manager or designer, including participation in preparation and realization of scenic, lighting, costume, and sound design, or stage man- agement in production. May be repeated once for credit. Letter grading.

171A. Advanced Theater Laboratory. (1 to 4) Hours to be arranged. Creative participation as actor or stage manager in the public presentation of departmental productions. May be taken for a maximum of 4 units.

171B. Advanced Theater Laboratory. (1 to 4) Hours to be arranged. Creative participation in real- ization of production elements related to public pre- sentation of departmental productions. May be taken for a maximum of 4 units.

172. Production Practice in Theater, Film, Video, and Digital Media. (1 to 8) (Formerly numbered C172.) Studio, three to eight hours. Exploration and laboratory experience in one or more various aspects of production and postproduction practice for entertain- ment media, including theater, film, video, and digi- tal media. May be repeated for a maximum of 24 units. Letter grading.

173A. Design Assignment: Assistant Designer. (2) Studio, six hours. Requisites: courses 14A, 14B, 14C. Laboratory experience as an assistant designer, including participation in and realization of scenic, lighting, costume, or sound designs. May be repeated twice. Letter grading.

173B. Production Design Assignment: Designer. (2) Studio, six hours. Requisites: courses 14A, 14B, 14C. Laboratory experience as a designer, including preparation and realization of scenic, lighting, costume, or sound designs. May be repeated twice. Letter grading.


174B. Project in Stage Management. (3) Studio, nine hours. Prerequisites: course 174A. Students gain expe- rience in the professional duties of assistant stage manager, including participation as an assistant stage manager in preproduction, rehearsal, and perfor- mance phases of production. May be repeated once for credit. Letter grading.

174C. Project in Stage Management. (4) Studio, 12 hours. Requisite: course 174A. Laboratory experi- ence in professional duties of stage manager, includ- ing participation as stage manager in preproduction, rehearsal, and performance phases of production. Problems of unions, auditions, organization, schedul- ing, and responsibilities of lengthy run. May be re- peated three times for credit. Letter grading.

175A-175C-175D. Summer Theater Workshops. (4 or 8 each) Laboratory, 12 to 24 hours. Participation in various aspects of theater production and perfor- mance. Offered in summer only. Letter grading.

175B. Summer Theater Workshop. (1 to 4) Laboratory, three hours. Participation in various aspects of theater production and performance. Offered in sum- mer only. Letter grading.

177. Computer-Assisted Design Techniques. (4) Lecture, four hours; laboratory, three hours. Use of computers for design of scenery and lighting in the- ater, film, and television. May be repeated once for credit. Offered in summer only. Letter grading.

M178. Film and Television Acting Workshop. (2) Same as Film and Television M177. Lecture or studio, four hours. Workshop providing opportunities for students to rehearse, perform, and evaluate scenes. Three dif- ferent production styles to which performers may need to adjust are (1) preproduction rehearsals with director, (2) single-camera experience, and (3) multi- camera experience. May be repeated twice for credit. Letter grading.

180. Senior Project. (4) Lecture or studio, three hours. Requisites: courses 101A, 101B, 101C. Prepa- ration of conceptual or creative project to provide culmi- nating experience in production of creative or re- search work. May be taken 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 devel- opment for actors. May be repeated two or four times. Letter grading.

C185A. Role of Producer in Professional Theater. (2) (Formerly numbered C190A.) Lecture, three hours. Study of structure governing economic and ar- tistic decision-making processes in professional thea- ter. May be repeated once for credit. Letter grading.

C185B. Role of Management in Educational and Community Theater. (2) (Formerly numbered C190B.) Lecture, three hours. Study of management, governance, and economic criteria in administration of educational and community theater. Concurrently scheduled with course C285A. P/NP or letter grading.

M187. Art Alive: Art and Improvisation in the Mu- seum. (4) (Formerly numbered M193.) (Same as Hon- ors Collegium M116.) Seminar, four hours. Offered in collaboration with Los Angeles County Museum of Art (LACMA). Interpretation of art in collection through act- ing, dialogues, movement, and music. Research into history and art history and production of creative per- formance piece required. P/NP or letter grading.

195. Community or Corporate Internships in The- ater, Film, and Television. (2, 4, or 8) Tutorial, eight, 16, or 24 hours. Limited to juniors/seniors. Internship at various theaters, studios, or entertainment organi- zations accentuating creative contributions, organiza- tion, and work of professionals in their various spe- cialties. Students meet on regular basis with instruc- tor and provide periodic reports of their experience. May be taken for maximum of 8 units. Individual con- tract with supervising faculty member required. Letter grading.

199. Directed Research or Senior Project in The- ater. (2 to 8) Tutorial, three hours. Limited to juniors/ seniors. Supervised individual research or investiga- tion under guidance of faculty mentor. Cullminating 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) Discussion, three hours. Designed for graduate stu- dents. Examination of theatrical production and dra- matic form in the Greek and Roman periods. May be repeated twice for credit.

202B. Seminar: Medieval Theater. (4) Discussion, three hours. Designed for graduate students. Select- ed studies of theatrical production and dramatic form in the Middle Ages. May be repeated twice for credit.

202C. Seminar: Renaissance and Baroque The- ater. (4) Discussion, three hours. Designed for grad- uate students. Selected studies in theater architecture, theatrical production, and dramatic form in Eng- lish and Continental theater from 1485 to the early 18th century. May be repeated twice for credit.

202D. Seminar: Bourgeois and Romantic Theater. (4) Discussion, three hours. Designed for graduate students. Selected studies in theater architecture, theatrical production, and dramatic form in English and Continental theater from 1700 to 1870. May be repeated twice for credit.

202E. Seminar: Modern Consciousness in The- ater. (4) Discussion, three hours. Designed for gradu- ate students. Study of prototypes of modern experi- ence as encountered in work of Ibsen and Strindberg. May be repeated twice for credit.

202F. Seminar: Modern Realism. (4) Discussion, three hours. Designed for graduate students. Select- ed studies of theater's response to science and tech- nology, politics, and revolution. May be repeated twice for credit.

202G. Seminar: Modern Theatricalism. (4) Discus- sion, three hours. Designed for graduate students. Select- ed studies of theater's response to science and tech- nology, politics, and revolution. May be repeated twice for credit.

202M. Seminar: American Theater. (4) Discussion, three hours. Designed for graduate students. Select- ed studies in development of theatrical production and dramatic writing in American theater. May be re- peated twice for credit.

202P. Seminar: Traditions of African Theater. (4) Discussion, three hours. Designed for graduate stu- dents. Selected studies of traditional theater forms such as those indigenous to Ghana, Nigeria, and oth- er African nations and their diaspora (Haiti, Jamaica, and other areas of the Caribbean) through examina- tion of character, structure, performance modes, and archetypes. May be repeated twice for credit.

202R. Seminar: East Asian Theater. (4) Discus- sion, three hours. Designed for graduate students. Selected topics in theater forms of East Asia, includ- ing dramatic literature, costume, craft, movement, and critical writings. May be repeated twice for credit.

202S. Seminar: South Asian Theater. (4) Discus- sion, three hours. Designed for graduate students. Selected topics in theater forms of South Asia, includ- ing dramatic literature, costume, craft, movement, and critical writings. May be repeated twice for credit.
202T. Seminar: Southeast Asian Theater. (4) Discussion, three hours. Designed for graduate students. Investigation of a selected area of theater and drama study that explores significant issues and ethical considerations of the modern world. May be repeated four times for credit.

203. Theater Ethics and Issues. (5) Seminar, three hours. Designed for graduate students. Investigation of history and literature of the theater as manifested in one or more of its major forms or genres. May be repeated four times for credit.


206. Themes in World Theater and Drama. (5) Seminar, four hours. Designed for graduate students. Selected works in world theater and drama based on philosophy of art and theories of the theater. 207A. Classical and Medieval Theories of Art and Theater; 207B. Renaissance Theories of Art and Theater to the Present.

208A-208B. Dramaturgy I, II. (4-4) Lecture, three hours; laboratory, one hour. Designed for graduate students. Letter grading. 208A. Theoretical and practical aspects of the dramaturge's work in contemporary theater. 208B. Required: course 208A. Continuation of study of theory and practice of dramaturgy.

208C. Practicum in Dramaturgy. (2 to 12) Laboratory, to be arranged. Requisites: courses 208A, 208B. Demonstration of competence in practice of dramaturgy through completion of approved dramaturgical assignment. May be taken for maximum of 12 units. Letter grading.

209. Theater Authors. (5) Designed for graduate students. Investigation of work of a theater artist from history of world theater. Special emphasis on relationship to time in which the work was generated. May be repeated four times for credit.

210. Topics in World Theater and Drama. (5) Designed for graduate students. Investigation of selected topics in world theater and drama. Special emphasis on relationship to time in which the work was generated. May be repeated four times for credit.

216A. Approaches to Representation. (5) Lecture, three hours; laboratory, one hour. Overview of strategies of representation from classical aesthetic theories to postmodern deconstructions of them. May be repeated once for credit. Letter grading.

216B. Approaches to History. (5) Lecture, three hours; laboratory, one hour. Overview of key methodologies, theories, and debates in historiography of theater and performance linked to plays and performances appropriate to approach. Letter grading.

216C. Approaches to Identification. (5) Lecture, three hours; laboratory, one hour. Overview of key theories, principles, and practices that define the performative as a mode of understanding the self and others. Letter grading.

220. Graduate Forum. (1 to 2) Seminar, one to two hours. Limited to graduate theater students. Presentation and discussion of issues informing and affecting contemporary theater. May be repeated four times for credit. S/U grading.

221. Introduction to Performance Studies. (5) Seminar, three hours. Investigation of performance as sustained practice in traditional disciplines such as theater, music, and dance and as lens to focus thinking about human experience in fields such as philosophy, literature, cultural anthropology, linguistics, education, and law. Emphasis on establishing interdisciplinary dialogue across many fields. Letter grading.

222. CM229. Contemporary Topics in Theater, Film, and Television. (2) (Same as Film and Television CM229) Lecture, two hours; screenings, two hours. Limited to junior/senior and graduate theater/film and television students. Examination of creative process in theater, film, and television, with consideration of writing, direction, production, and performance. Overviews of writing for alternative audiences, collaborative effort; examination of distinctiveness and interrelations among these arts. Individual units include participation of leading members of theater, film, and television professions. May be repeated twice for credit. Concurrently scheduled with course CM129.

230A-230B-230C. Writing for the Contemporary Theater. (4 to 8 each) Lecture, three hours; studio, two hours. Designed for graduate students. Letter grading. 230A. One-Act Plays. Analysis of strategy and dramatic structure of selected contemporary short plays leading to the guided completion and critique of student-written one-act plays. 230B. Full-Length Play. Analysis of strategy and dramatic structure of selected contemporary full-length plays leading to the guided completion and critique of a student-written full-length play. 230C. Performance and Text. Exploration of structural strategies, political implications, and technical demands of selected contemporary American plays leading to the guided completion and critique of student work.

231. Special Topics in Playwriting. (4) Lecture, three hours. Analysis and practice of various aspects of playwriting. Variable content selected from topics such as comedy writing, docudrama, experimental theater, writing for alternative audiences, or children's theater. May be repeated twice for credit. Letter grading.

232. Manuscript Analysis. (4) Lecture, three hours. Designed for graduate students. Critical and constructive study of dramatic techniques as employed by playwrights and screenwriters in selected examples of contemporary work. May be repeated once for credit.

241. Research in Technical Theater. (4) Designed for graduate students. Research in technical processes and equipment as applied to scenic, lighting, costume, or sound designs. May be repeated once for credit. Letter grading.

242. Introduction to Design in Production. (4) Lecture or studio, four hours. Introduction to process of design for entertainment, collaborative role of designer, and realization of designs in production. May be repeated once for credit. Letter grading.

243A-243B-243C. Scenic Design. (4-4-4) Advanced study and practice in scenic design for the theater. Emphasis as impetus for design, metaphors, and conceptualization. Investigation of design research process, composition, and style leading to visual presentation of the design. May be repeated once for credit.

244A-244B. Advanced Theater Production. (2 to 8 each) Studio, 12 to 24 hours. Designed for graduate students. Creative participation in preparation and presentation of a theatrical production. Each course may be taken for a maximum of 8 units. Letter grading.

244C. Production Management. (4) Lecture, three hours. Study in production management for the theater. Examination of professional duties of production manager, including preproduction, rehearsal, and performance phases of a production. Problems of re- source allocation, scheduling, and budgeting while maintaining a creative and collaborative environment. Letter grading.

245B. Production Management. (4) Lecture, three hours. Required: course 245A. Advanced study in production management for the theater with focus on the planning process of professional production manager in a seasonal and repertory environment. Problems of resource allocation, unions, organizational structure, scheduling, and budgeting to establish a creative and collaborative environment. Letter grading.


246A-246B-246C. History of Costume. (4-4-4) Lecture/ studio. Designed for graduate students. Study of history of costume as a manifestation of cultural, social, economic, and political influences to provide a historical framework for design of costumes for theater, film, and television. Historic survey and in-depth exploration of a selected period, with study of influences of diverse cultures. Letter grading.

246D. History of Costume Design. (4) Lecture, four hours. Study of history of costume as a manifestation of cultural, social, economic, and political influences to provide a historical framework for design of costumes for theater, film, and television. Historic survey and in-depth exploration of a selected period, with study of influences of diverse cultures. Letter grading.

247. Collaborative Project in Design and Production. (3 to 4) Studio, four hours. Designed for graduate students. Collaborative project in design, including analysis, conceptual development, and preparation of scenic, lighting, costume, or sound designs. May be repeated once for credit. Letter grading.

250. Directing I. (4) Lecture, four hours; studio, 24 hours. Designed for graduate students. Development of directorial skills of analysis, planning, staging, and criticism through medium of written preparations and directing of scenes. Letter grading.

251. Directing Post-Realist Drama. (4) Lecture, four hours; studio, 30 hours. Designed for graduate students. Problems in direction of post-realist plays through interpretation and laboratory scene work. Letter grading.

253. Production Project in Direction for the Stage. (2 to 8) Discussion, one hour; studio, 12 to 30 hours. Designed for graduate students. Direction of a dramatic work, with discussion and critique of work in progress. May be repeated for a maximum of 20 units. Letter grading.

253D. Directing Project for the Stage. (5) Discussion, three hours; laboratory, four to eight hours. Requisites: courses 163A, 163B, 163C. Application of stage directing techniques in production of short play or project. Students direct one-act play or project. May be repeated once for credit. Concurrently scheduled with course C163D. Letter grading.

264. Directing Classical and Historical Drama. (4) Lecture, four hours; studio, 30 hours. Designed for graduate students. Problems in interpretation and direction of historical or classical drama through medium of laboratory scene work. Letter grading.

265. Modern Theories of Production. (4) Examination of modern theories of production from emergence of the director in the 19th century to the present. Examination of different responses to problems of creating a vital theatrical event and the ongoing evolution of theater as an art form. Examination of contribution of significant directors and movements; relation between theater and other forms of representation. Letter grading.
266. Theatrical Conceptualization. (4) Examination of process of conceptualization in dramatic production; centrally of theatrical conceptualization in interpretation of dramatic text; exploration of range of possibilities inherent in different theatrical spaces and options in design components. Consideration of visual arts and music as sources of stimulus for theatrical conceptualization. Emphasis on collaborative aspects of theatrical production. Letter grading.

272. Production Practice in Theater, Film, Video, and Digital Media. (1 to 8) (Formerly numbered C272.) Studio/laboratory, three to six hours. Exploration and laboratory experience in one or more various aspects of production and postproduction practice for entertainment media, including theater, film, video, and digital media. May be repeated for maximum of 24 units. Letter grading.

C285A. Role of Producer in Professional Theater. (2) (Formerly numbered C294A.) Lecture, three hours. Designed for graduate students. Study of structure governing economic and artistic decision-making processes in professional theater of America. Concurrently scheduled with course C185A. S/U or letter grading.

C285B. Role of Management in Educational and Community Theater. (2) (Formerly numbered C294B.) Lecture, three hours. Designed for graduate students. Study of artistic, social, and economic criteria in administration of educational and community theater. Concurrently scheduled with course C185B. S/U or letter grading.

298A-298B. Special Studies in Theater Arts. (2 to 4 each) Lecture/discussion. Designed for graduate students. Seminar study of problems in theater arts, organized on topic basis. May be repeated once for credit.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employing as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLAI. May be repeated for credit. S/U grading.

420A-420B-420C. Advanced Acting I. (4 to 8-4-4) Studio, six to 18 hours. Letter grading.

420A. (4 to 8) Studio, six to 18 hours. Development of an internal technique, beginning with an adroit which is a dramatization of one’s personal history. Scene work follows, with emphasis on off-stage preparations, improvisations capturing the circumstances, life of the character, and intentions of the 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 the actor goes about doing research and fieldwork on the character being played. Letter grading.

420C. (4) Studio, six to 18 hours. Development of an external technique through comedy and of skits, improvisation, physical humor, delivery of a line, rhythm, timing, and public cabinet. Fusion of the internal; use of action and objective with the external. Letter grading.

421A-421B-421C. Advanced Acting II. (4 or 8 each) Studio/laboratory, six to 18 hours. Letter grading.


421B. Continued character behavior study through language and film and television. Exploration of language used by actors and directors in film and television production and subtle differences between acting for stage and camera. Working in multicamera studio environment, students prepare and tape scenes for analysis. May be repeated twice for credit. Letter grading.

424A-424B-424C. Advanced Voice and Speech I. (2 or 4 each) Studio/laboratory, three to six hours. Development of first-year student’s techniques for the stage, including those of relaxation, breathing, resonance, and development of speaking voice. Speech training uses International Phonetic Alphabet to train students in standard American speech. Text work in poetry and prose. Letter grading.

424D-424E-424F. Advanced Voice and Speech II. (2 or 4 each) Studio/laboratory, three to six hours. Advanced voice problems. Extension of first-year work, with increased demands on voice. Range, resonance, and breathing capacity extension. Articulation and phonetic alphabet. Text work in classical verse. Letter grading.

424G-424H-424I. Advanced Voice and Speech III. (2 or 4 each) Studio, three to six hours. Extension of second-year work, with increased demands on voice/speech, range, resonance, and breath capacity extension. Application of second-year training and International Phonetic Alphabet to create more authentic accents, as well as systematic approach to creating dialect charts. Letter grading.

425A-425B-425C. Advanced Movement I. (2 or 4 each) Studio/laboratory, three to six hours. Discovery of body’s unique language through exercises designed to explore and free the total instrument. Development of a flexible actor with range, expression, and confidence physically. Awakening of the imagination while exploring the 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. Extension of second-year work, with increased demands on voice/speech, range, resonance, and breath capacity extension. Application of second-year training and International Phonetic Alphabet to create more authentic accents, as well as systematic approach to creating dialect charts. Letter grading.

425G-425H-425I. Advanced Movement I. (2 or 4 each) Studio, three to six hours. Advanced physical training of individual actors to their maximum potential. Experience in techniques and discovery of origins of a variety of acrobatic and dance disciplines, including ballet, ballroom, period dance, and circus techniques. Letter grading.

425J-425K-425L. Advanced Movement II. (2 or 4 each) Studio/laboratory, three to six hours. Advanced physical training of individual actors to their maximum potential. Experience in techniques and discovery of origins of a variety of acrobatic and dance disciplines, including ballet, ballroom, period dance, and circus techniques. Letter grading.

428G-428H-428I. Advanced Movement II. (2 or 4 each) Studio, three to six hours. Advanced physical training of individual actors to their maximum potential. Experience in techniques and discovery of origins of a variety of acrobatic and dance disciplines, including ballet, ballroom, period dance, and circus techniques. Letter grading.

426A-426B-426C. Alexander Techniques. (2 or 4 each) Studio, three to six hours. Study and practice in Alexander techniques as method of developing balance, 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.


430A-430B-430C. Advanced Studies in Playwriting. (4-8-4 each) Lecture, three hours. Limited to M.F.A. playwriting program students. Guided completion of full-length script of one act, of one-act play, or of one-act play. 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.


C433A-C433B-C433C. Script Development Workshop. (4-8 each) Lecture, three hours; studio, four to 24 hours. Designed for graduate students. Guided process of script development, with emphasis on communication, artistic growth, and professional process. Each course may be taken for a 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 C140B. Letter grading.

441A-441B-441C. Lighting Design. (4-4-4) Lecture/ studio. Letter grading.

441A. (4 Lecture/studio. Study and practice in lighting the actor, emphasizing textual and character analysis from lighting designer’s perspective, conceptual development with the director, effect of light on dynamics of staging, use of color in light, and relationship of lighting designer to the actor. May be repeated once for credit. Letter grading.

441B. (4 Lecture/studio. Study of use of light and color to design space, effect of light on scenery and costumes, lighting for arena/thrust theaters, multiscenic productions, lighting patterns, and moving scenery. May be repeated once for credit. Letter grading.

