Organization of the Catalog

General Campus Colleges

College of Letters and Science
African Area Studies
African Studies
Afro-American Studies
American Indian Studies
Anthropology
Applied Linguistics
Archaeology
Asian American Studies
Astronomy
Atmospheric Sciences
Biology
Business and Administration
Chemistry and Biochemistry
Chicano Studies
Classics
Communication Studies
Comparative Literature
Computing, Program in
Cybernetics
Earth and Space Sciences
East Asian Languages and Cultures
East Asian Studies
Economics
English
Folklore and Mythology
French
Geography
Germanic Languages
History
Indo-European Studies
International Relations
Islamic Studies
Italian
Kinesiology
Latin American Studies
Law and Society
Linguistics
Mathematics
Microbiology
Molecular Biology
Near Eastern Languages and Cultures
Near Eastern Studies
Philosophy
Physics
Political Science
Psychology
Religion, Study of
Romance Linguistics and Literature
ROTC Programs
Scandinavian Languages (see Germanic Languages)
Slavic Languages and Literatures
Sociology
Spanish and Portuguese
Urban Studies/Organizational Studies
Women's Studies
World Arts and Cultures (see College of Fine Arts)

College of Fine Arts
Art, Design, and Art History
Dance
Motion Picture/Television (see Theater Arts)
Music
Theater Arts
World Arts and Cultures

General Campus
Professional Schools

School of Engineering and Applied Science
Chemical Engineering
Civil Engineering
Computer Science
Electrical Engineering
Environmental Science and Engineering (see School of Public Health)
Materials Science and Engineering
Mechanical, Aerospace, and Nuclear Engineering
Graduate School of Architecture and Urban Planning
Graduate School of Education
School of Law
Graduate School of Library and Information Science
Graduate School of Management
School of Social Welfare

Health Science Schools

School of Dentistry
Oral Biology

School of Medicine
Anatomy
Anesthesiology (Nurse Anesthesia)
Biological Chemistry
Biomathematics
Medicine
Microbiology and Immunology
Neurology
Neuroscience
Obstetrics and Gynecology
Ophthalmology
Pathology
Pediatrics
Pharmacology
Physiology
Psychiatry and Biobehavioral Sciences
Radiation Oncology
Radiological Sciences (Biomedical Physics)
Surgery

School of Nursing

School of Public Health
Environmental Science and Engineering
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>About UCLA</td>
<td>1-18</td>
</tr>
<tr>
<td>2</td>
<td>Undergraduate Study</td>
<td>21-38</td>
</tr>
<tr>
<td>3</td>
<td>Graduate Study</td>
<td>39-56</td>
</tr>
<tr>
<td>4</td>
<td>Academics</td>
<td>57-66</td>
</tr>
<tr>
<td>5</td>
<td>College of Letters and Science</td>
<td>67-78</td>
</tr>
<tr>
<td>6</td>
<td>College of Fine Arts</td>
<td>79-302</td>
</tr>
</tbody>
</table>