441C. (4 Lecture/studio. Investigation of lighting design in production, musical, opera, opera, touring, and repertory situations. Study of analysis of script and score for lighting designer. May be repeated once for credit. Letter grading.

441D. Scene Projection and Media Techniques. (4 Lecture/laboratory. Designed for graduate students. Advanced study and practice in scenic projection and media techniques, with emphasis on analysis, design, and execution of theatrical projection and photographic technique for the stage.

442A-442B-442C. Costume Design. (4-4-4) Lecture/ studio. Advanced study and practice in costume design for theater. Imagination as impetus for design, with emphasis on analysis, metaphor, and conceptualization. Investigation of design research process, period style, and character analysis leading to visual presentation of the design. Study of costume design for theatrical productions, ballet, opera, and musical theater. May be repeated once for credit. Letter grading.

443. Problems in Design. (2 or 4 Lecture/laborato- ry, four hours (additional hours as required). Study and practice in design techniques for theater. May be repeated for a maximum of 24 units. Letter grading.

C444A-C444B-C444C. Advanced Sound Design. (4-4-4) Lecture, four hours; laboratory, four hours. Concurrently scheduled with courses C144A-C144B- C144C. Letter grading.
C444A. (4) Lecture; four hours; laboratory; four hours. Study of sound and acoustics as they relate to performance environments, techniques associated with recording, editing, automation, and reproduction of dialogue, effects, and music tracks for theater sound design. May be repeated once for credit. Letter grading.

C444B. (4) Lecture; four hours; laboratory; four hours. Advanced study and practice in preparation and recording of theater sound designs, with emphasis on analysis of script and sound, conceptual development of the design, and multitrack recording techniques to realize the design. May be repeated once for credit. Letter grading.

C444C. (4) Lecture; four hours; laboratory; four hours. Study and practice in processing and mixing of live and recorded sound: mix-down of multitrack recordings; preparation of sound tracks and sound reinforcement in theater. Study of creation of sound effects, control of MIDI data, and design techniques for music theater. May be repeated once for credit. Letter grading.

445A-445B. Production Design for Film, Television, and Entertainment Media. (4-4) Lecture/studio, four hours. Study and practice in design of scenic environment for film, video, and entertainment media, including one- and two-paint perspective, form light, shade, and textures. Graduate students expected to produce models of materials and techniques for execution of the model. Students form collaborative teams to conceive and propose interactive entertainment events. May be repeated once for credit. Letter grading.

C446B. (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.

C446C. (4 to 8) Lecture, three to six 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.

C446E.C. (4 to 8) Lecture, three to six hours. Prototype development; conceptual refinement and technological realization of prototypes, which may entail creation of elaborate proposals containing storyboards, budgets, design, and marketing plans that 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 virtual characters in film, television, and entertainment media, including effect of differing media on design choices. Each course may be repeated once for credit. Letter grading.

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. These media on design choices by design faculty members from all areas of curriculum. Letter grading.

C451A. Scene Design. (4) Lecture/studio, four hours. Introduction 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.

C451B. Scene 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 C451B. 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 C451C. Letter grading.

C452A. Lighting Design. (4) Lecture/studio, four hours. Study of design for proscenium, thrust, and arena configurations, music theater, and concert lighting. May be repeated once for credit. Concurrently scheduled with course C452A. 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 C452B. 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 C453A. 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 C453B. 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 C453C. 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 C454A. Letter grading.

C454B. Sound Design for Theater. (4) Lecture/studio, four hours. Exploration of sound design for theater and techniques for mixing, reinforcement, and signal processing. Topics include use of delay, equalization, and microphone placement for theater sound reinforcement. Study of creation of sound effects, control of MIDI data, and design techniques for musical theater. May be repeated once for credit. Concurrently scheduled with course C454B. 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 C454C. Graduate students expected to produce designs demonstrating a higher level of proficiency and skill. Letter grading.


C455A. Perspective Drawing. (2) Studio, four hours. Required of course 147A or 147B. Introduction to use of pencil and pen to communicate scenic designs, including one- and two-perspective, form light, shade, and textures. Graduate students expected to produce drawings demonstrating a higher level of proficiency and skill. Letter grading.

C455B. Watercolor Rendering. (2) Studio, four hours. Required of course 147A or 147B. Study of watercolor techniques for rendering theoretical concepts of scenic designs, including painting of brick, wood, stone, fabrics, and other surfaces. Graduate students expected to produce drawings demonstrating a higher level of proficiency and skill. Letter grading.

C455C. Marker Rendering. (2) Studio, four hours. Required of course 147A or 147B. Study and practice of marker rendering techniques as a means of communication for scenic and costume designers. Letter grading.

C455D. Model Making. (2) Studio, four hours. Required of course 147A or 147B. Study of the 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 the model. Graduate students expected to produce models demonstrating a higher level of proficiency and skill. Letter grading.

C455E. Life Drawing. (2) Studio, four hours. Required of course 147A or 147B. Study and practice in drawing of human form. Letter grading.

C455F. Costume Rendering. (2) Studio, four hours. Required of 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. Required of 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.

C455H. Selected Topics in Graphic Representation of Design. (2) Studio, six hours. Group study of selected subjects in techniques for interpretation of design for theater. May be repeated once for credit. Letter grading.

C456A. Introduction to Computer-Assisted Drafting. (4) Studio, four hours. Investigation of drawing and editing techniques, drawing floor plan sections, and elevation drawings using AutoCAD. Concurrently scheduled with course C456A. Letter grading.


C456D. Introduction to Computer-Assisted Drafting. (4) Studio, four hours. Investigation of drawing and editing techniques, drawing floor plan sections, and elevation drawings using Vectorworks. Concurrently scheduled with course C456D. Letter grading.


459A-459B. Directing for Theater, Film, and Television. (4-4) Lecture, three hours. Limited to graduate theater students. Analysis and exploration, with specific scenographies of differences and many similarities in directorial approach to same literary material in three media.

460AF-460AW-460AS. Contemporary Issues in Design. (1-1-1) Discussion, three hours. Designed for graduate students. Discussion of role of director in contemporary professional practice. Review discussion and critique of directing projects. May be repeated for a maximum of 4 units. Letter grading.

460B-460C. Problems in Advanced Direction for the Stage. (4-4) Lecture, to be arranged. Limited to M.F.A. candidates. Discussion and critique of work in progress. 460B. Preparation and presentation of a published play under rehearsal conditions. 460C. Preparation and presentation of a full-length original play under rehearsal conditions.

462. Advanced Directing. (8 or 12) Studio, 12 or 30 hours. Designed for graduate students. Advanced problems in directing for theater, film, and television. May be repeated for a maximum of 24 units. Letter grading.

463. Production Project in Direction for the Stage. (8 or 12 units) Studio, 24 hours. Designed for graduate students. Creative participation as director in conceptualization and preparation of a dramatic work. Letter grading.

472. Production Practice in Theater, Film, Video, and Digital Media. (1 to 8) Formerly numbered C472.) Studio, three to eight hours. Exploration and laboratory experience in one or more various aspects of production and postproduction practice for entertainment media, including theater, film, video, and digital media. May be repeated for a maximum of 24 units. Letter grading.

474. Advanced Projects in Design and Production. (4) Lecture/studio, four hours. Study and practice in preparation and execution of designs for theater, film, video, and related entertainment forms. As contributing artistic member of design team, creative responsibilities include designer, technical supervisor, or production manager. May be repeated for a maximum of 16 units. Letter grading.

495A-495B-495C. Practicum and Practice in Teaching Theater. (2-2-2) Seminar, to be arranged; discussion, two hours. Limited to Ph.D. students. Study and practice of teaching theater at university level. Orientation and preparation of graduate (Ph.D.) students who have responsibility to assist in teaching undergraduate courses in department. Discussion of problems common to the teaching experience. Letter grading.

498. Professional Internship in Theater, Film, and Television. (4, 8, or 12) Full- or part-time at a studio or on a professional project. Designed for advanced M.F.A. students. Internship at various film, television, or theater facilities accentuating creative contribution, organization, and work of professionals in their various specialties. Given only when projects can be scheduled.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate school. Use to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596A. Directed Individual Studies: Research. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

596B. Directed Individual Studies: Writing. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

596C. Directed Individual Studies: Directing. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

596D. Directed Individual Studies: Design. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

596E. Directed Individual Studies: Acting. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

596F. Directed Individual Studies: Production. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examinations in Theater Arts. (2 to 8) Tutorial, to be arranged. May be repeated for a maximum of 12 units. S/U grading.


URBAN PLANNING
School of Public Affairs

UCLA
3357 Public Affairs Building
Box 951656
Los Angeles, CA 90095-1656
(310) 825-4025, 825-7331

Goetz Wolff, M.Phil.
Neal T. Richman, Ph.D.
Anastasia Loukaitou-Sideris, Ph.D., Chair

Los Angeles, CA 90095-1656

UCLA

The professional urban planner works on the creation and management of the urban environment, including its physical, economic, and social elements. Housing, transportation, air and water quality, the preservation of historic communities, and the development of community-level economic and employment programs are some of the tasks undertaken by recent graduates of the UCLA Department of Urban Planning. Graduates have taken positions in local, state, and national governments, and increasingly with nonprofit and private companies whose products and services affect the urban environment. While most UCLA graduates find positions in the U.S., the program offers the opportunity to specialize in development planning abroad, including rural development, and many graduates have found positions in Latin America, Africa, and Asia.

The program offers an undergraduate minor in Urban and Regional Studies, a two-year Master of Arts degree, and a Ph.D. degree. Concurrent degree programs allow students to combine study for an M.A. in Urban Planning with work toward an M.B.A. in the John E. Anderson Graduate School of Management, a J.D. in the School of Law, an M.Arch. I in the Department of Architecture and Urban Design, or an M.A. in Latin American Studies.
The department takes pride in its collegial atmosphere. It features a lively mix of students from diverse academic backgrounds, drawn from many foreign countries and from every avenue of American life. It includes many members of racial and ethnic minority groups, and more than half the students are women. Student organizations provide an interesting program of extracurricular activities.

Undergraduate Study

Urban and Regional Studies Minor

The scale, diversity, balkanized governance, and natural environment of Southern California all contribute to making it an extraordinary natural laboratory for learning about urban and regional issues, whether the focus is on immigration, employment, the built environment, transportation, poverty, natural resources, or a host of other challenges. The Urban and Regional Studies minor offers undergraduate students a means of addressing 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 or counselor at (310) 206-4613.

Required Courses (28 units): (1) Urban Planning 120 or 121 with a grade of C or better; (2) five elective courses from at least two departments, selected as follows: (a) at least three courses from Public Policy 10A, 104, C115, M120, C147, Urban Planning 120 (unless taken under item 1), 121 (unless taken under item 1), 130, C133, 141, M150, CM160, CM165, M175, C184 and (b) two courses from Anthropology 167, Chicana and Chicano Studies 181, Geography 150, History 145A, 145B, Management 175, Political Science 143B, Sociology 158 (students may petition to include a School of Public Affairs course not listed above to fulfill an elective requirement); (c) 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.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdsnet.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 Urban Planning offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Urban Planning. Four concurrent degree programs (Urban Planning M.A./Architecture M.Arch., I, Urban Planning M.A./Latin American Studies M.A., Urban Planning M.A./Law J.D., and Urban Planning M.A./Management M.B.A.) are also offered.

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 debates, such as normative theories of good urban form, metropolitan organization and governance, economic development and growth management, edge cities, spatial mismatch hypothesis, urban poverty, racial/ethnic inequality, gender and urban structure, sustainability, and future of cities. P/NP or letter grading.

M122. Policy, Planning, and Community. (4) (Same as 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.

129. Special Topics in Urban Policy and Research. (4) Lecture, three hours. Examination of particular planning and policy issues concerning 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. population lives and works in urbanized areas, and world’s population is becoming more urbanized with each passing decade. National, state, and local governments are engaged in managing, planning, policymaking, and governance in urban context. Ultimate efficacy of those public activities can be enhanced by understanding of economic forces acting on urban areas. Basic concepts related to location choice, agglomeration effects, economies of scale, and specialization by cities and transportation. P/NP or letter grading.

C133. Political Economy of Urbanization. (4) Lecture, three hours. Introduction to new approaches to urban studies, basic concepts and analytical approaches of urban political economy, with emphasis on Los Angeles. Key economic sectors, labor market composition, and review of conflicting portrayals depicting dynamics of region. Two all-day bus tours of key economic regions and guest lectures by regional experts included. Concurrently scheduled with course C233. P/NP or letter grading.

CM137. Southern California Regional Economy. (4) (Same as Labor and Workplace Studies M180.) Lecture, three hours. Introduction to regional economy, with emphasis on Los Angeles. Key economic sectors, labor market composition, and review of conflicting portrayals depicting dynamics of region. Two all-day bus tours of key economic regions and guest lectures by regional experts included. Concurrently scheduled with course C237. Letter grading.

M140. Issues in Latina/Latino Poverty. (4) (Same as Chicana and Chicano Studies M121.) Lecture, three hours. Examination of nature and extent of urban and rural poverty confronting Latina/Latino population in U.S. Special emphasis on antipoverty policies of government and nonprofit organizations and social planning and economic development strategies. Attention also to literature on underclass. Letter grading.

141. Planning for Minority Communities. (4) Lecture, three hours. Introduction to inner-city policy issues on three separate levels: (1) each student develops comprehensive inner-city urban program using materials from Alternatives Inner-City Future Exercise, (2) each student is expected to identify value assumptions and theories of social justice implicit or explicit in alternative intervention programs, and (3) each student is expected to participate in class discussions that emphasize minority issues that affect implementation. P/NP or letter grading.

M150. Transportation Economics. (4) (Same as Geography M149.) Lecture, three hours. Designed for juniors/seniors. Study of geographical aspects of transportation, with focus on characteristics and functions of various modes and on complexities of intraurban transport. P/NP or letter grading.

151. Urban Transportation Economics. (4) Lecture, three hours. Big cities offer many attractions, but high density also produces traffic congestion and air pollution. Can we have dense urban areas without congested traffic and polluted air? Analysis of economic explanations for transportation problems and examination of possible solutions. Because university campuses resemble small cities, they are used as examples to explore various policies (such as BruinGO at UCLA) that universities have adopted to improve transportation. Letter grading.

CM160. Environmental Politics and Governance. (4) (Same as Environment M164.) Lecture, three hours. 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 remain as important as economic processes. There is a need to address environmental issues and the collective action required to make change. Cities and states face unique challenges, with special emphasis on issues of environmental justice. Trends in climate and ecological change have become central issues for urban and regional planners, with policies and planning responses needed to address these issues.

M162. Land Use and Development. (4) (Same as Environment M162.) Lecture, four 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. Relationship of state-level land-use policies and politics and ways in which localities plan. Environmental, social, and equity aspects of different patterns of urbanization and likely trends into future. Letter grading.

M163. California Sustainable Development: Economic Perspective. (4) (Same as Environment M135 and Public Policy M149.) Lecture, three hours. Examination of specific environmental challenges that California faces. Microeconomic perspective used, with special emphasis on 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.
195. Community Internships in Urban Planning. (4) Tutorial, 12 hours. Limited to junior/senior Urban and Regional Studies minors. Internship in super- vised setting in community agency or urban planning setting. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract required. P/NP grading.

199. Directed Research in Urban Planning. (2 to 8) Tutorial, three hours. Limited to juniors/seniors. Sup- pervised individual research or investigation under guidance of faculty members. Written report must be prepared and approved or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M201. Theories of Architecture. (4) (Same as Ar- chitecture and Urban Design M201.) Lecture, three hours. Exploration of conceptual and historical structures that shape current issues in architectural theory. Readings in primary texts serve as framework for understanding nature of speculative inquiry in architectural context. Letter grading.

M202A. Public Control of Land Development. (3 to 6) (Same as Law M286.) Lecture, three hours. Analy- sis of legal and constitutional constraints on land-use planning and development; administrative and envi- ronmental regulations; relationship between law and planning, formulation land-use legislation, zoning, subdivision controls, eminent do- main, taxation, urban development, environmental law, and negotiation. Theory and doctrine applied to case studies; research project/paper and/or examina- tion required. S/U or letter grading.

M202C. Seminar: Urban Affairs. (3 to 6) (Same as Law M526.) Seminar, three hours. Consideration of selected aspects of housing law and pol- icy, including current federal and state housing subsi- dies; remedies of housing consumers; impacts of market discrimination against children, racial minori- ties, and women; and local governmental laws influ- encing cost and supply, such as antispeculation and rent control legislation. Catalytic role of economic and community development in planning of housing sup- ply also considered. S/U or letter grading.

M204. Research Design and Methods for Social Policy. (4) (Same as Public Policy M218.) Lecture, three hours; outside study, nine hours. Limited to graduate students. How to become more sophisticated con- sumers and producers of qualitative and quan- titative policy research. In first half of course, formal principles of research design; in second half, various data collection methods, including ethnography, inter- viewing, and survey design. Letter grading.


M206A. Introduction to Geographic Information Systems. (4) (Same as Public Policy M224A.) Lecture, three hours; laboratory, one hour. Preparation: one intermediate-level statistics course, familiarity with one packaged statistics program. Principles of Geo- graphic Information Systems (GIS) and applied tech- niques of using spatial data for mapping and analysis. Topics include data quality, data manipulation, spatial analysis, and information systems. Use of mapping and spatial analysis to address planning problem. Letter grading.

M206B. Advanced Geographic Information Sys- tems. (4) (Same as Public Policy M224B.) Lecture, four hours; laboratory, four hours. Prerequisite: course M206A or Public Policy M224A. Principles and skills of geographic analysis and modeling; managing, pro- cessing, and interpreting spatial data. Especially use- ful for students interested in environmental, demo- graphic, and transportation-related re- search. Scripts (Avenue), modeling (Spatial Analyst), network analysis, and transportation modeling (Tra- nScAD). Letter grading.

207. Applied Microeconomics for Urban Planning. (4) Lecture, three hours. Preparation: passing score on microeconomics examination given first day of class. Practical use of economics in analyzing public resource allocation problems. Topics include review of marginal analysis, difference between equity and efficiency, pub- lic goods and free rider problem, environmental pricing, public service pricing, and conflicts between individual and collective rationality. Letter grading.


209. Special Topics in Planning Theory. (4) Lec- ture, three hours. Topics in planning theory selected by instructor. May be repeated for credit. S/U or letter grading.

210A. Advanced Planning Theory. (4) Lecture, three hours. Required of first-year Ph.D. students. Major ideas and theories of planning that have influ- enced its development from early-19th century to present. Letter grading.

210B. Comparative Histories of Planning. (4) Lec- ture, three hours. Limited to Ph.D. and advanced M.A. students. Examination of history and historical meth- od in planning through group discussion, oral presen- tations, and written assignments. Organization of course into three parts to develop critical historical skills: historiography and historical methods, critique of planning histories of Los Angeles, and writing of ur- ban histories. S/U or letter grading.

210C. Colloquium in Planning Theory. (4) Lecture, one hour; discussion, two hours. Required of first-year Ph.D. students. Introduction to some central theoretical issues of contemporary planning. S/U or letter grading.

211. Law and Quality of Urban Life. (4) Lecture, three hours. Introduction to law as urban system, di- rected primarily toward those interested in intersec- tion of law and policy: broad array of urban issues ex- amined, as is law’s role as partial cause and cure of urban problems. Examination of law as changing process rather than collection of rules, so that stu- dents develop facility to interact with law and lawyers in positive and forceful manner. S/U or letter grading.

212. International/Comparative Planning Work- shop. (4) Discussion, three hours; field trips, five to 10 days. Topics of planning and policy in various inter- national or domestic sites. Topics may include urban design, urban development, urban governance, land use, environmental issues, transportation, infrastruc- ture planning, housing development, community de- velopment, and/or physical planning. May be repeat- ed for credit. Letter grading.

215. Spatial Statistics. (4) (Same as Geography M272 and Statistics M222.) Lecture, three hours. De- signed for graduate students. Survey of modern methods used in analysis of spatial data. Implementa- tion of various techniques using real data sets from diverse fields, including neuroimaging, geography, seismology, demography, and environmental scienc- es. S/U or letter grading.

218. Graphics and Urban Information. (4) Lecture, two hours; studio, one hour. Presentation of basic graphic methods and tools for conceptualization, analysis, and documentation of built environment. Development of fundamental skills of graphic ideation and communication. Letter grading.

219. Special Topics in Built Environment. (4) Lecture, three hours. Topics in built environment selected by faculty members. May be repeated for credit. S/U or letter grading.

220A. Quantitative Analysis in Urban Planning I. (4) Lecture, three hours; laboratory, 90 minutes. Preparation: passing basic mathematics proficiency examination given first day of class. Introduction to mathematical and statistical concepts and methods with applications in urban planning. Review of basic mathematical concepts fundamental to planning methods; linear and nonlinear functions focusing on growth curves and mathematics of finance; data measurement and display; descriptive statistics and probability. Introduction to use of computer as tool in analysis of planning-related data. Letter grading.

220B. Quantitative Analysis in Urban Planning II. (4) Lecture, three hours; laboratory, 90 minutes. Prerequisite: course 220A or equivalent as demonstrated by passing basic mathematics proficiency examination given first day of course 220A. Introduction to concepts of statistical inference and modeling, with emphasis on urban planning applications. Topics include sampling, testing, analysis of variance, correlation, and simple and multiple regression. Use of computer as tool in statistical analysis and modeling. Letter grading.

222. Introduction to Histories and Theories of Urban Planning. (4) Lecture, 90 minutes; discussion, 90 minutes. 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. Generally taken Fall Quarter of first year of M.A. program. Letter grading.

223. Professional Development Seminar. (4) Seminar, 90 minutes; discussion, 90 minutes. Recommended preparation: course 222. Problems of professional practice. Development of methods that integrate theory and practice through readings and individual and collective analyses of each student's fieldwork experience. Students must be working in field setting to enroll. Job fair is held at end of Fall Quarter to place students in field settings. Students invited to present first term of course 486 to meet fieldwork requirement. Letter grading.


M226B. Introduction to Computer-Aided Architectural Design, Three-Dimensional. (4) (Same as Architecture and Urban Design M226B.) Lecture, three hours; laboratory, one hour. Concepts of basic mathematics, profi- ciency examined by first day of course 220A. Introduction to concepts of statistical inference and modeling, with emphasis on urban planning applications. Topics include sampling, testing, analysis of variance, correlation, and simple and multiple regression. Use of computer as tool in statistical analysis and modeling. Letter grading.

M229. Special Topics in Planning Methods. (4) Lecture, three hours. Topics in built environment selected by faculty members. May be repeated for credit. S/U or letter grading.

C233. Political Economy of Urbanization. (4) Lecture, three hours. Introduction to new approaches to urban studies, technical and analytical approaches of urban political economy, with major emphasis on American urban problems and restructuring of modern metropolitan. Topics include historical geography of urbanization, development and transformation of urban spatial structure, suburbanization, and metropolitan political fragmentation, urban fiscal crisis, and role of urban social movements. Concurrently scheduled with course 220A. Letter grading.

234A. Development Theory. (4) Lecture, three hours. Review of basic literature and schools of thought on development theory through analysis of impact of mercantilism, colonialism, capitalism, and socialism on land-use urban and rural economic structures in Third World. Presentation, through evaluation of theoretical writings and case studies, of complexity and diversity of developing countries. Emphasis on linkages between policy and urban issues. May use a background of courses 224B, M234C, and many other planning courses addressing Third World issues. Letter grading.

234B. Conservation in Inhabited Landscapes. (4) Lecture, three hours. Recommended preparation: course 234A. Development more thoroughly of themes raised in earlier courses. Topics may include passive and active development, women, agricultural, urban ecological, comparative land reform, agrarian revolution, and special problems of tropical development. May be repeated for credit with consent of instructor. Letter grading.

M234C. Resource-Based Development. (4) (Same as Geography M229.) Discussion, three hours. Recommended preparation: course 234A. Some major issues associated with development of specific natural resources. Topics include nature of particular resource (or region associated with it), its previous management, involvement of state, corporations, and local groups, and economic changes and social impact of its development. Letter grading.


M236A. Theories of Regional Economic Development I. (4) (Same as Public Policy M240.) Lecture, three hours; discussion, one hour. Introduction to theories of location of economic activity, trade, and other forms of contact between regions, process of regional growth and decline, reasons for different levels of economic development, relations between more and less developed regions. Letter grading.

236B. Globalization. (4) Lecture, three hours. Recommended preparation: course 236A. Application of theories of regional economic development, location, and trade learned in course M236A to contemporary process known as globalization. Examination of nature and effects of globalization on development, employment, and social structure, along with implications for policy. Letter grading.

236C. Advanced Workshop on Regions in World Economy. (4) Lecture, three hours. Prerequisite: course 236B. Advanced workshop on regional development examining changes in organization of production systems, their geographies, and processes that affect regional performance in globalization. Letter grading.

237A. Sectoral Analysis. (4) Lecture, three hours; laboratory, one hour. Recommended preparation: methods and procedures of sectoral investigation as applied to regions, industries, companies, and their labor forces. Current theories and conceptions of industrial structure and industry location; underlying sources of locational conflict across cities and regions; evolution of examples aimed at varying types of controversial facilities and land uses in human service and environmental arenas; development of strategies for addressing, overcoming, and coping with locational conflict. Letter grading.

237B. Urban and Regional Economic Development Applications. (4) Lecture, three hours. Survey and analysis of economic development strategies in U.S. cities. Economic policies 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.

237C. Southern California Regional Economy. (4) Lecture, three hours. Introduction to regional economy, with emphasis on Los Angeles. Key economic sectors, labor market composition, and review of conflicting portrayals depicting dynamics of region. Two all-day bus tours of key economic regions and guest lectures by regional experts included. Concurrently scheduled with course CM137. Letter grading.

239. Special Topics in Regional and International Development. (4) Seminar, three hours. Topics in urban and regional development selected by faculty members. May be repeated for credit. S/U or letter grading.

M240. Local Government. (2 to 6) (Same as Law M285.) Lecture, three hours. Analysis of structure and function of local, regional, and state government in historical and institutional context. Federal, state, and local governments, intergovernmental relations, roles of judiciary, public services, lawmaking, citizen participation through initiatives and referenda, and government tort liability. Letter grading.


242. Locational Conflict. (4) Discussion, three hours. Conceptual framework for understanding underlying processes of locational conflict across cities and regions; exploration of examples aimed at varying types of controversial facilities and land uses in human service and environmental arenas; development of strategies for addressing, overcoming, and coping with locational conflict. Letter grading.

M243. Privatization, Regulation, and Public Finance. (4) (Same as Public Policy M230.) Lecture, three hours; laboratory, six hours. Prerequisite: Public Policy 201. Evaluation of economic and political determinants of trend toward privatization public sectors. Emphasis on recent trends of this trend as expressed through new pricing, financing, and service-level policies. Exploration of new regulatory role this trend implies for state and local government. Letter grading.

244. Urban Poverty and Planning. (4) Lecture, three hours. Examination of determinants of urban poverty, with emphasis on poverty in U.S. and on geographical dimensions of poverty and planning inter-ventions that contribute to poverty reduction. Topics include relationship between poverty and human and social capital, demographic change, low-wage labor market, spatial concentration of poor, residential segregation, and social policy. Letter grading.

245. Urban Public Finance. (4) Lecture, three hours. Prerequisites: courses 207, 220A. Theory and practice of urban public finance, with emphasis on methods used to fund public infrastructure. Topics include fiscal impact analysis of real estate development, effects of taxes on land-use decisions, benefit assessments to finance neighborhood public investment, private and intergovernmental contracting as method of supplying urban public services, trends for urban development, and municipal bond market. S/U or letter grading.

247. Race, Gender, Culture, and Cities. (4) Discussion, three hours. Exploration of multicultural context of contemporary U.S. cities, with focus on changing social and economic functions of communities and their policy implications. Topics relate new diversity and gender with global restructuring, new urban economy, and policies toward workplace, housing, schools, and governance. S/U or letter grading.


249. Special Topics in Social Policy and Analysis. (4) Lecture, three hours. Topics in social policy and analysis selected by faculty members. May be repeated for credit. S/U or letter grading.

250. Introduction to Social Policy. (4) Lecture, three hours. Analysis of demographic changes, history, needs, and ideological debates that affect development of social policy in U.S., compared with Western Europe. S/U or letter grading.

251. Planning and the Publics. (4) Lecture, three hours. Exploration of planning needs of various social groups in urban settings, using existing literature and research studies to determine appropriate mechanisms of public participation. 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.

253. Sprawl. (4) Lecture, three hours. Suburbs are not new, but metropolitan areas in U.S. and elsewhere continue to grow rapidly at their edges in ways that many consider poorly planned. Discussion of causes and impacts of sprawl and what, if anything, should be done about it. Letter grading.

M254. Transportation, Land Use, and Urban Form. (4) (Same as Public Policy M220.) Lecture, three hours. Historical evolution of urban form and transportation systems, intrametropolitan location theory, recent trends 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.

M255. Transportation Planning. (4) (Same as Public Policy M244.) Lecture, three hours. Examination of how planners analyze, manage, and operate transportation systems, system performance, intelligent transportation systems, transportation system demand management, parking management, freight movement and facilities, public transit evaluation and management, paratransit, bicycle and pedestrian planning, transportation for elderly and disabled. Letter grading.

M256. Travel Behavior Analysis. (4) (Same as Public Policy 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, trip assignment, cost of travel, historical development of travel forecasting methods and new approaches to travel behavior analysis. Letter grading.

M257. Transportation Economics, Finance, and Policy. (4) (Same as Public Policy M222.) Lecture, three hours. Overview of transportation finance and economics; concepts of efficiency and equity in transport 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.

M258. Transportation and Environmental Issues. (4) (Same as Public Policy M223.) Lecture, three hours. Regulatory and 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 and land-use control measures; alternative fuels and electric vehicles; corporate average fuel economy and global warming issues; growth of assumptions; automobility in sustainability debate. Letter grading.

259. Transportation and Economic Development. (4) Lecture, three hours. Examination of equity issues related to urban transportation, with focus on complex relationships among urban spatial structure, transportation (travel patterns and transportation investments), and economic outcomes. Role of transportation in improving economic outcomes for low-income and minority households and communities. Letter grading.

C260. Environmental Politics and Governance. (4) Lecture, three hours. Environmental planning is more than simply finding problems and fixing them. Each policy must be negotiated and implemented with multiple, competing interests. Institutions and politics matter deeply. Overview of how environmental governance works in practice and how it might be improved. Concurrently scheduled with course CM160. Letter grading.

261. Land-Use Planning: Processes, Critiques, and Innovations. (4) Lecture, three hours. Under-standing of techniques, processes, strategies, and dilemmas of land-use planning. Despite strong criticism 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 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. (Formerly numbered 262B.) Lecture, three hours. Water is life and wealth in California, which has world's most extensive long-distance, inter-basin 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, despite growing pressures to increase supplies. Analysis of environmental impacts, geography, use of water, and consideration of resource planning. S/U or letter grading.

264. Environmental Law. (3 to 6) (Same as Law M290.) Lecture, three to three and one-half hours. 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. S/U or letter grading.

C265. Environmentalism: Past, Present, and Future. (4) Lecture, three hours. 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 environment, how rise of modern sciences reshaped environmental thought, and how this was later transformed by 19th-century ideas and rise of American conservation movements. Review of environmental thought and contemporary environmental issues as they relate to broader set of questions about nature of development, sustainability, and equity in environmental debate. Environmental context, including global climate change, rise of pandemics, deforestation, and environmental justice impacts of war. Concurrently scheduled with course CM165. Letter grading.


M267. Environmental and Resource Economics and Policy. (4) (Same as Public Policy CM250.) Lecture, three hours. Requisites: courses 207 and 220B, or Public Policy 204 and 208. Survey of ways of economics is used to define, analyze, and resolve problems of environmental management. Overview of analytical questions addressed by environmental economists that bear on public policies. Letter grading.

269. Special Topics in Environmental Analysis and Policy. (4) Lecture, three hours. Topics in environmental analysis and policy selected by faculty members. May be repeated for credit. S/U or letter grading.

M270. Homelessness: Housing and Social Service Issues. (4) (Same as Social Welfare M206A.) Lecture, 90 minutes; discussion, 90 minutes; one field trip. Requisites: courses 207 and 220B. Requisites: students for whom homelessness 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.


M272. Real Estate Development and Finance. (4) (Same as Architecture and Urban Design M272.) Lecture, two hours; workshop, two hours; outside study, eight hours. Requisites: courses 220A, 220B. Recommended for first-year students in community development and built environment area of concentration. Introduction to real estate development process specifically geared to students in planning, architecture, and urban design. Financial decision model, market studies, designs, loan packages, development plan, and feasibility studies. Lectures and projects integrate development process with proposed design solutions that are interactively modified to meet economic feasibility tests. S/U or letter grading.

273. Site Planning. (4) Lecture, 90 minutes; laboratory, 90 minutes. Requisite: course 274. Introduction to principles of site planning for urban areas. S/U or letter grading.

274. Introduction to Physical Planning. (4) Lecture/ workshop, 90 minutes; discussion, 90 minutes. Designed for students with no prior physical planning background and for first-year M.A. students in community development and built environment, design and development, and transportation policy and planning concentrations. Introductory overview of physical planning, land use, site analysis, and surveys; regulatory structures and social/community impacts. Letter grading.

M275. Community Development and Housing Policies: Roles of State, Civil Society, and Nonprofits. (4) (Same as Public Policy M243 and Social Welfare M290U.) 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 inter ventions be directed toward inner city housing markets or through neighborhood strategies? What lessons can be learned from experience of other countries? Let ter grading.
cover general urology, urological subspecialties, uropathology, and uroradiology. Urology teaching settings include the Reagan UCLA, Harbor-UCLA, Olive View-UCLA, UCLA-Santa Monica Hospital, and West Los Angeles VA Medical Centers.

For further details on the Department of Urology and a listing of the courses offered, see http://www.uclaurology.com.

**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.

---

**Women’s Studies**

*College of Letters and Science*

UCLA
2225 Rolfe Hall
Box 951504
Los Angeles, CA 90095-1504
(310) 206-8101
tax: (310) 206-7700
e-mail: women@women.ucla.edu
http://www.womensstudies.ucla.edu

Christine A. Littleton, J.D., Chair

Professors
Sondra Hale, Ph.D.
Christine A. Littleton, J.D.

Associate Professors
Grace Kyungwon Hong, Ph.D.
Purnima Mankekar, Ph.D.
Elizabeth A. Marshaht, Ph.D.
Juliet A. Williams, Ph.D.

**Scope and Objectives**

The Department of Women’s Studies provides interdisciplinary academic programs that span departments, disciplines, and ideologies. The undergraduate program offers a Bachelor of Arts degree and a minor; the graduate program offers Master of Arts and Ph.D. degrees. The programs provide students the opportunity to study the full range of human experience and arrangements of social organization from the perspectives of those whose participation has been traditionally distorted, omitted, neglected, or denied — women in their racial, class, sexual, national, and cultural diversity. Students develop critical reasoning and analytical skills, research and communication skills, a deep appreciation for complexities of power and asymmetries in gender relations across time, class, and cultures, and conceptual tools for social change. Emphasis on multidisciplinary, multietnic, and transnational approaches assures a broader exposure to the humanities and social sciences than is commonly available within disciplinary confines. A background in women’s studies offers unique contextual validation for today’s gender contro-versions and prepares students for a wide range of career and life choices.

The faculty members who teach women’s studies courses come from various College of Letters and Science departments, area studies centers, and professional schools. Many professionals within and outside the University contribute their time, expertise, and enthusiasm. A governance committee composed of the chair, faculty members, and graduate and undergraduate student representatives sets program policies and curricula.

The department works closely with undergraduate and graduate student associations to promote student activism and community service among its majors, minors, and graduate students. It also assists other student groups with extracurricular programming on feminist issues. Research in women’s studies is promoted in cooperation with the Center for the Study of Women.

**Undergraduate Study**

**Women’s Studies B.A.**

The major in Women’s Studies may be taken alone or in conjunction with another Letters and Science major. In the case of a double major, no more than five courses may be applied toward both majors.

**Admission**

To be admitted to the major, students must have completed Women’s Studies 10, be in good standing, and formally register with the program. They are encouraged to declare their major as early as possible and to discuss their proposed course of study with the chair or undergraduate adviser.

Students are encouraged to draw on the University’s diverse resources in creating their program of study. They may pursue traditional and/or innovative subjects in fields ranging from the humanities and fine arts to the social and life sciences. In addition to courses on the women’s studies approved list, students may petition to have diverse courses accepted, including courses outside the College of Letters and Science, independent studies, or field study courses.

Each course applied toward the major must be taken for a letter grade, and students must have a grade-point average of 2.0 or better in women’s studies courses to receive credit for completing the program. Courses in which they receive grades of C– or lower may not be applied toward the core requirements in the major.

**Preparation for the Major**

Required: Women’s Studies 10. Students must also complete departmental lower division requirements, as applicable, for upper division women’s studies courses in the disciplines.

**Transfer Students**

Transfer applicants to the Women’s Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one multidisciplinary feminist perspective on women and society course and departmental lower division requisite courses. Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

**The Major**

The major is designed to (1) impart core concepts in theory and critical analysis, research design, and methods, (2) provide exposure to a range of feminist scholarship across disciplines, and (3) enable students to acquire a depth of knowledge within one or two disciplinary or topical fields of inquiry. To achieve this goal, the major is divided into three categories.

Required: At least 13 upper division courses (minimum of 4 units each) as follows:

1. Three core courses, including (a) one feminist theory course from Women’s Studies 110A or 110B or 1110C, (b) course 130 or one course on the study of American ethnic minority women from the approved list of women’s studies credit courses issued each term by the department, and (c) course 187

2. A distribution of at least four courses, each from a different department or discipline, selected from the approved list of women’s studies courses

3. Six additional concentration courses from one or two of the disciplines in which the core and distribution courses have been taken. Students may petition for interdisciplinary or topical concentrations such as feminist theory, women of color, women’s health, or lesbian studies. If two fields are selected, the ratio of the six courses may be divided 3:3 or 4:2

One upper division tutorial (minimum of 4 units) selected from course 195, 197, or 199 may be applied toward the concentration requirement for the major. This limit does not apply to Women’s Studies 198A or 198B.

**Honors Program**

The honors program is open to advanced junior and senior Women’s Studies majors with a 3.6 grade-point average in women’s studies courses and a minimum 3.4 overall GPA who have no outstanding Incomplete grades, and to majors who demonstrate ability to do honors work by submitting a paper to the department chair for approval. Students wishing to undertake honors in the major are encouraged to complete Women’s Studies 187 by Spring Quarter of the junior year or Fall Quarter of the senior year.

To qualify for honors at graduation, students must successfully complete course 187 and two successive terms of honors research (courses 198A, 198B) with their faculty sponsor and receive a grade of B+ or better on their
Women's Studies Minor

The Women's Studies minor augments and enriches study in a traditional field. Students participating in this program are required to complete both a departmental major and the Women's Studies minor.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in 2225 Rolfe Hall. They are encouraged to declare the minor as early as possible and to discuss their proposed course of study with the chair or undergraduate adviser.

Required Lower Division Course (4 units): Women's Studies 10.

Required Upper Division Courses (28 units): (1) One feminist theory course from Women's Studies 110A or 110B or M110C, (2) 120 or 187 or an equivalent senior research seminar approved in advance, and (3) five upper division elective courses (minimum of 4 units each) from the approved list of women's studies courses issued each term by the department. At least three elective courses must be taken in departments other than the major department. No more than 4 units of courses 195 through 199 may be applied.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Courses in which students receive grades of C– or lower may not be applied toward the core requirements in the minor. Successful completion of the minor is indicated on the transcript and diploma.

Women's Studies Lower Division Course

10. Introduction to Women's Studies: Feminist Perspectives on Women and Society, (5) Lecture, three hours; discussion, two hours. Introduction to study of women and men in society, covering comparative issues of social, political, and economic position in the workplace, family, cultural institutions; historical basis of women's subordination; the female experience; the male experience; relations between women and men; intersections of ethnicity, class, and gender; violence against Women; cultural images of women and men; social roles of women and men and movements for social change. P/NP or letter grading.

Upper Division Courses


M101C. Special Topics in Lesbian and Gay Literature, (5) (Same as English M101C and Lesbian, Gay, Bisexual, and Transgender Studies M101C.) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in lesbian and gay literature. Topics focus on particular problem or issue in terms of its relationship to lesbian and gay culture and writing. May be repeated for credit. P/NP or letter grading.

M104C. Diversity in Aging: Roles of Gender and Ethnicity, (4) (Same as Gerontology M104C and Social Welfare M104C.) Lecture, four hours. Exploration of complexity of variables related to diversity of the aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in a multidisciplinary perspective utilizing faculty from a variety of fields to address issues of diversity. Letter grading.

105. Topics in Women and Medicine, (4) (Same as English M105.) 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 principles that arise in discussion of women's health and self-care; consideration of a women's health specialty and ways to deliver healthcare to women. Exploration of roles and lifestyles of female physicians. P/NP or letter grading.

M106. Imaginary Women, (4) (Same as Honors College M106.) Seminar, four hours. Designed for juniors/seniors. Study of four female cultural archetypes: abscissing wife/mother, infanticide mother, intellectual woman, and warrior woman — as they appear in their classical and modern manifestations in European and American cultures. P/NP or letter grading.

M107A. American Women Writers, (5) (Same as English M107A.) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H. Survey of literary works by American women writers, with emphasis on roles of women, portrayal of nature and society, and evolution of forms and techniques in writing by American women. P/NP or letter grading.

M107B. British Women Writers, (5) (Same as English M107B.) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Survey of literary works by British women writers, with emphasis on roles of women, portrayal of nature and society, and evolution of forms and techniques in writing by British women. P/NP or letter grading.

M107C. Special Topics in Women and Literature, (5) (Same as English M107C.) Lecture, four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in women and literature, with emphasis on a period, genre, particular theme, or nonnational literary grouping. P/NP or 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.

110A. Feminist Theories in Social Sciences, (4) Lecture/discussion, three hours. Requisite: course 10. Multidisciplinary explorations of theorists' attempts to describe, explain, and critique social institutions, considering impact of race, ethnicity, class, etc. Emphasis on relation of theories to change in law, work, politics, education, economics, family, religion, sexuality, etc. Applications of theories to research questions and methodologies. P/NP or letter grading.

110B. Feminist Theories in the Humanities, (4) Lecture/discussion, three hours. Requisite: course 10. Examination of theoretical positions on gender and women in study of literature and the arts. Analysis of ways in which women and sexuality have been represented in cultural production, considering impact of race, ethnicity, class, etc. Applications of theories to research questions and methodologies. P/NP or letter grading.

M110C. Philosophical Analysis of Issues in Feminist Theory, (4) (Formerly numbered M112) (Same as Philosophy M112.) Lecture, three hours. Requisite for Women's Studies majors: course 10; for other students: one philosophy course. Examination in depth of different theoretical positions on gender and women as they have been applied to study of philosophy. Emphasis on theoretical contributions made by new scholarship on women in philosophy. Critical study of concepts and principles that arise in discussion of women's rights and liberation. Philosophical approach to feminist theories. May be repeated for credit with consent of instructor. Letter grading.

M111. Women and Film, (5) (Same as Film and Television M111.) Lecture, eight hours; discussion, one hour. Historical issues and critical approaches to women and cinema that may include authorship, stardom, female genres, and images of women in Hollywood cinema, alternative cinema, and independent cinema from silent era to the present. Letter grading.
112. Special Topics in Women and the Arts. (4) Lecture, three hours. Requisite: course 10. Selected topics relating feminist theories to creation of art by women, with consideration of cultural contexts in which they work. Approach to be comparative, cross-cultural, and interdisciplinary. Consideration of artistic practice by women in relation to issues of power, representation, and representation politics. May be repeated twice, except for credit toward Women's Studies major. P/NP or letter grading.

M114. Introduction to Lesbian, Gay, Bisexual, and Transgender Studies. (5) Same as Lesbian, Gay, Bisexual, and Transgender Studies M114.) Lecture, three hours; discussion, one hour. Introduction to history, politics, culture, and scientific study of lesbians, gay men, bisexuals, and transgendered people; examination of sexuality and gender as categories for investigation; interdisciplinary theories and research on minority sexualities and genders. P/NP or letter grading.

M115. Topics in Study of Sexual and Gender Orientation. (4) Same as Lesbian, Gay, Bisexual, and Transgender Studies M115.) Lecture/discussion, three hours. Requisite: course 10 or M114. Studies in arts, humanities, social sciences, and/or life sciences on aspects of sexual orientation, gender identity, and lesbian, gay, and/or bisexual issues; variable topics may include cultural representations, historical and political change, and life and health experiences, and queer or transgender theories and cultural and interdisciplinary emphases. May be repeated for credit. Letter grading.


M117. Women and Politics. (4) (Same as Political Science M107.) 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 the 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 the military; women, development, and global politics. P/NP or letter grading.

M118. Queering American History. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M118.) Lecture, four hours. History of sexual and gender minorities in the 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 M104.) Lecture, three hours. German, French, and English versions of Tristan and Isolde story from Middle Ages to 20th century. Particular attention to relation between representation of "heterosexual" love in each text and contemporary ideas about human sexuality. P/NP or letter grading.

120. Internship in Women's Studies. (4) Seminar, three hours; internship, eight hours. Preparation: At least two upper division women's studies courses. Requisites: courses 10, 110A or 110B. Field studies courses combining seminar with field placement. Practical experience in working on women's issues and connecting these experiences to methodological and theoretical themes explored in course 110A or 110B. Letter grading.

M121. Topics in Gender and Disabilities. (4) (Same as Disability Studies M121.) Lecture, three and one-half hours. Emphasis on which issues of disability are affected by gender, with particular attention to various roles, positions, and concerns of women with disabilities. Approach is interdisciplinary, exploring how social categories of class, race, ethnicity, age, sexuality, nationality, and citizenship affect and are affected by gender and disability. Topics may include law (civil rights, nondiscrimination), representation, education, public policy, health. May be repeated for credit with topic and instructor change. P/NP or letter grading.

M124. Psychology of Language and Gender. (4) (Formerly numbered M137U.) (Same as Communication Studies M124.) Examination of current topics at intersection of gender and language. Topics include sex differentiation in language cross-culturally; sex bias in lexicon and usage; sex differences in lexicon, syntax, phonology, and nonverbal behavior; development of sex-differentiated language in children; "women's" and "men's" language in various ethnic/class/sexual preference groups; and concepts of language. P/NP or letter grading.

125. Women and Healthcare in the U.S. (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, economic, and cultural factors affecting women as recipients of healthcare. P/NP or letter grading.

M127. Women in Russian Literature. (4) (Same as Russian M127.) Lecture, three hours. Designed for juniors/seniors. Lectures and readings in English. Introduction to topics of women's writings in Russia and the Soviet Union. Emphasis on images of women expressed in this tradition as compared with those found in narratives of contemporary male writers. P/NP or letter grading.


M131SL. Gender and Sustainability: Local-Global Connections. (5) (Same as Environment M131SL.) Lecture, three hours; service learning, two hours. Introduction to gender and development (GAD) theories, analytical approaches, and applied case studies in context of local-global sustainability and environmental issues, with focus on knowledge, roles, relationships, needs, practices, and strategies of women vis-a-vis men. Examination of gender and sustainability dimensions of food system, including agri-business, community-supported agriculture, farmers' markets and cooperatives, certification, genetically engineered foods, food supplements, food safety, and nutrition, permaculture, and related student-advocated issues. Integration of variety of student-centered learning/teaching with community/community service organization required. P/NP or letter grading.

M132A. Chicana Feminism. (4) (Same as Chicana and Chicano Studies M132A.) Lecture, three hours. Requisite: course 10 or Chicana and Chicano Studies 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 both within Chicana/Chicano community and dominant society. Attention to Anglo-European and Third World women. P/NP or letter grading.

M132B. 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, immigration, reproduction, employment conditions. Comparative analysis with other Latinas. P/NP or letter grading.


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 the present. P/NP or letter grading.

M133A. 800 to 1715; M133B. 1715 to Present.

M133C. History of Prostitution. (4) (Same as History M133C.) Lecture, three hours; discussion, one hour (when scheduled). Descriptive, chronological, and/or biographical treatments of women's experiences as sex workers. History of prostitution from ancient times to the present. Topics include toleration in medieval Europe, impact of syphilis, birth of courtesans, regulation in 18th century Europe, white slavery scare, and contemporary global sex trade. Readings include novels, prima- ry sources, and testimony by sex workers. P/NP or letter grading.


M135C. Bilingual Writing Workshop. (4) (Same as Chicana and Chicano Studies M135C.) Seminar, four hours. Writing sample required on first day of class; access to course Web page mandatory. Need not be bilingual to enroll. Technical instruction, analysis, and theoretical discussion of bilingual creative expression, with focus on specific genre (i.e., autobiography, poetry, fiction). Emphasis on memory, identity, gender, and sexuality. Central theme of bilingualism as politics and aesthetics. Peer critique of weekly writing assignments. Letter grading.

M136. Music and Gender. (5) (Same as Music History M136.) Lecture, four hours; discussion, one hour. Analysis of gender ideologies and musical cultures; representations of gender, the body, and sexuality by both male and female musicians; contributions of women to Western art and popular music; methods in feminist and gay/lesbian theory and criticism. Letter grading.

M137E. Work Behavior of Women and Men. (4) (Same as Psychology M137E.) Lecture, two and one-half hours. 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 interdependence of work and family roles. P/NP or letter grading.
138. 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 in 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. Examination 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 regimes of power. Consideration of debates concerning transformative potential of popular 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 a selected aspect of the situation of women in French literature as author, character, symbol, etc. P/NP or letter grading.

M141. Women's Health and Aging: Policy Issues. (4) (Same as Gerontology M141 and Health Services CM141.) Lecture; three hours; discussion, one hour. Preparation: two upper division social sciences courses, two upper division biological sciences courses. Social and economic context of older women's aging, major physical and psychological changes older women experience, delivery of health services to this population, and policies that respond to their health needs. 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. Study of 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.

M146. Feminist Geography. (4) (Same as Geography M146.) Lecture; three hours; discussion, one hour. Critical engagement of gender as concept of geographic inquiry. Gender as spatial process, analysis of feminist geographic theory and methods, landscapes and gender challenges of representing gender. Spaces of feminism, masculinity, and sexuality. P/NP or letter grading.

M147A. Psychology of Lesbian Experience. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M147A.) Lecture; three hours. Examine psychological aspects of lesbian experience, including gender roles, romantic relationships, family, and legal and social implications. Emphasis on gender, race, and class. Letter grading.

M147B. History of Women in Colonial British America and Early U.S., 1600 to 1860. (4) (Same as History M147B.) Lecture, three hours; discussion, one hour (when scheduled). Requisite for juniors/seniors. Examination of role of women in history of early American women from initial confrontation of English and American Indian cultures in the early 17th century to rise of women's rights movement in the mid-19th century. P/NP or letter grading.

M147C. Transnational Women's Organizing in Americas. (4) (Same as Chicana and Chicano Studies M147C.) Lecture, four hours. Feminist theories of transnational organizing. Examination of gender and race as central to processes of globalization and essential to economic and political struggles encapsulated in transnationalism. Exploration of how questions of race and gender influence global economic policies and impact local actors and their communities. In time when people, capital, cultures, and technologies cross national borders with growing frequency, discussion of process of accelerated globalization has been linked to feminization of labor and migration, environmental degradation, questions of diaspora, sexuality, and cultural displacement, as well as growing global militarization. Problems and issues created by globalization and cultural, social, and political responses envisioned by transnational organizing. P/NP or letter grading.

M147D. History of Women in the U.S., 1860 to 1980. (4) (Same as History M147D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to major themes in history of American women from abolition of slavery and Civil War to rise and consequences of second-wave feminism. P/NP or letter grading.

M148. Women in Higher Education. (4) (Same as Education M148.) Lecture, three hours. Designed for juniors/seniors. Overview of issues related to experience of women in higher education. Topics include curricular transformation, feminist pedagogy, gender equity, women's faculty and leadership roles, and intersection of gender and race. Letter grading.

M149. Media: Gender, Race, Class, and Sexuality. (5) (Same as Communication Studies M149.) Lecture, four hours; activity, one hour. Limited to junior/senior Communication Studies and Women's Studies majors. Examination of manner in which media culture induces people to perceive various dominant and dominated and/or colonized groups of people. Ways in which women, gay, lesbian, bisexual, transgendered, racial, and ethnic marginalized peoples, class relations, and other subaltern or subordinated groups are presented and often misrepresented in media. Examination and employment of practical applications of communications and feminist theories for understanding ideological nature of stereotyping and politics of representation through use of media, guest presentations, lectures, class discussions, and readings. Introduction to theory and practice of cultural studies. Letter grading.


M153. Media and Aggression against Women. (4) (Same as Communication Studies M153.) Lecture, four 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.


M154Q. Gender Systems: Global. (4) (Same as Anthropology M154Q.) Lecture, three hours. Recommended preparation: prior women's studies or anthropology courses. Designed for junior/senior social science majors. Comparative study of gender systems globally from anthropological perspective. Outline of major traditions of Western feminist thought -- gender division of labor, relationship of gender to state, and colonialism and resistance movements. 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 homogeneous whole. Restoration of diversity and contradiction in it by listening to voices of Japanese women in various historical contexts. P/NP or letter grading.

M155Q. Women and Social Movements. (4) (Same as Anthropology M155Q.) Lecture/discussion, three hours. Recommended preparation: prior women's studies or anthropology courses. Comparative studies of social movements (e.g., nationalist, socialist, liberationist), 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. during the 20th century, including women's rebelliions, and body. Examination of dramatic challenges to gender roles over course of the 20th century through actions of rebellious women who led way for myriad social changes in U.S. Offered in summer only. P/NP or letter grading.

M158. Women in Italian Culture. (4) (Same as Italian M158.) Lecture, three hours; discussion, one hour. Examination of role of women in Italian society through history, politics, literature, film, and art. 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. (4) (Same as Sociology M162.) Lecture, three hours; discussion, one hour. Requisite: course 10 or Sociology 1. Examination of processes by which gender is socially constructed. Topics include distinction between biological sex and sociological gender, causes and consequences of gender inequality, and recent changes in gender relations in modern industrial societies. P/NP or letter grading.

M163. Gender and Work. (4) (Same as Sociology M163.) Lecture, three hours. Requisite: course 10 or Sociology 1. Exploration of relationships of gender to work, concentrating on the U.S. experience but also including some comparative material. Particular emphasis on analysis of causes and consequences of job segregation by gender and of wage inequality. P/NP or letter grading.

171B. Afro-American Women in U.S. (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 of Afro-American women as members of society as a whole of their biological and ethnic group. P/NP or letter grading.

171C. Sociology of the Family. (4) (Same as Sociology M173.) Lecture, three hours; discussion, one hour. Topics include: family structure and functions; reproduction; marriage, family, and childhood. P/NP or letter grading.

171D. Women and the Family: Contemporary Issues. (4) (Same as Sociology M173.) Lecture, three hours; discussion, one hour. Topics include: family structure and functions; reproduction; marriage, family, and childhood. P/NP or letter grading.

171E. Women: Gender, Globalization, and Cross-Cultural Comparisons. (4) Lecture, four hours. Study of various methods of violence done on women not only in and of themselves but in light of larger systems of oppression, with focus on Filipino, Vietnamese, Singapore, and South Asian cultures. Letter grading.

171F. Psychology of Gender. (4) (Same as Psychology M175.) Lecture, three hours. Consideration of psychological literature relevant to understanding contemporary sex differences. Topics include sex-role development and role conflict, physiological and personality differences between men and women, sex differences in intellectual abilities and achievement, and impact of gender on social interaction. P/NP or letter grading.

171G. Women in Socialist and Post-Socialist Societies. (4) (Same as Sociology M176.) Lecture, three hours; discussion. Exploration of historical and current vantage point of women in socialist and post-socialist states. Although transition from socialism occurs differently, gender differences are everywhere central to democratization or a market economy. Discussion of ways in which state policies affect women. Letter grading.

171H. Contested Sexualities. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M177.) Lecture, three hours; discussion, one hour. Sociopolitical concepts of 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.

171I. Feminist Economics in Globalizing World. (4) Lecture, four hours. Preparation: satisfaction of Writing Proficiency 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 as gender division of labor in paid and unpaid work, patterns of employment and unemployment, and wage gaps between men and women in different world economy regions; feminist perspectives on economics; and theoretical debates within gender and development field on topics such as structural adjustment, feminization of labor force, and poverty; examination of efforts and proposals by governments, international policy-making institutions, and civil society organizations to make economic policies and structures gender-equitable. P/NP or letter grading.

171J. Alternate Traditions: In Search of Female Voices in Contemporary Literature. (5) (Same as Comparative Literature CM170.) Seminar, three hours. Designed for upper division literature majors. Investigation of selected texts by contemporary French, German, English, American, Spanish American, African, Asian, and African American women writers from cross-cultural perspective. Common themes, problems, and techniques are explored. Concurrently scheduled with course CM270. Undergraduate students read all works in translation. P/NP or letter grading.

171K. History of Women in China, A.D. 1000 to the Present. (4) (Same as History M170C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics include women and family, women in Confucian ideology, women in literati culture, feminist movement, and women and communist revolution. P/NP or letter grading.

171L. Critical Media Literacy and Politics of Gender: Theory and Production. (4) (Same as Education CM178.) Seminar, three hours. Corequisite: course CM178L. Methodological 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 analysis of media and critical media literacy projects. Concurrently scheduled with course CM278. Letter grading.

171M. Critical Media Literacy and Politics of Gender: Laboratory. (2) (Same as Education CM178L.) Laboratory, two hours. Corequisite: course CM178. Hands-on production experience as integral component of course CM178. Concurrently scheduled with course CM278L. Letter grading.

180B. Historical Perspectives on Gender and Science. (4) (Same as History M180B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historical cases illustrating how gender enters practices and concepts of science. Topics include gendered conceptions of nature, persona of “man of science,” role of women in scientific revolution, scientific investigations of women and feminine. P/NP or letter grading.

185. Special Topics in Women’s Studies. (4) Lecture, three hours. Preparation: one prior women’s studies course. Designed for juniors/seniors. Specialized or advanced study in one area within women’s studies. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.

189. Women’s Studies Research Seminar. (4-4) Tutorial, eight hours. Preparation: at least two upper division women’s studies courses or consent of instructor. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Content may include themes in feminist discourse, application of feminist theoretical perspectives to disciplinary field, or emerging issues. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. Letter grading.

195A-198B. Honors Research in Women’s Studies. (2 or 4) Tutorial, to be arranged. Preparation: at least two upper division women’s studies courses, minimum 3.0 grade-point average. Requisite: course 110A or 110B or M110C. Limited to junior/senior Women’s Studies majors or minors. Undergraduate students who have completed upper division research under guidance of faculty mentor on specific topic within women’s studies. Culminating paper or project required. May be repeated for credit. Individual contract required. 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 women's studies. Requisites: courses 201, 202. Topics in advanced critique of social research methods, models of inclusion of women in research and theory, nonsexist research methods from conception through interpretation, what constitutes "feminist" research, inclusiveness and attention to diversity issues, appropriate frameworks in comparative research, supplements disciplinary offerings on research methods. Letter 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 presents 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 networks and community; impact of Internet and information technologies on women and men and gendered distinctions between who builds and who "owns" information technology resources; race, class, gender, cyberspace and electronic communications. Letter grading.

210. Topics in Women and Public Policy. (4) Lecture, four hours. Designed for graduate women's 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 policy issues, science, medicine, workplace studies, and social welfare. May be repeated for credit with topic or instructor change. Letter grading.

215. Topics in Study of Sexuality and Gender. (4) Seminar, three to four hours. Designed for graduate students in multisciplinary courses 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.


M252. Selected Topics in Sociology of Gender. (4) (Same as Sociology M252.) Lecture, two hours; discussion, four hours. Recent "antifeminist" feminists. 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, Freud, Marcuse, 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 and essentialist categories of gender possible or is gender too different cross-culturally? S/U or letter grading.

M259A-M259B. History of Women. (4-4) (Same as History M259A-M259B.) Seminar, 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 include: gendered conceptions of musicality, (de)codification 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, idealized systems, and social inequality. Selection of 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 last quarter century have both challenged and strengthened conventional social sciences theories and their methodological prescriptions. Introduction especially to feminist standpoint theory, distinctive critical theories, methodology now widely used in social sciences. Letter grading.

CM270. Alternate Traditions: In Search of Female Voices in Contemporary Literature. (5) (Same as Comparative Literature M270.) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Investigation of narrative texts by contemporary French, German, English, American, Spanish, African, and Asian women writers from cross-cultural perspective. Common themes, problems, and techniques. May be concurrently scheduled with course CM170. Graduate students required to prepare papers based on texts read in original languages whenever possible. S/U or letter grading.

CM278. Critical Media Literacy and Politics of Gender: Theory and Production. (4) (Same as Education M278.) Lecture, three hours. Preparation: course CM278L. Use of range of pedagogical approaches to theory and practice of critical media literacy that necessarily involves understanding of new technologies and new 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 M278L.) Lecture, three hours. Corequisite: course CM278. Hands-on production experience as integral component of course CM278. Concurrently scheduled with course CM178L. Letter grading.

285. Special Topics in Women's Studies. (4) Lecture/discussion, four hours. Designed for graduate students. Selected topics or special problems. In-depth study of aspects of feminist theory or research methods or gender analysis within disciplinary studies in social sciences, humanities, health sciences, arts, or professional programs. May be repeated for credit with topic or instructor change. Letter grading.

296. Doctoral Roundtable. (2) Research group meeting, two hours. Preparation: satisfactory completion of Ph.D. program first year. Requisites: at least two courses from 201, 202, 203, 210. Limited to program Ph.D. students. Interactive seminar with focus on disciplinary and interdisciplinary issues, feminist scholarship, research presentation, and professional development. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Requisite: corequisite: course 495. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Feminist Pedagogy. (2) Seminar, two hours. Preparation: appointment as teaching assistant in department. Introduction to feminist methods of teaching, with emphasis on reciprocity and dialogue and de-emphasis on hierarchy. Required of students while serving as teaching assistants (first time only) in undergraduate women's studies courses. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. Requisites: courses 201, 202, 203. Directed individual research and study in area related to women's studies/gender studies, arranged individually by student and 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 women's studies students. Reading and preparation for written M.A. comprehensive examination or Ph.D. qualifying field examinations. May be repeated for a maximum of 12 units. S/U grading.


**World Arts and Cultures / 611**

**World Arts and Cultures School of the Arts and Architecture**

UCLA
150 Kaufman Hall
Box 951608
Los Angeles, CA 90095-1608

(310) 825-3951
fax: (310) 825-7507
e-mail: wacinfo@arts.ucla.edu
http://www.wac.ucla.edu

Kathleen L. Komar, Ph.D., Co-Chair
Angelia S.-Y. Leung, M.A., C.M.A., Co-Chair
The department is an interdisciplinary unit that brings together artists, scholars, and ethnographers, the academic discipline.

Guided by an interdisciplinary faculty of artists, arts scholars, and ethnographers, the academic programs in the Department of World Arts and Cultures (WAC) are organized around three fundamental missions: (1) the formulation of critical and intercultural insights into the nature of human creativity, (2) the creation 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'être in a set of intellectual and artistic problems rather than an established academic discipline.

The undergraduate program offers concentrations in dance and in world arts and cultures. The graduate program offers Master of Arts and Ph.D. degrees in Culture and Performance and a Master of Fine Arts in Dance. One set of degrees encompasses research on communities, cultures, and transnational movements, including arts traditions and innovations, arts activism, and interdisciplinary art-making. Another set of degrees provides dance education with a difference, offering opportunities to engage multiple dance practices, intercultural dance studies, civic engagement, and choreographic research. While operating with considerable independence, these degree streams are unified by a common concern for cultural identity and differences, the meanings of tradition in contemporary societies, the forging of connections between critical theory and artistic practices, and the changing social roles and responsibilities of artists and scholars of the arts in the U.S. and worldwide.

Students in the World Arts and Cultures Department at UCLA study with faculty members of international standing engaged in both creative artistic work and research. Potential careers for graduates include work with community nonprofits and activist groups, government arts agencies, museums, and teaching/educational institutions. Many students pursue dance as choreographers or dancers, while others work in performance art, videography, and theatrical production. Urban planning, law, environmental activism, public health, and medicine are among the many fields in which graduates have excelled.

Undergraduate Study

World Arts and Cultures

B.A.

The World Arts and Cultures major leads to the Bachelor of Arts degree and is designed to offer choice and flexibility while maintaining balance and rigor. At the outset, students select one of two concentrations: dance or world arts and cultures. All students complete a set of core courses, which includes two concentrations: dance or world arts and cultures. Students may also consider courses from ethnic and area studies programs and may organize their course of study in relation to particular interests or professional goals (e.g., international comparative studies, intercultural studies, area specializations such as Africa, Asia, or Latin America, minority discourse, gender or women's studies).

Students who wish to confer with the departmental student affairs officer regarding program planning and major requirements should contact Wendy Temple at (310) 825-8537.

Admission

New students are admitted to the major for Fall Quarter only. All applicants are reviewed individually, based on submission of a written research paper, transcripts, two letters of recommendation, and two personal essays. These supplementary materials are requested from students in mid-December, after the general UC application is received and processed, and are due back in the department in January. For freshman applicants, college placement test scores are also considered. Students interested in the dance concentration must participate in an early February audition. Specifics about the audition are included in the e-mail requesting the above-mentioned supplementary materials.

Current UCLA students who petition to change their major are required to meet with the student affairs officer prior to application. They are advised to take world arts and cultures courses before and during the term in which they apply to the program. They must have a minimum 2.0 overall grade-point average and no more than 120 quarter units. Students interested in the world arts and cultures concentration may apply at the beginning of Fall, Winter, and Spring Quarters. Those interested in the dance concentration may apply at the beginning of Fall and Spring Quarters and are expected to participate in an audition.

Dance Concentration

The concentration consists of 111 units of coursework.
Preparation for the Major
Required: World Arts and Cultures 1, 2A, 2B or 47, 16, 45, 67A, 67B, 70, 85, and 12 units in movement practice electives selected from courses 5 through 15 or 55 through 65.

The Major
Required: (1) World Arts and Cultures 185; (2) 16 units in performance/production practices, including 12 units from courses C106A through C115 (two different styles required) and 4 units from 169, 171, 172, 174A, 174B, or other department courses with faculty approval; and (3) 38 units combined from the following three clusters: (a) topics in dance studies — course 101 and 8 units from C145 through C168 or 199 or from outside the department with faculty approval, (b) creative inquiry/research — courses 117A, 117B, and 4 units from 116, 117C, 174A, 174B, or C180, or from outside the department with faculty approval, and (c) civic engagement — course 100A or 100B or 103 and 8 units from 100A, 100B, 103, 144, 166, 167, 177SL, or from outside the department with faculty approval. Students then select 12 additional focus units from one of the three clusters. They also have the option to complete a capstone senior project (courses 186A and 186B).

World Arts and Cultures Concentration
The concentration consists of 107 units of coursework.

Preparation for the Major
Required: World Arts and Cultures 1, 2A, 2B, 20, 21, 22 or 24, 70, 85, and 8 units in world arts practice electives selected from courses 5 through 16 or 55 through 67B (4 units must be taken within the department); 4 units may be from outside the department).

The Major
Required: (1) World Arts and Cultures 100A or 100B, 101, 103, 185, 186A, 186B; (2) 8 units in locating cultures in which students select a geographical/cultural focus from either inside or outside the department with faculty approval; (3) 4 units in arts/activism/community engagement selected from course M125A, 144, 166, 167, C168, 174A, 174B, C175, or 177SL; and (4) 28 units from one of three commitment areas — studies in culture and performance, interdisciplinary/intercultural creative work, or integrated studies — selected from approved course lists (see department counselor), in which 16 units must be taken within the department and 12 units may be inside or outside the department.

Senior Honors Project
World Arts and Cultures 186A and 186B lead to a senior honors project that has three possible areas of focus — performance, applied research, or studies in culture and performance: (1) the performance project is a creative project leading to the production and public performance of original or traditional work; (2) the applied research focus implies an application of knowledge in a hands-on situation and includes projects in and with the community or campus; and (3) the culture and performance focus involves students in independent ethnographic research in some aspect of the arts.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnets.ucla.edu/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 World Arts and Cultures offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Culture and Performance and a Master of Fine Arts (M.F.A.) degree in Dance.

World Arts and Cultures

Lower Division Courses
1. Introduction to World Arts and Cultures. (5) Lecture, three hours; discussion, one hour. Survey of concepts and theories involved in intercultural, interdisciplinary study of art, aesthetics, and performance. Examination of interactions among various modes of creative expression, role of style in daily life, performative representation of cultural identity and difference, and interaction of diverse artistic traditions. Letter grading.

2A. Lower Division Seminar: Practice-Based Research. (5) Formerly numbered 2.) Seminar, two hours; studio, two hours; outside study, 11 hours. Variable topics seminar with focus on practice-based research in arts. Skills may include development of dance/theatrical performance, video/filmic creation, interdisciplinary art-making, text-based creation of work, and more. In-depth investigative experience to understand practice-based research process from conception to presentation. Research inquiry methods may include readings and assigned written analysis, supervised fieldwork, research question, and practice-oriented processes. Substantial prac- tice-based culminating project required. May be repeated for credit without limitation. Letter grading.

2B. Lower Division Seminar: Writing-Based Research. (5) Seminar, four hours; outside study, 11 units. Variable topics seminar with focus on scholarly research in arts. Study of culture and performance, including individual and cultural identity through arts, arts criticism, theoretical and analytical approaches to arts practice, and arts activism. Substantial culminating research paper required. May be repeated for credit. Letter grading.

5. Beginning Global and Transcultural Forms. (2) Studio, three hours. Beginning-level study of world arts practices crossing national and cultural boundaries. Variable topics, such as body music, crosscultural textile creation, or mural painting, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

6. Beginning World Arts Practices in Sub-Saharan Africa and Diaspora. (2) Studio, three hours. Beginning-level study of world arts practices originating from sub-Saharan Africa and extending to cultures of African diaspora, including Brazil and the Afro-Caribbean. Variable topics, such as dance of Guinea, Mali, and Senegal or Afro-Caribbean masking traditions, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

7. Beginning World Arts Practices in Middle East/ North Africa and Diaspora. (2) Studio, three hours. Beginning-level study of world arts practices originating from the Middle East and North Africa. Variable topics, such as belly dancing or Israeli folk dance, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

8. Beginning World Arts Practices in Latin America and Diaspora. (2) 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 folkloric dances, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

9. Beginning World Arts Practices in North America and Diaspora. (2) Studio, three hours. Beginning-level study of world arts practices originating from North America, including the U.S., Canada, and Native America. Variable topics, such as Native American dance, jazz, and jazz-tap, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

10. Beginning World Arts Practices in East Asia and Diaspora. (2) Studio, three hours. Beginning-level study of world arts practices originating from East Asia, including China, Korea, and Japan. Variable topics, such as movement and music techniques of Beijing opera, Korean maskmaking and performance practices, and Kabuki theater, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

11. Beginning World Arts Practices in South Asia and Diaspora. (2) Studio, three hours. Beginning-level study of world arts practices originating from South Asia and extending to 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.

12. Beginning World Arts Practices in Southeast Asia and Diaspora. (2) Studio, three hours. Beginning-level study of world arts practices originating from Southeast Asia. Variable topics, such as Cambodian court dance, Indonesian kechak, or Balinese legong, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

13. Beginning World Arts Practices in Europe and Diaspora. (2) Studio, three hours. Beginning-level study of world arts practices originating from Europe and extending to cultures of European diaspora, including the U.S. Variable topics, such as flamenco, Balkan folk dances, and classical ballet, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

15. Beginning Modern/Postmodern Dance. (2) Laboratory, four hours. Study of dance technique. Critical viewing, reading, and discussion of modern/postmodern dance artists’ works. May be repeated twice for credit. P/NP or letter grading.

16. Beginning Improvisation in Dance. (2) Lecture, one hour; laboratory, three hours. Introduction to creative exploration in movement through improvisational and compositional exercises that access and develop imagination, find relationship between imagination and dance making, and enrich movement vocabulary. May be repeated once for credit. P/NP or letter grading.

20. Culture: Introduction. (5) Lecture, four hours. Introduction to key concepts and major theoretical and methodological debates that characterize field of cultural studies, including discussion of notions of culture, popular culture, subculture, youth culture, hegemony, gender, race, class, and national identity. Letter grading.
21. Introduction to Field-Based Research. (5) Lecture, three hours. Introduction to methods, techniques, and issues in conducting field-based research, including nature, use, and limitations of data gathering; ethical concerns, sampling, checks and controls, teamwork, interventions, and results as not only tangible and impersonal outcomes of inquiry but also personal and tangible. Through readings, discussion, and hands-on exercises, students learn how to plan fieldwork projects and write project reports and deals with ethical issues, observe behavior, construct questionnaires, interview, use audiovisual documentation, and manage and present data. P/NP or letter grading.

22. Introduction to American Folklore Studies. (5) Lecture, four hours; outside study, three hours. Introduction to American folklore and its study. P/NP or letter grading.

M23. Introduction to American Indian Studies. (5) (Same as American Indian Studies M10.) Lecture, three hours; discussion, one hour. Introduction to American Indian cultures. P/NP or letter grading.

24. World Arts, Local Lives. (5) Lecture, three hours; discussion, one hour. Use of Fowler Museum’s long-term “Intersections: World Arts/Local Lives” as object of study to examine many insights that arts can offer into social, political, and religious experience. Drawing heavily on cultures of Africa, Asia, Pacific, and indigenous Americas, both ancient and contemporary, consideration of degree to which notions of aesthetics and efficacy are intertwined and how they influence people’s lives in active, instrumental ways. Use of specific case studies to illustrate and interrogate theoretical paradigms. P/NP or letter grading.

45. Introduction to Dance Studies. (4) Lecture, three hours. Introduction to discipline of dance studies, with focus on study of corporeality as key contemporary perspective on the body. Multidisciplinary approach to dance bodies conceptualized as social constructs, including gender, race, class, and national identity. P/NP or letter grading.

46. Survey of Dancing in Selected Cultures. (2) Studio, three hours. Survey of selected dance forms from African, Native American, and Diaspora. (2) Studio, three hours. Intermediate-level study of world arts practices originating from Middle East and North Africa. May be repeated for credit without limitation. P/NP or letter grading.

47. World Dance Histories. (5) Seminar, four hours; outside study, six hours. Comparative framework for looking at dance practices through time as they have developed around world, questioning relation of dance to culture and politics and providing students with tools for investigating histories of any given dance form. P/NP or letter grading.

48. Survey of World Folk Dance. (2) Lecture, three hours. Survey of world folk dance from Africa and Asia and Diaspora. (2) Studio, three hours. Intermediate-level study of world arts practices originating from Middle East and North Africa. Vari- able 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.

49. Intermediate World Arts Practices in Latin America and Diaspora. (2) Studio, three hours; discussion, three hours. Intermediate-level study of world arts practices originating from Latin America, including cultures of Mexico and Latin America. Variable topics, such as Argentine tango and Mexican folkloric dances, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

50. Intermediate World Arts Practices in North America and Diaspora. (2) Studio, three hours. Intermediate-level study of world arts practices originating from North America, including the 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.

51. Intermediate World Arts Practices in Asia and Diaspora. (2) Studio, three hours; discussion, three hours. Intermediate-level study of world arts practices originating from East Asia, including China, Korea, Japan, and Southeast Asia. Lecture and music techniques of Beijing Opera, Korean shamanic movement practices, Kabuki theater, or Tai Chi, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

52. Intermediate World Arts Practices in South Asia and Diaspora. (2) 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.

53. Intermediate World Arts Practices in South- east Asia and Diaspora. (2) Studio, three hours. Intermediate-level study of world arts practices originating from Southeast Asia. Variable topics, such as Cambodian court dance, Indonesian kechak, or Bali- nese legong, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

54. Intermediate World Arts Practices in Europe and Diaspora. (2) Studio, three hours. Intermediate-level study of world arts practices originating from Europe and extending to cultures of European diasporas, including the U.S. Variable topics, such as flamenco, Baltic folk dances, and classical ballet, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

55. Intermediate Modern/Postmodern Dance. (2) Studio, four hours. Technical training with emphasis on increasing skill. May be repeated twice for credit. P/NP or letter grading.

47A. Theories and Methods in Dance Composition I: Languages. (4) (Formerly numbered 67.) Seminar, two hours; studio, two hours; outside study, eight hours. Enforced requisite; 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 select or create movement out of which they create dance? Answers to these questions in relation to broader social issues and the understanding that dance-making occurs distinctively 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 69.) Seminar, two hours; studio, two hours; outside study, eight hours. Enforced requisite; course 67. 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 distinctively in different cultural contexts and different historical moments. Readings about and viewing of videos of selected artists’ work and their different strategies for their processes of creating dances for comparison. Use of these analyses to assist in creative process for making new dances. P/NP or letter grading.

70. Production Practicum. (2) Lecture, 90 minutes; activity, three and one half hours. Introduction to practical perspectives on producing events in world arts and cultures, including but not limited to theatrical support and planning and executing lecture series. Introduction to professional stage production principles and hands-on experience in technical theater. May be repeated once for credit. 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.

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 a whole. P/NP grading.

Upper Division Courses

100A. Art as Social Action. (5) Lecture, four hours; discussion, one hour. Discussion of what constitutes artist's social responsibility and in what ways art is engaged to influence society in general and artists in particular. Movements that demand broader base of cultural literacy for artists and public in general. P/NP or letter grading.

100B. Art as Moral Action. (5) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. One's ability to distinguish between right and wrong action is culturally instilled, nurtured, and developed. Study of cultural strategies of moral engagement, persuasion, and inquiry in personal and public life, including acts of conscience and civil disobedience. P/NP or letter grading.

101. Theories of Performance. (5) Lecture, four hours; studio, two hours. Requisite: course 85. Performance common relates to activities on professional stage. Expansion of that narrow notion of performance by delving into scholarship from young field of performance studies, which draws on disciplines of anthropology, cultural studies, gender studies, linguistics, postcolonial theory, and sociology. Exploration in studio of concept of performing theory by creating interdisciplinary performance works that engage with and amplify theories studied. P/NP or letter grading.

102. Seminar: Intercultural and Interdisciplinary Performance. (4) Seminar, four hours. Enforced requisite; course 85. Recent discussions of multiculturalism have demanded 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 in cultural and historical context. Knowledge that dance-making occurs distinctively 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.
103. Arts in Community. (5) Lecture, four hours. Requisite: course 85. Introduction to theoretical and practical understanding of field of community arts by and for multiple publics. Review of relevant issues in field and exploration of roles of artists and arts organizations in struggles for social change, representation, and community building. Through national and international examples, exploration of art works that emphasize participation of citizens in community-based and culturally relevant performance, art, and exhibition. Examination of processes of creative thinking, community involvement, collaborative enterprise, research, and education in community arts. Letter grading.

C106A. Advanced World Arts Practices in Sub-Saharan Africa and Diaspora. (2) 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 C406A. P/NP or letter grading.

C109A. Advanced World Arts Practices in North America and its Cultures. (4) Lecture, six hours. Requisite: course 65. Studies in outside study, three hours. Advanced-level study of world arts practices originating from North America, including the U.S., Canada, and Native America. Variable topics, such as Native American dance, jazz, and jazz-tap, in cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C409A. P/NP or letter grading.

110B. Dance in East Asia. (4) Lecture, four hours. Survey of dance forms 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.


C113A. Advanced World Arts Practices in Europe and Diaspora. (2) 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 the U.S. Variable topics, such as flamenco, Balkan folk dances, and classical ballet, in cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C413A. P/NP or letter grading.

114. Performance Practicum. (1 to 4) Studio, three to 12 hours. Rehearsal and performance in selected community-based or theatrical work. May be repeated for credit without limitation. P/NP grading.

C115. Advanced Modern/Postmodern Dance. (2) Studio, four hours. Requisite: course 65. In-depth study of advanced modern/postmodern dance technique, with emphasis on performing skills. May be repeated for credit without limitation. Concurrently scheduled with course C415. P/NP or letter grading.

116. Advanced Improvisation in Dance. (2) 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 I: Locations. (4) Seminar, two hours; studio, two hours; outside study, eight hours. Enforced requisites: courses 16, 67A, 67B. Examination of how location of dancing impacts its meaning. How does occasion of dance, concert, festival, ritual, or celebration influence experience of it? What are factors that need to be 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 distinctively in different cultural contexts and different historical moments. Examination of range of locations for dances, including proscenium stages, theaters in round, parks, sidewalks, temples, amphitheatres, 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) Seminar, two hours; studio, two hours; outside study, eight hours. Enforced requisite: course 117A. Examination of relation of dance to its audience. Synthesis of analyses undertaken in previous terms to determine how dances move their viewers. How do dances appeal to or address their audiences? How, in their context, do dances locate and location combine to create particular effects? Answers to these questions in relation to broad range of artistic approaches, acknowledging that dance-making occurs distinctively in different cultural contexts and different historical moments. Different approaches to dance result in highly distinctive kinds of responses from audiences. Focus on creation of three in-depth studies, each of which endeavors to construct distinctive kind of response from viewers. P/NP or letter grading.

117C. Advanced Topics in Choreography. (4) Formerly numbered 117T.) Lecture, four hours; studio, two hours; outside study, six hours. Directed exploration in composition, with focus on developing theme-based choreographic works that are informed by theoretical engagement with selected topics through lectures, readings, and discussion. Thematic topics include contemporary issues and concerns such as image, essence, and abstraction; home, history, and memory; interculturalism; constructing identity. May be repeated for credit without limitation. P/NP or letter grading.

118. Advanced Interdisciplinary Composition. (4) Lecture, four hours; studio, two hours. Requisites: course 117A or 117B. Advanced study of 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) Lecture, four hours; studio, two hours. Requisites: courses 16 and 67 or 69. 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 discussion. May be repeated for credit without limitation. P/NP or letter grading.

120. Selected Topics in Cultural Studies. (4) Lecture, three hours. Designed for juniors/seniors. Selection of topics in interdisciplinary study of arts and performance in cultural and historical context. Consent Schedule of Classes for topics to be offered in specific term. May be repeated for credit without limitation. P/NP or letter grading.

121. Ethnography of Performance. (4) Lecture, two hours; discussion, two hours; outside study, eight hours. Development of observation and recording skills for study of performance events, including both analysis of and performance of ethno-ethnographies and training in and application of field research methodologies. P/NP or letter grading.

122. Introduction to Folklife. (4) Lecture, four hours. Survey of various forms of folklife and approaches to their identification, description, and analysis, including their historical and social significance. Introduction to expressive behavior of folk groups from throughout world and comparison through readings, lectures, film, and fieldwork, with attention to artifacts and processes employed in relation to evolving popular culture. P/NP or letter grading.

C123. Arts of Identity: Survey of Expressive Cultures. (4) Lecture, four hours; outside study, eight hours. Concurrently scheduled with course C223. 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. Corequisite: course M125AL. Investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. P/NP or letter grading.

M125B. Beyond Mexican Mural: Advanced Mural. Muralism and Community Laboratory. (4-2-2) (Same as Art M186AL-M186BL-M186CL and Chicana and Chicano Studies M186AL-M186BL-M186CL.) Course M125AL is requisite to M125BL, which is requisite to M125CL. Mural and Digital Laboratory is art studio housed at Social and Public Art Resource Center in Venice, CA, where students work in community-based study of art, and work with community participants. Corequisite: course M125BL. M125CL. Advanced, Laboratory, two hours. Corequisite: course M125C.

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. Corequisite: course M125BL. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through states of production to full scale and community approval. P/NP or letter grading.

M125C. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) (Same as Art M186C and Chicana and Chicano Studies M186C.) Studio/lecture, six hours. Requisites: courses M125B, M125CL. Corequisite: course M125CCL. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through installation, documentation, and dedication, with work on more advanced independent projects. P/NP or letter grading.
M126. Where Monument Where: Course on Public Art. (4) (Same as Art M185 and Chicana and Chicano Studies M185.) Lecture, four hours. Recommended corequisites: courses M125A or M125B or M125C. Examination of public monuments in U.S. as basis for cultural insight and critique of American values from perspective of artist. Use of urban Los Angeles as textbook in urban space issues such as who is “public,” what is “public space” at end of 20th century, what defines neighborhoods, and do different ethnic populations use public space differently. P/NP or letter grading.

M128. Chicana Art and Artists. (4) (Same as Art M184 and Chicana and Chicano Studies M175.) Lecture, four hours. Introduction to Chicana art and artists. Examination of Chicana artists and their use of symbols in reflecting the dynamics of Chicana identity, with focus on Chicana involvement in Chicana art movements. Concurrently scheduled with course C229. P/NP or letter grading.

C132. Food Customs and Symbolism. (4) Lecture, three hours. Designed for juniors/seniors. Introduction to foodways, with particular attention to customs and symbolism in America. Topics include sensory realm, food as social glue, and cultural integration of food into daily life. Concurrently scheduled with course C241. P/NP or letter grading.

M130. Space and Place. (4) (Same as Architecture and Urban Design M130.) Lecture, four hours. Inquiry into various ways of human interaction in the built environment. Emphasis on issues of spatial relationships and human activity. Use of American festivals as a way to examine the role of space in American culture. Concurrently scheduled with course C241. P/NP or letter grading.

C141. Carnival and Festivity. (4) Lecture, three hours; fieldwork, one hour. Study of traditional calendrical, religious, and local festivals and related events in their cultural and historical contexts, with emphasis on American festival occasions and their Old World antecedents. Topics include carnival and carnavalization in their cultural and historical contexts, with emphasis on how carnivalesque genres are adopted and adapted by diverse cultural communities. Concurrently scheduled with course C242. P/NP or letter grading.

C142. Myth, Magic, and Mind. (4) Lecture, four hours; outside study, eight hours. Designed for juniors/seniors. Study of myth, magic, and mind. Exploration of psychological functions served by various cultural expressions, such as trance, visions, altered states of consciousness, and shamanic healing, with particular attention to indigenous societies. Concurrently scheduled with course C229. P/NP or letter grading.

M143A. Introduction to Museology: Museum Collections and Administration. (5) Lecture, six hours. Introduction to the history and functions of museums, tracing development to present. Collection, organization, management, and conservation of objects and legal and ethical issues surrounding these practices. P/NP or letter grading.


M143C. Introduction to Museology: Selected Topics. (4) Discussion, six hours; individual study, six hours. Requisites: courses 143A, 143B. Students pursue projects in area of museum operations, working with museum staff and directors to produce papers on contemporary issues in museums. For example, students may work as curators or directors to examine cultural property issues as they pertain to contemporary museums, following suggested reading list. P/NP or letter grading.

M144. Make Art/Stop AIDS. (5) Lecture, four hours; studio, two hours. Can art save lives? That is central question posed here in relation to global AIDS epidemic. Working in close connection with public health and epidemiology, exploration of arts as powerful and effective tool in AIDS prevention and treatment efforts. Review of literature of AIDS cultural analysis that emerged in late 1980s in the U.S. and application of that literature to international hot spots such as India, China, South Africa, and Brazil. Collaborative theory-in-action projects. P/NP or letter grading.

C145. Selected Topics in Dance Studies. (2 to 4) Lecture, four hours; outside 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 without limitation. Concurrently scheduled with course C245. P/NP or letter grading.

C146. Politics of Performance. (4) Seminar, four hours; outside study, eight hours. Designed for juniors/seniors. An exploration of how artistic and intellectual activities have been mobilized as political tools for social change. Course will examine various artistic and intellectual movements as a means of political change and the social context in which they have emerged.

C147. Arts and Healing. (4) Lecture, four hours. Interdisciplinary, contemporary arts-based model of healing applicable to persons leading Western modern 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 catastrophes that evoke great terror and trigger fears of annihilation and chaos, but if successfully negotiated, have potential to promote revitalized sense of self, greater compassion for others, and restored sense of trust and hope in humanity. Concurrently scheduled with course C247. P/NP or letter grading.

C148. Dance as Healing and Therapy. (4) Lecture, two hours; laboratory, two hours; outside study/see-saw, eight hours. Designed for juniors/seniors. In an introduction to historical, theoretical, methodological, and ethical considerations involved in practice of dance as healing and therapy. Concurrently scheduled with course C248. Letter grading.

149. Dance in the Multicultural U.S. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Designed for juniors/seniors. Study of dance performance in the U.S., with emphasis on genres that can be viewed in multicultural Los Angeles, from concert modern/postmodern dance, Mexican folklórico, and Japanese butoh to popular idioms and video dance. Attention to genres from Native America, Asia, Oceania, and Africa. Student projects involve creation of in-class performances. P/NP or letter grading.

150. History of Dance in Culture and Performance. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Study of dance in historical and cultural context, its function in society and its relationship to contemporary artistic expression. Focus on topics from traditional and recent research in world dance. P/NP or letter grading.

152. History and Theory of Modern/Postmodern Dance. (4) Lecture, four hours; studio, two hours; outside study, six hours. In this course, students will examine the history and theory of modern/postmodern dance. We will look at the development of modern dance in the 20th century, contemporary developments, and the influence of various cultural and artistic movements. We will also explore the impact of modern/postmodern dance on contemporary dance practice. P/NP or letter grading.

154. Dance and Folklore. (4) Lecture, four hours. Consideration of vernacular tradition as site for cultural configuration, social construction, representation, and display of national, ethnic, and other affiliation identities. Emphasis on various European and European-American dance idioms. Concurrently scheduled with course C255. P/NP or letter grading.

155. Self and Culture. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. This course examines the role of self and culture in the construction of identity. We will explore the ways in which individuals use symbols and narratives to construct a sense of self and how these constructions are shaped by cultural and historical contexts. P/NP or letter grading.
156. Frida Kahlo: Creation of Cultural Icon. (5) Formerly numbered 26.) 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 significant attachments influenced her work; (4) way her significant attachments influenced her work; (5) conversion of Kahlo’s image after her death into cultural icon by culturally disenfranchised groups, and (6) psycho-social conditions and processes that tend to promote creation of cultural icons. Concurrently scheduled with course C256. P/NP or letter grading.


159. Movement Theories. (2) Lecture, two hours; laboratory, two hours. Study of motor coordination patterns as related to expressive movement features for dance performance. Personalized attention and use of video to increase students’ stylistic diversity. Development of movement efficiency for prevention of dance injuries. May be repeated twice. P/NP or letter grading.

160. Topics in Body Mechanics. (4) Lecture, three hours; studio, one hour. Designed for juniors/seniors. Variable topics course with discussion of injury prevention, anatomy for dancers, and study of biological and physical principles of human movement as related to dance. May be repeated for credit without limitation. P/NP or letter grading.

161. Movement Observation and Analysis. (4) Lecture, two hours; laboratory, two hours. Designed for juniors/seniors. 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.

164. Public Writing in the Arts. (4) Lecture, four hours; outside study, eight hours. Survey of journalistic approaches to writing about the arts, with eye to toward shaping writing practices and putting that critique into practice. Exploration of new modes of (and venues for) writing that rebalance power relationships and comparative and critical approaches to visual study of culture, community, and arts. P/NP or letter grading.

166. Dance as Culture in Education. (4) Lecture, three hours; laboratory, one hour. Study of the culture, community, and arts. P/NP or letter grading.

167. Lighting Design for Dance Theater. (4) Lecture, four hours; laboratory, two hours. Lighting for dance: examination of aesthetics, principles, and technical elements. Application to selected choreographies to be publicly performed. P/NP or letter grading.

170. Advanced Production. (1) Laboratory, three hours; studio, one hour. Production of new aesthetic work and application of technical and administrative support practices in producing events in world arts and cultures, including but not limited to theatrical support and planning and production functions. May be repeated for credit without limitation. P/NP grading.

171. Costume and Scenic Design Concepts for Dance Theater. (4) Lecture, four hours. Study of the theory for conceptualizing dance performance environments, communication through visual elements, artistic properties of costume and sets, and procedures for producing dance costumes and sets in order to facilitate choreographer/designer communication. P/NP or letter grading.

173. Sound Resources for Performance. (4) Lecture, three hours; studio, one hour; outside study, eight hours. Designed for juniors/seniors. Exploration of musical concepts, communication, and applications. Fundamentals of musical notation, performance, and production: conceptualization, field recording, Internet, and music library; environmental sounds and patterns; body (clapping, stepping, and singing); and hardware store (found sound). Participants collaborate with fellow students in creative efforts and in presentations of research results. Concurrently scheduled with course C273. P/NP or letter grading.

174A. Projects in World Arts and Cultures. (2) (Formerly numbered 474A.) Lecture, four hours. Individualized major projects in choreography, performance, cultural studies, production, and media. May be repeated for credit. P/NP or letter grading.

174B. Projects in World Arts and Cultures. (4) (Formerly numbered 474B.) Laboratory, six hours. Individualized major projects in choreography, performance, cultural studies, production, and media. May be repeated for credit. P/NP or letter grading.

175L. Taking Action: Arts Practice and Community Service. (4) (Formerly numbered 177L.) Seminar, four hours; outside study, eight hours. Enforced prerequisite: course 103. Designed for juniors/seniors. Application of training in world arts and cultures through service projects 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.

175S. Taking Action: Arts Practice and Community Service. (4) (Formerly numbered 177S.) Seminar, four hours; outside study, eight hours. Enforced prerequisite: course 103. Designed for juniors/seniors. Application of training in world arts and cultures through service projects 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.

181. Ethnographic Film. (4) Lecture, four hours. Survey of ethnographic film and video, with focus on stories of cultural transformation. Emphasis on critical and comparative approaches to visual study of culture, community, and arts. P/NP or letter grading.

182. Dance and the Visual Media. (4) Lecture, four hours. Examination of aesthetic differences between dance and video, including exploration of new aesthetic forms and techniques, and the role of documentary film, choreo-cinema, and video and exploration of new aesthetic forms when they are combined. Analysis of documentary and performance film, choreo-cinema, and impact of MTV, as well as integration of media with performance. Letter grading.

183. Film and Folklore. (4) Lecture, three hours. Designed for juniors/seniors. Introduction to film criticism and folklore methodology. Topics include early examples of folklore on film, changing conceptions of folklore and uses of films about folklore, and examples of films by with, and for folklorists. Concurrently scheduled with course C283. P/NP or letter grading.

184. Production Arts Seminar. (4) 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, fund-raising, and archival. Concurrently scheduled with course C243. P/NP or letter grading.

185. Junior-Year Proposal. (1) Lecture, 90 minutes; outside study, 90 minutes. Designed for juniors/seniors. Planning and execution of proposal (either senior focus or senior honors project) for senior-year study, with attention to exploring resources of department and University as whole. May be repeated once for credit. P/NP grading.

186A-186B. Senior Honors Projects in World Arts and Cultures. (5-5) Lecture, four hours; outside study, 11 hours. Requisite: course 185. Course 186A is requisite to 186B. Limited to senior World Arts and Cultures majors. Application of concepts and content from interdisciplinary major to individual projects. Methodologies may include critical, comparative, ethnographic, and performance approaches. Lecture/ seminar format with World Arts and Cultures faculty during first term; faculty-directed presentations of individual projects during second term. Letter grading.

190. Community or Corporate Internships in World Arts and Cultures. (2 to 4) (Formerly numbered 176.) Tutorial, six hours. Internship in supervised setting in community agency or business. Students are on regular payroll, and provide periodic reports of their experience. 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 World Arts and Cultures. (2.0 to 4.0) Tutorial, two hours. Preparation: 3.0 grade-point average in major. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Proseminar: Study of Culture. (4) Seminar, three hours; outside study, nine hours. Introduction to history of culture concept in arts, humanities, and social sciences. Analysis of contemporary debates concerning ownership and use of word “culture” and critical analysis of study of culture and U.S. society. Letter grading.

201. Theories of Performance. (4) Seminar, three hours; outside study, nine hours. Close reading and analysis of classic and contemporary studies of performance and related aesthetic practices. Familiarization with ways in which “performance” is defined and deployed by scholars working in disciplines of anthropology, dance, folklore, linguistics, literature, musicology, performance studies, philosophy, sociology, and theater. S/U or letter grading.
202. Ethnography of Performance. (4) Seminar, three hours; outside study, nine hours. Survey of methods and methodological issues in ethnographic study of performance in various contexts. Field documentation, participant observation, oral history and interview techniques, performative dimensions of ethnographic research, ethics and politics of ethnographic representation. S/U or letter grading.

203. Proseminar: Dance Studies. (4) Seminar, three hours; outside study, nine hours. Survey of theoretical issues and problems in study of dance and body movement in cultural, social, and historical context. S/U or letter grading.

204. The Body. (4) Seminar, three hours; outside study, nine hours. Cross-cultural and interdisciplinary perspectives on the human body. Topics include representations of the body, body symbolism, embodiment of identity (including gender, race, ethnicity, and class identities), and analyses 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 history, analytical perspectives, and current trends, including research techniques in contemporary folkloristics. S/U or letter grading.

206. Folklore. (4) Seminar, three hours; outside study, nine hours. Variable topics. Detailed consideration of particular folk genre, culture area, historical period, and/or theoretical issue in field of folklore. May be repeated for topics. S/U or letter grading.

211A-211F. Advanced Choreography. (4 each) Lecture, two hours; laboratory, two hours. Theoretical aspects of advanced choreography for students who have reached the level of self-initiation of substantial creative works. Refinement and realistic self-evaluation; critical counsel by acknowledged choreographers. S/U or letter grading.

216. Analyzing Narrative and Oral Performance. (5) Lecture, four hours. Designed for graduate students. Explores in a systematic way documenting individual narrators and interpreting their styles and repertoires; how narrators conceptualize and perform narrative discourse, impact of audience and "situated event" on both narrating and "the story." How experiences and values are communicated through narrating, modes of representing oral narrating, and politics of narrative and oral performance. S/U or letter grading.

220. Seminar: Culture and Performance. (4) Seminar, three hours; outside study, nine hours. Designed for graduate students. Variable topics in interdisciplinary study of expressive culture, arts, and performance in social and cultural contexts. May be repeated for topics. S/U or letter grading.


223. Arts of Identity: Survey of Expressive Cultures. (4) Lecture, four hours; outside study, eight hours. Introduction to study of performance, art, and creativity in cultural context. Special attention to relationship between arts and identity and role of artists in cultural transformation. Concurrently scheduled with course C123. S/U or letter grading.

225A-225B. Theories of Movement: Labananalyse. (4-4) Lecture, two hours; laboratory, two hours. Theories of Laban movement analysis as means for analyzing and describing human movement. Use of Laban movement analysis to increase movement observation skills and theoretical understanding of role of movement in dance, nonverbal behavior, and cross-cultural dance studies. Focus on complex movement patterns and timing. S/U or letter grading.

229. Food Customs and Symbolism. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Introduction to foodways, with particular attention to cultural, social, and historical context. S/U or letter grading.


240. Women Healers, Ritual, and Transformation. (4-4) Same as Women's Studies CM240.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Examination of role of women healers, historically and within contemporary culture-specific contexts. Exploration of psychological concepts and their practice through ritual dances and healing rituals and of role of arts in healing troubled communities. Concurrently scheduled with course CM140. S/U or letter grading.

241. Carnival and Festivity. (4) Lecture, three hours; fieldwork, one hour. Study of traditional calendrical, religious, and local festivals and related events in the Caribbean area. Lecture credit with emphasis on American festival occasions and their Old World antecedents. Topics include carnival and carnavalesque and politics of celebration. Concurrently scheduled with course C141. S/U or letter grading.

242. Myth, Magic, and Mind. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Consideration of metaphor and symbol, reflexive anthropology, and notion of culture as text applied to such examples as trickster figures, rhetorical devices including parable and irony, and arguably magical experience of humans "shape-shifting" to become animals. Concurrently scheduled with course C142. S/U or letter grading.

243. Production Arts Seminar. (4) 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 production, mission statements, budgeting, marketing, public relations, fund-raising, legalities, and archiving. Concurrently scheduled with course C143. S/U or letter grading.

244. Folk Medicine. (4) Seminar, three hours; outside study, six hours. Exploration of fundamental concepts, analytical approaches, and recurrent questions in research on folk or traditional medicine, including categories and motivations of healers, varieties of illness, and treatment modalities such as use of faith- and plant-based remedies, along with issues about persistence, efficacy, and development of culturally sensitive healthcare. S/U or letter grading.

245. Selected Topics in Dance Studies. (2 to 4) Lecture, four hours; outside study, eight hours. Designed for graduate students. 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 without limitation. S/U or letter grading.

246. Politics of Performance. (4) Seminar, four hours; outside study, eight hours. Designed for graduate students. Opportunity to reflect on artists and intellectual as cultural workers operating in domains of ideology, aesthetics, and theory. Analysis of such keywords as ideology, aesthetics, politics, and political, art, politics, intervention, intellectuals, and artists. 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. Considerable attention to historical and 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, greater compassion for others, and restored sense of trust and hope in humanity. Concurrently scheduled with course C147. S/U or letter grading.

248. Dance as Healing and Therapy. (4) Lecture, two hours; laboratory, ten 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.

252. History and Theory of Modern/Postmodern Dance. (4) Lecture, four hours; studio, two hours; outside study, six hours. Introduction to key figures in creation of modern dance, with special attention to their theories and philosophies and tracing of radical shift to postmodern dance that occurred in the mid-20th century. Contemporary developments, both historical and theoretical. Study to include choreography and writing. Concurrently scheduled with course C152. S/U or letter grading.


255. Self and Culture. (4) Lecture, two hours; laboratory, two hours; outside 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.

256. 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 mestiza and (2) external transitions that strongly influenced construction of her mestiza and gender identity, as well as her revolutionary political ideals, (3) obstacles that 20th-century female artists living in patriarchal societies confront, (4) way her significant attachments influenced her construction of subjective sense of self and kind of artwork she produced, (4) transcendent 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 disenchanted 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.

264. Public Writing in the Arts. (4) Lecture, four hours; outside study, six hours. Consideration of how journalistic approaches to writing about the arts, with eye toward shaping critique of public writing practices and putting that critique into practice. Exploration of new modalities and venues for formatting that reframe power differential between artist makers and commentators. Concurrently scheduled with course C164. S/U or letter grading.

268. Beyond Academia: Making Art in the Real World. (4) Lecture, two hours; outside study, six hours. Designed for graduate students. Focus on understanding bureaucratic structures and regional histories conditioning creation of art in the real world, including such practical issues as publicity and grant-writing. Concurrently scheduled with course C168. S/U or letter grading.
C273. Sound Resources for Performance. (4) Lecture, three hours; studio, one hour; outside study, eight hours. Designed for graduate students. Exploration of music, in search of the interesting, new, and unusual. Investigation of musical possibilities via record store, Internet, and music library; environmental sounds and patterns; body (clapping, slapping, and singing); and hardware store (found sound). Participants collaborate with fellow students in creative efforts and in presentations of research results. Concurrently scheduled with course C173. S/U or letter grading.

C275. Applied Folklore. (4) Lecture, four hours. Designed for graduate students. Introduction to methods and issues in application of folklore studies to such areas as education, health, museums, organization development, tourism, environmental planning, economic and community development, aging, art therapy, and public sector folklore. Concurrently scheduled with course C175. 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 footage, constructing a program, mastering finished tape). Emphasis alternates quarterly between ethnographic documentary and dance/choreography. May be repeated once for credit. Concurrently scheduled with course C180. Letter grading.

C285. Folklore and Film. (4) Lecture, four 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.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Directed Professional Activities. (2 to 8) Lecture, to be arranged. Directed projects in professional editing, bibliography, 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.

C406A. Advanced World Arts Practices in Sub-Saharan Africa and Diaspora. (2) 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) Studio, three hours; outside study, three hours. Advanced-level study of world arts practices originating from North America, including the U.S., Canada, and Native America. Variable topics, such as Native American dance, jazz, and jazz-tap, in cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C109A. S/U or letter grading.

C413A. Advanced World Arts Practices in Europe and Diaspora. (2) 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 the U.S. Variable topics, such as flamenco, Balkan folk dances, and classical ballet, in cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C113A. S/U or letter grading.

C415. Advanced Modern/Postmodern Dance. (2) Studio, six hours. Requisite: course 65. Studies in advanced modern/postmodern dance technique, with emphasis on performing skills. May be repeated for credit without limitation. Concurrently scheduled with course C115. S/U or letter grading.

441. Dance Production Practicum. (2 to 4) Laboratory, four to eight hours (one or two hours may be individualized consultation). Skills and understanding of production components in roles of stage manager, production assistants, and producer. May be repeated for a maximum of 8 units. S/U grading.

451. Teaching Assistant Seminar. (2) 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.

452. Directed Field Study in Dance Education. (2 to 8) Seminar, one hour; field study, two hours minimum. Directed field study to provide teaching experience in the community school or other approved site. No more than 4 units may be applied toward M.A. degree requirements. S/U grading.

478. Advanced Private Instruction in World Arts and Cultures. (2 to 8) Studio, three to 12 hours; outside study, three to 12 hours. Private or semiprivate instruction with distinguished community-based artist to be arranged by students and approved by instructor. May be repeated for maximum of 24 units. S/U grading.

480. Seminar: Research Topics. (2) Seminar, two hours. Forum in which faculty, students, and visitors make presentations and obtain feedback on research being planned, in progress, or recently completed. Students required to make a presentation each term they are enrolled for credit. May be repeated for a maximum of 8 units. S/U grading.

490. Projects in Choreography and Performance. (2 to 8) Tutorial, one three-hour rehearsal per unit per week minimum. Creation, casting, and rehearsing of culminating concert, reflecting professional achievement in choreography or performance, in first term. In second term, direction of on-stage rehearsals for culminating concert by each student leading to fully staged performance. May be repeated for a maximum of 16 units. S/U or letter 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/selecting course content, teaching methodologies, assessment/evaluation/grading practices, and consideration of practical, administrative, and ethical issues. Students meet with instructor to review their specific needs as they progress in development and elaboration of course plans. Microteaching sessions provide context for applying concepts and principles discussed. S/U grading.

498. Professional Internship in Dance. (4, 8, or 12) Seminar, to be arranged. Full- or part-time supervised fieldwork. Limited to M.F.A. students. Internship in dance, theater, film, or television organization. Participation in creative, administrative, or technical work of professionals in their specialties. S/U or letter grading.

596A. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. S/U or letter grading.

596R. Directed Study or Research in a Hospital or Clinic. (2 to 8) Tutorial, to be arranged. S/U grading.

597. Preparation for Master's Comprehensive Examination or Ph.D. Qualifying Examination. (2 to 8) Tutorial, to be arranged. Preparation for M.A. or M.F.A. comprehensive examination or Ph.D. qualifying examination. S/U grading.


Appendices

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), disability, age, medical condition (cancer-related), ancestry, marital status, citizenship, sexual orientation, or status as a Vietnam-era veteran or special disabled veteran. The University also prohibits sexual harassment. This nondiscrimination policy covers admission, access, and treatment in University programs and activities.

Inquiries regarding the University’s student-related nondiscrimination policies may be directed to the UCLA Campus Counsel, 3149 Murphy Hall, Box 951405, Los Angeles, CA 90095-1405, (310) 825-4042. Speech- and hearing-impaired persons may call TTY (310) 206-6083.

Inquiries regarding nondiscrimination on the basis of disability covered by the Americans with Disabilities Act (ADA) of 1990 or Section 504 of the Rehabilitation Act of 1973 may be directed to Monroe Gorden, ADA and 504 Compliance, A239 Murphy Hall, UCLA, Box 951405, Los Angeles, CA 90095-1405, voice (310) 825-7906, TTY (310) 206-3349; http://www.saonet.ucla.edu/ada&504/default.html.

Students may complain of any action which they believe discriminates against them on the ground of race, color, national origin, marital status, sex, sexual orientation, disability, or age and may contact the Office of the Dean of Students, 1206 Murphy Hall, and/or refer to Section 111.00 of the University of California Policies Applying to Campus Activities, Organizations, and Students (available in 1206 Murphy Hall or at http://www.ucop.edu/ucophome/coordrev/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.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. Physical abuse, including but not limited to sexual assault, sexual misconduct, sex offenses, and other physical assault; threats of violence; or conduct that threatens the health or safety of any person;

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, or participating in the planning of an act that would be in violation of the UCLA 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, plagiarism, multiple submissions, or facilitating academic misconduct. For the purposes of the UCLA 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 or the failure to observe the expressed procedures or instructions of an academic exercise (e.g., examination instructions regarding alternate seating or conversation during an examination).

102.01b: Fabrication. Fabrication includes, but is not limited to, falsification or invention of any information or citation in an academic exercise.

102.01c: Plagiarism. Plagiarism includes, but is not limited to, the use of another’s words or ideas as if they were one’s own, including but not limited to representing, either with the intent to deceive or by the omission of the true source, part of or an entire work produced by someone other than the student, obtained by purchase or otherwise, as the student’s original work or representing the identifiable but altered ideas, data, or writing of another person as if those ideas, data, or writing were the student’s original work.
102.01d: Multiple Submissions. Multiple submissions includes, but is not limited to, the re-submission by a student of any work which has been previously submitted for credit in identical or similar form in one course to fulfill the requirements of a second course, without the informed permission/consent of the instructor of the second course; or the submission by a student of any work submitted for credit in identical or similar form in one course to fulfill the requirements of a concurrent course, without the permission/consent of the instructors of both courses.

102.01e: Facilitating Academic Dishonesty. Facilitating academic dishonesty includes, but is not limited to, knowingly helping another student commit an act of academic misconduct (e.g., cheating, fabrication, plagiarism, multiple submissions).

102.01f: Coercion Regarding Grading or Evaluation of Coursework. Threatening personal or professional repugnance or discipline against an instructor to coerce the instructor to change a grade or otherwise evaluate the student's work by criteria not directly reflective of coursework.

102.02: Other Forms of Dishonesty. Other forms of dishonesty, including but not limited to fabricating information or knowingly furnishing false information or reporting a false emergency to the University.

102.03: Forgery. Forgery, alteration, or misuse of any University document, record, key, electronic device, or identification.

102.04: Theft. Theft of, conversion of, misappropriation of, or damage to or destruction of any property of the University or property of others while on University premises or at official University functions; or possession of any property when the student had knowledge or reasonably should have had knowledge that it was stolen.

102.05: Computers. 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 and electronic communications facilities, systems, and services; and violations of copyright laws, whether by theft, unauthorized sharing, or other misuse of copyrighted materials such as songs, movies, software, photos, or text. Violation of the University of California Electronic Mail Policy and Guidelines (available at http://www.adminv.ucsd.edu/appm/public/455.htm), of the University of California Electronic Communications Policy (available at http://www.ucop.edu/ucpolic/home/policies/ecp.html), 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: University Housing and Parking. 102.07a: University Housing. Violation of policies, regulations, or rules governing University-owned, -operated, or -leased housing facilities or other housing facilities located on University property.

102.07b: Parking. Violation of policies, regulations, or rules governing University parking services or University-owned or -operated parking facilities.

102.08: Physical Abuse. Physical abuse includes physical assault, sexual assault, sexual misconduct, sex offenses; threats of violence; or other conduct that threatens the health or safety of any person.

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. Sex offenses include, but are not limited to, sexual assault upon a child, incest, and consensual sex with an individual under the age of consent (18 years of age in California). 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 his or her own or another person's intimate parts without effective consent

3. Intoxication of the accused will not diminish his or her responsibility for any violations of this section

102.09: Sexual Harassment. Sexual harassment, as defined in the University of California Policies Applying to Campus Activities, Organizations, and Students (Section 160.00), reads in part: Sexual harassment is unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature, when submission to or rejection of this conduct explicitly or implicitly affects a person's employment or education, unreasonably interferes with a person's work or educational performance, or creates an intimidating, hostile, or offensive working or learning environment. In the interest of preventing sexual harassment, the University will respond to reports of any such conduct.

Refer to the Policy on Sexual Harassment and Complaint Resolution Procedures (section 160.00) for the entire definition. The Policy on Sexual Harassment and Complaint Resolution Procedures is incorporated into the Policy on Student Conduct and Discipline.

102.10: Hazing. 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 his or her safety, or the safety of the person or his or her family; where the threat is reasonably determined by the University to seriously alarm, torment, or terrorize the person; and where the threat is additionally determined by the University to serve no legitimate purpose.

102.11: Harassment. Harassment by a student of any person. For the purposes of this section, harassment includes:

a. Is the use, display, or other demonstration of words, gestures, imagery, or physical materials, or the engagement in any form of bodily conduct, on the basis of race, color, national or ethnic origin, alienage, sex, religion, age, sexual orientation, or physical or mental disability that has the effect of creating a hostile and intimidating environment sufficiently severe or pervasive to substantially impair a reasonable person's participation in University programs or activities, or use of University facilities;

b. Must target a specific person or persons; and

c. Must be addressed directly to that person or persons

NOTE: The Office of the President has issued the following guidelines on interpretation and application of this section (102.11: Harassment): “Prior to applying this provision of policy to any student conduct, the Office of General Counsel will be consulted regarding its proper interpretation and application in light of the specific circumstances.”

102.12: Hazing. Participation in hazing or any method of initiation or preinitiation into a campus organization or other activity engaged in by the organization or members of the organization at any time that causes, or is likely to cause, physical injury or personal degradation or disgrace resulting in psychological harm to any student or other person.

102.13: Obstruction or Disruption. Obstruction or disruption of teaching, research, admini-
102.14: Disorderly Conduct. 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 his or her duties while on University property or at official University functions, or resisting or obstructing such University or other public officials in the performance of or the attempt to perform their duties.

102.17: Controlled Substances. Unlawful manufacture, distribution, dispensing, possession, use, or sale of, or the attempted manufacture, distribution, dispensing, or sale of controlled substances, identified in Federal and State laws or regulations.

102.18: Alcohol. Manufacture, distribution, dispensing, possession, use, or sale of, or the attempted manufacture, distribution, dispensing, or sale of alcoholic beer which is unlawful or otherwise prohibited by, or not in compliance with, University policy or campus regulations.

102.19: Destructive Devices. Possession, use, storage, or manufacture of explosives, firebombs, or other destructive devices.

102.20: Weapons. Except as expressly permitted by law, possession, use, storage, or manufacture of a firearm or other weapon capable of causing bodily injury. Except as expressly permitted by University policy, possession, use, storage, or manufacture of replicas of firearms or other weapons.

102.21: Violation of Disciplinary Conditions. Violation of the conditions contained in the terms of a disciplinary action imposed under the UCLA 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 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.

Utilize campus and community support services:

1. Contact a Rape Services Consultant (RSC) at the Center for Women and Men. RSCs 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. RSCs are available to assist any UCLA student regardless of where or when the assault occurred. For assistance, contact the Center for Women and Men at (310) 825-3945 or (310) 206-8240 or go to B44 Student Activities Center and ask to speak to an RSC.

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.

Sexual 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.

Any distribution of a recording of a course presentation at UCLA that captures the actual sounds and/or images of that course presentation, in any medium, must consider not only the rights of the instructor and the University, but also those of other parties. Examples include the privacy rights of students enrolled in the course, the rights of guest lecturers, and the copyright interests in materials authored by others that are displayed or presented during the course presentation. In addition to the consent of the University and the instructor/presenter, it may be necessary to secure permission from these other parties before any recording, distribution, publication, or communication is legally permitted.

102.23a: Selling Course Notes. Selling, preparing, or distributing for any commercial purpose course lecture notes or video or audio recordings of any course unless authorized by the University in advance and explicitly permitted by the course instructor in writing. The unauthorized sale or commercial distribution of course notes or recordings by a student is a violation of the UCLA Code whether or not it was the student or someone else who prepared the notes or recordings. This policy is applicable to any recording in any medium, including handwritten or typed notes.

102.23b: Copying Course Notes. Copying for any commercial purpose handouts, readers, or other course materials provided by an instructor as part of a University of California course unless authorized by the University in advance and explicitly permitted by the course instructor or the copyright holder in writing (if the instructor is not the copyright holder). Students currently enrolled in a course may provide a copy of their own notes or recordings to other currently enrolled students for noncommercial purposes reasonably arising from participation in the course, including individual or group study.

102.23c: Commencement Tickets. Selling commencement tickets.

102.24: University Properties. Using University properties for the purpose of organizing or carrying out unlawful activity.

102.25: Violations of Law. Violation of Federal, State, or local laws.

Sexual Assault and Sexual Misconduct

UCLA does not tolerate sexual assault or sexual misconduct. Where there is probable cause to believe a student has committed a sexual assault or has engaged in sexual misconduct, disciplinary action will be pursued. Sanctions may include dismissal from the University.

If a Person Has Been Sexually Assaulted

Those who believe that they are the victims of sexual assault should

1. Immediately call the police department.
   If possible, call the UCLA Police Department at (310) 825-1491 or 911

2. Get medical attention. Campus police will provide transportation to the Santa Monica-UCLA Medical Center Emergency Room for emergency medical treatment and evidence collection. A counselor from the Rape Treatment Center will be available at that time, free of charge.

Conduct Code
forms, works against those values and often corrodes a person's sense of worth and interferes with one's ability to participate in University programs or activities. While the University is committed to the free exchange of ideas and the full protection of free expression, the University also recognizes that words can be used in such a way that they no longer express an idea, but rather injure and intimidate, thus undermining the ability of individuals to participate in the University community. The University of California Policies Applying to Campus Activities, Organizations, and Students (hereafter referred to as “Policies”; http://www.opc.uci.edu/ucophome/coordin/div/ucpolicies/aos/toc.html) presently prohibit a variety of conduct by students which, in certain contexts, may be regarded as harassment or intimidation.

For example, harassing expression which is accompanied by physical abuse, threats of violence, or conduct that threatens the health or safety of any person on University property or in connection with official University functions may subject an offending student to University discipline under the provisions of Section 102.08 of the Policies. Similarly, harassing conduct, including symbolic expression, which also involves conduct resulting in damage to or destruction of any property of the University or property of others while on University premises may subject a student violator to University discipline under the provisions of Section 102.04 of the Policies. Further, under specific circumstances described in the Universitywide Student Conduct Harassment Policy (http://www.deanofstudents.ucla.edu), students may be subject to University discipline for misconduct which may consist solely of expression. Copies of this Policy are available in the Office of the Dean of Students, 1206 Murphy Hall, or in any of the Harassment Information Centers listed below:

1. Center for Women and Men, B44 Student Activities Center, (310) 825-3945
2. Dashew Center for International Students and Scholars, 106 Bradley Hall, (310) 825-1681, http://www.internationalcenter.ucla.edu
4. Office of Ombuds Services, 105 Strathmore Building, (310) 825-7627, (310) 825-4287; Student Services Director, 214 UNEX Building, (310) 825-2656

Appendix / 623
such a charge in person if the student contin-

cember of the Academic Senate Grievance

with the Office of Ombuds Services and a

the student may, after discussing the matter

grounds for the administration to file a charge,

Committee. If the dean, in consulta-

tioned, the alleged violator should be reported

conduct and that formal discipline may be war-

member has violated the Faculty Code of Con-

Entering into a romantic or sexual relationship

or, within the limits imposed by law or Univer-

lations, because of age or citizenship

Violation of University policy, including the per-

tinential guidelines, applying to nondiscrimination against students on the basis of disability.

Use of the position or powers of a faculty mem-

ber to coerce the judgment or conscience of a

student or to cause harm to a student for arbi-

rarity or personal reasons.

Participating in or deliberately abetting disrup-

tion, interference, or intimidation in the class-

room.

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 (instruc-

tional, evaluative, or supervisory) for any stu-

dent with whom a faculty member has a ro-

mantic or sexual relationship.

Charges of Violation

If a student has reason to believe that a faculty member has violated the Faculty Code of Con-

duct and that formal discipline may be war-

anted, 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 consulta-

tion with the vice chancellor of Academic Per-

sonnel, 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 and Disciplinary Procedures Committee, file such a charge in person if the student contin-

ues 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 a nonresident tuition fee 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 semes-

ter system, the day instruction begins for the semester.

Laws Governing Residence

The rules regarding residence for tuition pur-

poses at the University of California are gov-

erned by the California Education Code and implemented by Standing Order 110.2 of The Regents of the University of California (http://

www.universityofcalifornia.edu/regents/bylaws

so1102.html). Under these rules adult citizens and certain classes of aliens can establish resi-

dence for tuition purposes. There are particu-

lar rules that apply to the residence classifica-

tion of minors (see below).

Who Is a Resident?

Persons who are adult students (at least 18 years of age) may establish residence for tu-

tion purposes in California if (1) they are U.S.

citizens, (2) they are permanent residents or other immigrants, or (3) they are nonimmi-

grants who are not precluded from establishing a domicile in the U.S.

Nonimmigrants who are not precluded from es-

ablishing 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, or V. To es-

ablish 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 establish-

ment of California residence, regardless of the length of stay. Students must demonstrate their intention to make California their home by sev-

ering their residential ties with their former state of residence and establishing those ties with California. If these steps are delayed, the one-year duration 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, regis-

tered domestic partner, or their parents.

Requirements for Financial Independence

Students are considered financially indepen-

dent 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 re-

questing 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 de-

ceased; (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 stu-

dent and they were not claimed as an income tax deduction by their parents or any other indi-

vidual for the two tax years immediately preced-

ing the term for which they are requesting resident classification, and they can demon-

strate self-sufficiency for those years and the current year.

Note: Financial dependence is not a factor in determining residence status for graduate student

 instructors, graduate student teaching as-

sistants, 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 adminis-

tered 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 Californi-

a 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) ob-

taining California vehicle registration, (5) pay-

ing California income taxes as a resident, in-

cluding California income 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) li-

ensing for professional practice in California.

The absence of these indicia in other states
during any period for which students claim resi-

dence can also serve as an indication of their intent. Documentary evidence is required, and all relevant indications are considered in deter-

mining 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 ap-

pointment of a legal guardian, or by the rein-

quishment of their parent’s right of control. If students live with neither parent, their resi-

dence 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 duration residential requirement.

**Specific Rules Applying to Minors**

**Divorced or Separated Parents**

Minor U.S. citizens or eligible aliens may be able to derive California resident status from a California resident parent if they move to California to live with that parent on or before their 18th birthday. If they begin residing with their California parent after their 18th birthday, they are treated like any other adult student coming to California to establish residence.

**Parent of Minor Moves from California**

Students may be entitled to resident status if they are minor U.S. citizens or eligible aliens whose parent(s) was a resident of California who left the state within one year of the residence determination date if (1) they remained in California after their parent(s) departed, (2) they enroll in a California public postsecondary institution within one year of their parent(s) departure, and (3) once enrolled, they maintain continuous attendance in that institution. Financial independence is not required in this case.

**Two-Year Care and Control**

Minor students may be entitled to resident classification if, immediately prior to enrolling in a postsecondary institution, they have been living with and been under the continuous direct care and control of an adult or adults other than a parent for a period of no less than two years. The adult or adults having control must have been residents of California during the one year immediately prior to the residence determination date. The classification continues until students have attained the age of majority and have lived in the state the minimum time necessary to become a resident, so long as continuous full-time attendance is maintained at a postsecondary institution.

**Self-Support**

If students are U.S. citizens or eligible aliens and are minors who can prove that they lived in California for the entire year immediately before the residence determination date, 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 Tuition**

**Member of the Military**

Members of the U.S. military may be exempt from the nonresident tuition fee 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 until they have resided in California the minimum time necessary to become a resident (366 days). 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.

**Spouse, Registered Domestic Partner, or Other Dependents of Military Personnel**

Students are exempt from payment of the nonresident tuition fee 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 the nonresident tuition fee 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.

**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 the nonresident tuition fee. 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). 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 the nonresident tuition fee 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 the nonresident tuition fee 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 the nonresident tuition fee.

**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 the nonresident tuition fee.

**Student Athlete in Training at the U.S. Olympic Training Center, Chula Vista**

Any amateur student athletes in training at the U.S. Olympic Training Center in Chula Vista may be exempt from the nonresident tuition fee 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 the nonresident tuition fee. They are not eligible for the exemption if they are a nonimmigrant alien.

**Surviving Dependents of California Residents Killed in the September 11, 2001, Terrorist Attacks**

If persons are nonresident students who are in California at the time of his or her death and who was killed in the course of their public law enforcement or fire suppression duties.

**Temporary Absences**

If persons are nonresident students who are in the process of establishing a residence for tuition purposes and they return to their former home during noninstructional periods, their presence in the state is presumed to be solely for educational purposes and only convincing evidence to the contrary rebuts this presumption. Students who are in the state solely for
Educational purposes are NOT classified as residents for tuition purposes regardless of the length of their stay.

If persons are students who have been classified as residents for tuition purposes and they leave the state temporarily, their absence could result in the loss of their California residence. The burden is on students (or their parents if they are minors) to verify that they did 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 Resident Classification
Students may obtain a petition at 1113 Murphy Hall or at http://www.registrar.ucla.edu/forms/residenceclass.pdf for a change of classification from nonresident to resident status. All changes of status must be initiated at least three weeks in advance of the fee payment deadline for the applicable term.

Time Limitation on Providing Documentation
If additional documentation is required for residence classification but is not readily accessible, students are allowed until the end of the applicable term to provide it.

Incorrect Classification
Students who were incorrectly classified as residents are subject to nonresident classification and to payment of all nonresident tuition fees not paid. If they concealed information or furnished false information and were classified incorrectly as a result, they are also subject to University discipline. Resident students who become nonresidents must immediately notify the residence deputy.

Inquiries and Appeals
Inquiries regarding residence requirements, determination, and/or recognized exceptions should be directed to the Residence Deputy, UCLA Office of the Registrar, 1113 Murphy Hall, Box 951429, Los Angeles, CA 90095-1429 (310-825-3447; http://www.registrar.ucla.edu/faq/residencefaq.htm) or to the Se-
according to the number of terms students have attended and the number of units they have successfully completed. Students not meeting the requirements shown on the schedule may receive a warning letter or have their financial aid suspended. Once deficiencies are satisfied, financial aid may be reinstated.

Financial aid eligibility is reinstated for the term following the term in which students reestablish compliance with the units-per-term schedule. For example, if they successfully complete 16 units in Fall Quarter and therefore make up the deficiency, they become eligible for financial aid in Winter Quarter. Financial aid is then awarded on the basis of their need and the availability of funds.

**Appeal Process**
Students who fail to meet the satisfactory academic progress standards because of debilitating illness, prolonged hospitalization, death in the immediate family, or other such mitigating circumstances may appeal their disqualification.

To appeal, students should submit a letter and supporting documentation to the Financial Aid Office explaining the circumstances and how they affected their ability to meet the requirements. The satisfactory academic progress appeal coordinator evaluates the request based on the rationale and evidence provided.

**Graduate Students**

**Qualitative Standard**
The qualitative standard is enforced by the dean of the Graduate Division in consultation with the department.

**Quantitative Standard**
Students must successfully complete at least 8 units per term of enrollment to be eligible for financial aid as full-time students. Approved study loads of less than 8 units result in proportionally reduced aid for that term and are charged against the maximum period of eligibility at the appropriate proportional rate.

**Disqualification and Appeal Process**
If students fail to meet the qualitative and quantitative requirements, their financial aid is discontinued until the deficiencies are made up. Appeals are reviewed by their academic department, the dean of the Graduate Division, and/or the Financial Aid satisfactory academic progress appeal coordinator.

**Period of Eligibility**
The degree program to which students are admitted determines the maximum number of terms for which they can receive need-based financial aid. Terms for which no need-based aid is received are considered when determining the remaining number of terms of financial aid eligibility.

Students who are in a credential program or a professional master’s program (other than Master of Fine Arts) are eligible for a maximum of nine terms of need-based financial aid. Students who are in a Master of Fine Arts program are eligible to apply for aid for the first 12 terms of enrollment. If students are in an M.A. or M.S. program, a doctoral program, or a combination master’s/doctoral program, their eligibility expires after 27 terms of enrollment. Students who change their program may be accommodated through an extension of terms of eligibility. The extension should be secured at the time the program change is made.

**Professional Schools**
Students attending the Schools of Dentistry, Law, and Medicine 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 the Office of the Dean of Students, 1206 Murphy Hall, for assistance.

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.

**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 and (2) on written request of the chair of the UCLA Academic Senate in cases where it has been determined by the Committee on Privilege and Tenure that an instructor has assigned a grade on any basis other than academic grounds. No change of grade may be made on the basis of reexamination or, with the exception of the I and IP grades, the completion of additional work. Any grade change request made more than one year after the original filing must be validated for authenticity of the instructor’s signature by the department chair. Any grade change request made by an instructor who has left the University must be countersigned by the department chair. No grade change may be made once a student has graduated. All grade changes are recorded on the transcript.

**Policy on Alternate Examination Dates**
In compliance with Section 92640(a) of the California Education Code, the University must accommodate requests for alternate examination dates for any test or examination at a time when that activity would not violate a student’s religious creed. This requirement does not apply in the event that administering the test or examination at an alternate time would impose an undue hardship which 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.

**Undergraduate Final Examinations**
No student shall be excused from assigned final examinations, except as provided above in the policy on alternate examination dates and as provided in the following three paragraphs.

The instructor in charge of an undergraduate course is responsible for assigning the final
grade in the course. The final grade shall reflect the student’s achievement in the course and shall be based on adequate evaluation of that achievement. The instructor’s method of evaluation must be announced at the beginning of the course. The methods may include a final written examination, a term paper, a final oral examination, a take-home examination, or other evaluation device. Evaluation methods must be of reasonable duration and difficulty and must be in accord with applicable departmental policies. Final written examinations may not exceed three hours’ duration and are given only at the times and places established and published by the department chair and the Registrar’s Office.

At the end of the term in which a student is expected to be graduated, a student’s major department may examine him or her in the field of the major, may excuse the student from final examinations in courses offered by the department during that term and, with the approval of the Undergraduate Council, assign a credit value to such general examination.

An instructor shall, if he or she wishes, release to individual students their original final examinations (or copies). This may be done by any method that insures the students’ right to privacy. Otherwise, the instructor shall retain final examination materials, or a copy thereof, until the end of the next succeeding regular term of instruction, during which period students shall have access to their examinations.

**Disclosure of Student Records**

Pursuant to the Federal Family Educational Rights and Privacy Act (FERPA), the California Information Practices Act, and the University of California Policies Applying to the Disclosure of Information from Student Records, students at UCLA have the right to (1) inspect and review records pertaining to themselves in their capacity as students, except as the right may be waived or qualified under Federal and State Laws and University Policies, (2) have withheld from disclosure, absent their prior 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 “directory information” which 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.

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 “directory 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 “directory information,” complete the UCLA FERPA Restriction Request form available from Enrollment and Degree Services, 1113 Murphy Hall.

Student records which are the subject of Federal and State Laws and University Policies may be maintained in a variety of offices, including the Registrar’s Office, Office of the Dean of Students, UCLA Career Center, Graduate Division, UCLA External Affairs Department, and the offices of a student’s College or school and major department. Students are referred to the UCLA Telephone Directory (http://www.directory.ucla.edu) which lists all the offices that may maintain student records, together with their campus address and telephone number. Students have the right to inspect their student records in any such office subject to the terms of Federal and State Laws and University Policies. Inspection of student records maintained by the Registrar’s Office is by appointment only and must be arranged three working days in advance. Call (310) 825-3801 or inquire at Academic Record Services, 1134 Murphy Hall.

A copy of the Federal and State Laws, University Policies, and the UCLA Telephone Directory may be inspected in the office of the Information Practices Coordinator, 600 UCLA Wilshire Center. Information concerning students’ hearing rights may be obtained from that office and from the Office of the Dean of Students, 1206 Murphy Hall.

**Undergraduate Retention, Graduation, and Time to Degree**

Retention and graduation rates are higher than ever before at UCLA and among the highest for public universities anywhere in the country. Over the past three years, 97 percent of all students entering from high school and 95 percent of all students entering as transfers were still enrolled at UCLA one year later.

Over the past three years, the four-year, five-year, and six-year graduation rates for students entering from high school averaged 65, 67, and 89 percent respectively. Final graduation rates above 90 percent have been observed and projected for all freshmen cohorts entering UCLA since Fall Quarter 2000.

Over the past three years, the two-year, three-year, and four-year graduation rates for entering transfer students have averaged 57, 85, and 89 percent respectively. Final graduation rates above 90 percent have been observed and projected for all transfer cohorts entering UCLA since Fall Quarter 2000.

Time to degree for UCLA undergraduates has declined significantly over the past decade. In 2006-07 approximately 4,025 baccalaureate degrees were awarded to students who entered directly from high school. The average number of quarters registered at UCLA was 12.2, down from an average of 13.3 quarters for similar graduates in 1996-97. Among recent graduates, 74 percent were registered for 12 quarters or less (i.e., four years or less), 84 percent for 13 quarters or less, 90 percent for 14 quarters or less, and 98 percent for 15 quarters or less (i.e., five years or less).

In 2006-07 approximately 2,875 baccalaureate degrees were awarded to students who entered as transfers. The average number of quarters registered at UCLA was 6.7, down from an average of 7.8 quarters for similar graduates in 1996-97. Among recent graduates, 65 percent were registered for six quarters or less (i.e., two years or less), 76 percent for seven quarters or less, 83 percent for eight quarters or less, and 95 percent for nine quarters or less (i.e., three years or less).

Additional information is available at http://www.aim.ucla.edu/Statistics/graduation/graduation.asp.

**Campus Security Information**

**UCLA Police Department**

The UCLA Police Department (UCPD), (310) 825-1491, http://www.ucpd.ucla.edu, is temporarily located in the Kinross Building (between Lot 36 and Gayley Avenue). The sworn State of California Police Officers are empowered by the State of California with the authority to enforce all state and local laws. UCLA police officers patrol the campus 24 hours a day, 365 days a year. They enforce all applicable local, state, and federal laws, arrest violators, investigate and suppress crime, and provide a full range of police services and community safety programs.

The department is linked by computer to city, state, and federal criminal justice agencies that provide access to information concerning criminal records, wanted persons, stolen property, and vehicle identification. The Detective Bureau handles criminal investigations, and detectives conduct interviews, arrest violators, execute search warrants, and file cases with the Los Angeles District and City Attorney Offices.
Incident Reporting
UCLA police officers have primary jurisdiction over the UCLA campus, Reagan UCLA Medical Center, Center for the Health Sciences, Santa Monica-UCLA Medical Center and Orthopaedic Hospital, and University Apartments South. The City of Los Angeles Police Department does not handle calls for service on campus or on most UCLA properties. All requests for police service must 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 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 telephones (University, private, public) located on University grounds are tied into the 911 emergency system. Emergencies can also be reported by using the blue-hooded or yellow Emergency Reporting Telephones located throughout the campus.

Campus community members are encouraged to program the department number (310-825-1491) into their cell phones. When on campus this number should be used in the event of an emergency to avoid the delay that may occur by the time it takes for the emergency cellular operators to transfer calls to the appropriate jurisdiction.

NONEMERGENCY calls for service can be made by contacting the department at (310) 825-1491.

Crime Statistics and Reports
As required by the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, UCLA prepares an annual report describing campus security policy and information concerning alcohol and drug use, crime prevention, crime reporting, and related matters. It also includes three years of campus statistics. Printed copies are available by calling (310) 825-1491. The report can be accessed at http://map.aias.ucla.edu/go/1000958.

Community Service Officers
UCPD employs approximately 80 student community service officers (CSOs; http://map.aias.ucla.edu/go/1000806) who are the additional “eyes and ears” (trained observers) of the department and act as nonintervention visual deterrents to crime. CSOs wear high-visibility uniforms and carry two-way police radios. They are dispatched by the department’s Communications Center and provide a direct link to police, fire, and medical aid. CSOs provide security service to a number of campus buildings, including residence halls and libraries. They are most well-known for the Campus Escort Service and the Evening Van Service. The Campus Escort Service operates every day of the year from dusk to 1 a.m. Individuals requesting the service call the Communications Center at (310) 794-9255; 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 provides a safe and convenient mode of transportation around campus at night 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.aias.ucla.edu/go/1001449) that works closely with community members to make UCLA a safer place to work, live, and learn. The unit gives presentations on vehicle and residential security, personal safety, office and equipment security, and rape prevention. Other programs are developed to meet the special needs of the campus community. Brochures and literature on crime prevention and personal safety are available. The Center for Women and Men 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, pornography, 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. The Center for Women and Men 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. The center works closely with the student housing office 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 Alert Bulletins (http://map.aias.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 (EMT’s). 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 programs that are designed to discourage the use of illicit substances and to educate students on the merits of legal and responsible alcohol consumption. Student Psychological Services (310-825-0788; http://www.sps.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 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 common-
sense 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/or referrals to neighboring police departments.

Safety Tips

The nature of the studies and research done at UCLA requires many of the campus buildings to be open 24 hours. Because the campus is so large and adjacent to the greater Los Angeles community, individuals with criminal intent are able to access the University grounds. Regardless of the time of day or night and no matter where persons are on campus, they should be alert and aware of their surroundings and exercise good commonsense safety precautions. Anyone parking on campus should remember to lock their vehicles and consider investing in a steering wheel locking device or alarm. Take advantage of all the safety services provided by the University and UCPO. Use the Campus Escort Service when walking at night. Keep room and apartment doors locked at all times. Most important, anyone needing assistance should not hesitate to contact the department.

APPENDIX B: UNIVERSITY ADMINISTRATIVE OFFICERS

Terms of Regents (http://www.universityofcalifornia.edu/regents/) appointed by the Governor expire March 1 of the year in parentheses. The Student Regent (D’Artagnan Scorza) 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
Arnold Schwarzenegger

Lieutenant Governor of California
John Garamendi

Speaker of the Assembly
Karen Bass

State Superintendent of Public Instruction
Jack T. O’Connell

President of the Alumni Associations of the University of California
David Shewmake

Vice President of the Alumni Associations of the University of California
Debbie Cole

President of the University
Mark G. Yudof

Appointed Regents
Richard C. Blum (2014)
William De La Peña (2018)
Russell S. Gould (2017)
Judith L. Hopkinson (2009)
John Hotchkis (2009)
Eddie Island (2017)
Odessa P. Johnson (2012)
Joanne C. Kozberg (2010)
Sherry L. Lansing (2010)
Monica C. Lozano (2013)
George M. Marcus (2012)
Norman J. Pattiz (2015)
Bonnie Reiss (2020)
Frederick R. Ruiz (2016)
Leslie Tang Schilling (2013)
Bruce D. Varner (2018)
Paul D. Wachter (2016)
D’Artagnan Scorza, Student Regent (2009)

Faculty Representatives to the Board of Regents
Mary Croughan
Henry C. Powell

Officers of The Regents

President of The Regents
Arnold Schwarzenegger

Chair of The Regents
Richard C. Blum

Vice Chair of The Regents
Russell S. Gould

Chief Investment Officer and Acting Treasurer
Marie N. Berggren

General Counsel
Charles F. Robinson

Secretary and Chief of Staff
Diane M. Griffiths

Senior Vice President—Chief Compliance and Audit Officer
Sheryl Vacca

Office of the President

President of the University
Mark G. Yudof

Provost and Executive Vice President—Academic and Health Affairs
Wyatt R. Humen

Executive Vice President—Business Operations
Katherine N. Lapp

Executive Vice President—Chief Financial Officer
To be announced

Executive Vice President—University Affairs
Bruce B. Darling

Vice President—Agriculture and Natural Resources
Daniel M. Dooley

Vice President—Budget
Patrick J. Lenz

Vice President—Finance
Anne C. Broome

Vice President—Health Sciences and Services
To be announced

Vice President—Investments
Marie N. Berggren

Vice President—Laboratory Management
S. Robert Foley

Vice President—Legal Affairs
Charles F. Robinson

Vice President—Research and Graduate Studies
Steven V.W. Beckwith

Vice President—Student Affairs
Judy K. Sakaki

Chancellors of the Campuses

Chancellor at Berkeley
Robert J. Birgeneau

Chancellor at Davis
Larry N. Vanderhoef

Chancellor at Irvine
Michael V. Drake

Chancellor at Los Angeles
Gene D. Block

Chancellor at Merced
Sung-Mo Steve Kang

Chancellor at Riverside
Timothy P. White

Chancellor at San Diego
Marye Anne Fox

Chancellor at San Francisco
J. Michael Bishop

Chancellor at Santa Barbara
Henry T. Yang

Chancellor at Santa Cruz
George W. Blumenthal

University Professors, UCLA

Robert B. Edgerton, University Professor, Los Angeles, Anthropology, Psychiatry and Biobehavioral Sciences
M. Frederick Hawthorne, University Professor, Los Angeles, Chemistry and Biochemistry

UCLA Administrative Officers

Chancellor
Gene D. Block, Ph.D.

Executive Vice Chancellor and Provost
Scott L. Waugh, Ph.D., Acting
Administrative Vice Chancellor
Sam J. Morabito, M.B.A.

Vice Chancellor—Academic Personnel
Thomas H. Rice, Ph.D.

Vice Chancellor—External Affairs
Rhea Tuxtell, B.A.

Vice Chancellor—Finance, Budget, and Capital Programs
Steven A. Olsen, M.P.P.

Vice Chancellor—Graduate Studies and Dean of Graduate Division
Claudia Mitchell-Kernan, Ph.D.

Vice Chancellor—Legal Affairs
Kevin S. Reed, J.D.

Vice Chancellor—Medical Sciences
Gerald S. Levey, M.D.

Vice Chancellor—Research
Roberto Peceo, Ph.D.

Vice Chancellor—Student Affairs
Janina Montero, Ph.D.

Vice Provost—Faculty Diversity and Development
Rosina M. Becerra, Ph.D.

Vice Provost—Intellectual Property and Industry Relations
Kathryn Ann Atchison, D.D.S., M.P.H.

Vice Provost and Dean—UCLA International Institute
J. Nicholas Entringik, Ph.D., Acting

Vice Provost—Undergraduate Education
Judith L. Smith, Ph.D.

University Librarian
Gary Strong, M.L.S.
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 290 endowed chairs which have been approved by the Office of the President of the University of California.

See the complete list of endowed chairs at http://www.registrar.ucla.edu/catalog/.

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 UCLA Alumni Association Awards Ceremony, and selection of recipients is based on recommendations of the Academic Senate Committee on Teaching. Nominations are solicited from academic departments during Fall Quarter.

The Luckman Distinguished Teaching Awards Program was established in late 1991 after receipt of a generous gift from Harriet and Charles Luckman. Awards given for 1992 through 1997 were named the Luckman Distinguished Teaching Awards.

1961
John F. Barron (Economics)
Hector E. Hall (Physics)
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 (Linguistics)

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. Hobb's (Political Science)
J.E. Phillips (English)
Raymond M. Redheffer (Mathematics)
Margret I. Sellers (Microbiology and Immunology)

1970
Ehrhard Bahr (Germanic Languages)
Joseph Cascaron (Biology)
B. Lamar Johnson (Education)
Daniel Kivelson (Chemistry and Biochemistry)
Richard D. Lehan (English)

1971
Vernon E. Denne (Chemical Engineering)
Peter N. Ladefoged (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. Dukeminier (Law)
George R. Guffey (English)
Marilyn L. Kourilely (Education)
Chand R. Viswanathan (Electrical Engineering)

1977
Michael J.B. Allen (English)
Henry M. Cherrick (Dentistry)
Richard C. Maxwell (Law)
J. William Schofield (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)
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 Distin-
guished 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 Bartsch (History)
Bonnie Lisle (Writing Programs)
Kenneth R. Pfeiffer (Civil Engineering, Psychology)

1990
Lisa Gerrard (Writing Programs)
Andres Durstenfeld (Biology)
Dorothy Phillips (Physiological Science)

1991
Marde S. Gregory (Speech)
Betty A. Luceigh (Chemistry and Biochemistry)
Cheryl Pfoff (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)

1995
Norman Collaros (French)
Kristine S. Knaplund (Law)
Christopher Mott (English)

1996
Scott Bowman (Political Science)
Timothy Tangherlini (Scandinavian Section)
G. Jennifer Wilson (Honors and Undergraduate Programs)

1997
William McDonald (Film and Television)
Stuart Slavin (Pediatrics)
Sung-Ock Sohn (East Asian Languages and Cultures)

1998
Paul Frymer (Political Science)
George Gadda (Writing Programs)
Julie Giese (English)

1999
Patricia Gilmore-Jaffe (Writing Programs)
Emily Schiller (English)
Scott Voley (UCLA Emergency Medicine Center)

2000
Nicole Dufresne (French)
Thomas Holm (Law)
Richard P. Usatine (Family Medicine)

2001
George Leddy (Geography/International Development Studies)
Sandra Mano (Writing Programs)
L. Jean Perry (Molecular, Cell, and Developmental Biology)

2002
Steven Hardinger (Chemistry and Biochemistry)
Colleen K. Keenan (Nursing)
Cynthia Merrill (Writing Programs)

2003
Marjorie A. Bates (Chemistry and Biochemistry)
Anita McCormick (Writing Programs)
Richard Stevenson III (Dentistry)

2004
Andrew Hsu (Philosophy)
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)

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 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
Robert N. Watson (English)

2007
William J. Kaiser (Electrical Engineering)

2008
Alicia Gaspar de Alba (Chicana and Chicano Studies)
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
</table>