**Academic Calendar** Iv

<table>
<thead>
<tr>
<th>Department/Programs:</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Area Studies</td>
<td>81</td>
</tr>
<tr>
<td>African Studies</td>
<td>84</td>
</tr>
<tr>
<td>Afro-American Studies</td>
<td>84</td>
</tr>
<tr>
<td>American Indian Studies</td>
<td>87</td>
</tr>
<tr>
<td>Anthropology</td>
<td>88</td>
</tr>
<tr>
<td>Applied Linguistics</td>
<td>98</td>
</tr>
<tr>
<td>Archaeology</td>
<td>99</td>
</tr>
<tr>
<td>Asian American Studies</td>
<td>102</td>
</tr>
<tr>
<td>Astronomy</td>
<td>103</td>
</tr>
<tr>
<td>Atmospheric Sciences</td>
<td>106</td>
</tr>
<tr>
<td>Biology</td>
<td>109</td>
</tr>
<tr>
<td>Business and Administration</td>
<td>117</td>
</tr>
<tr>
<td>Chemistry and Biochemistry</td>
<td>118</td>
</tr>
<tr>
<td>Chemistry/Materials Science</td>
<td>124</td>
</tr>
<tr>
<td>Chicano Studies</td>
<td>125</td>
</tr>
<tr>
<td>Classics</td>
<td>126</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>131</td>
</tr>
<tr>
<td>Comparative Literature</td>
<td>132</td>
</tr>
<tr>
<td>Computing, Program in</td>
<td>135</td>
</tr>
<tr>
<td>Cybernetics</td>
<td>136</td>
</tr>
<tr>
<td>Diversified Liberal Arts</td>
<td>137</td>
</tr>
<tr>
<td>Earth and Space Sciences</td>
<td>137</td>
</tr>
<tr>
<td>East Asian Languages and Cultures</td>
<td>145</td>
</tr>
<tr>
<td>East Asian Studies</td>
<td>149</td>
</tr>
<tr>
<td>Economics</td>
<td>149</td>
</tr>
<tr>
<td>Economics/System Science</td>
<td>155</td>
</tr>
<tr>
<td>English</td>
<td>156</td>
</tr>
<tr>
<td>English Composition</td>
<td>162</td>
</tr>
<tr>
<td>English as a Second Language Section</td>
<td>164</td>
</tr>
<tr>
<td>Folklore and Mythology</td>
<td>167</td>
</tr>
<tr>
<td>Foreign Literature in Translation</td>
<td>170</td>
</tr>
<tr>
<td>French</td>
<td>171</td>
</tr>
<tr>
<td>Geography</td>
<td>175</td>
</tr>
<tr>
<td>Germanic Languages</td>
<td>182</td>
</tr>
<tr>
<td>Scandinavian Section</td>
<td>187</td>
</tr>
<tr>
<td>History</td>
<td>189</td>
</tr>
<tr>
<td>Humanities</td>
<td>199</td>
</tr>
<tr>
<td>Indo-European Studies</td>
<td>200</td>
</tr>
<tr>
<td>International Relations</td>
<td>202</td>
</tr>
<tr>
<td>Islamic Studies</td>
<td>202</td>
</tr>
<tr>
<td>Italian</td>
<td>204</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>208</td>
</tr>
<tr>
<td>Latin American Studies</td>
<td>212</td>
</tr>
<tr>
<td>Law and Society</td>
<td>218</td>
</tr>
<tr>
<td>Linguistics</td>
<td>218</td>
</tr>
<tr>
<td>Mathematics</td>
<td>225</td>
</tr>
<tr>
<td>Mathematics/Computer Science</td>
<td>233</td>
</tr>
<tr>
<td>Mathematics/System Science</td>
<td>234</td>
</tr>
<tr>
<td>Microbiology</td>
<td>234</td>
</tr>
<tr>
<td>Molecular Biology</td>
<td>237</td>
</tr>
<tr>
<td>Near Eastern Languages and Cultures</td>
<td>238</td>
</tr>
<tr>
<td>Near Eastern Studies</td>
<td>245</td>
</tr>
<tr>
<td>Philosophy</td>
<td>245</td>
</tr>
<tr>
<td>Physics</td>
<td>250</td>
</tr>
<tr>
<td>Political Science</td>
<td>255</td>
</tr>
<tr>
<td>Psychology</td>
<td>262</td>
</tr>
<tr>
<td>Religion, Study Of</td>
<td>272</td>
</tr>
<tr>
<td>Romance Linguistics and Literature</td>
<td>273</td>
</tr>
<tr>
<td>ROTC Programs</td>
<td>275</td>
</tr>
<tr>
<td>Aerospace Studies</td>
<td>275</td>
</tr>
<tr>
<td>Military Science</td>
<td>276</td>
</tr>
<tr>
<td>Naval Science</td>
<td>277</td>
</tr>
<tr>
<td>Slavic Languages and Literatures</td>
<td>278</td>
</tr>
<tr>
<td>Sociology</td>
<td>282</td>
</tr>
<tr>
<td>Spanish and Portuguese</td>
<td>289</td>
</tr>
<tr>
<td>Speech</td>
<td>295</td>
</tr>
<tr>
<td>Urban Studies/ Organizational Studies</td>
<td>296</td>
</tr>
<tr>
<td>Women's Studies</td>
<td>297</td>
</tr>
<tr>
<td>World Arts and Cultures</td>
<td>298</td>
</tr>
</tbody>
</table>

**Chapter 6: College of Fine Arts** 299

<p>| Bachelor of Arts Degrees      | 300  |
| Graduate Study               | 302  |</p>
<table>
<thead>
<tr>
<th>Departments/Programs:</th>
<th>Biological Chemistry</th>
<th>437</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art, Design, and Art History</td>
<td>Biomathematics</td>
<td>439</td>
</tr>
<tr>
<td>Dance</td>
<td>Medicine</td>
<td>442</td>
</tr>
<tr>
<td>Music</td>
<td>Microbiology and Immunology</td>
<td>442</td>
</tr>
<tr>
<td>Theater Arts</td>
<td>Neurology</td>
<td>445</td>
</tr>
<tr>
<td>World Arts and Cultures</td>
<td>Neuroscience</td>
<td>445</td>
</tr>
<tr>
<td></td>
<td>Obstetrics and Gynecology</td>
<td>446</td>
</tr>
<tr>
<td></td>
<td>Ophthalmology</td>
<td>447</td>
</tr>
<tr>
<td></td>
<td>Pathology</td>
<td>447</td>
</tr>
<tr>
<td></td>
<td>Pediatrics</td>
<td>449</td>
</tr>
<tr>
<td></td>
<td>Pharmacology</td>
<td>449</td>
</tr>
<tr>
<td></td>
<td>Physiology</td>
<td>451</td>
</tr>
<tr>
<td></td>
<td>Psychiatry and Biobehavioral Sciences</td>
<td>453</td>
</tr>
<tr>
<td></td>
<td>Radiation Oncology</td>
<td>460</td>
</tr>
<tr>
<td></td>
<td>Radiological Sciences</td>
<td>460</td>
</tr>
<tr>
<td></td>
<td>Surgery</td>
<td>462</td>
</tr>
<tr>
<td>Chapter 7: School of Engineering and Applied Science</td>
<td>337</td>
<td></td>
</tr>
<tr>
<td>Bachelor of Science Degrees</td>
<td>338</td>
<td></td>
</tr>
<tr>
<td>Graduate Study</td>
<td>341</td>
<td></td>
</tr>
<tr>
<td>Departments:</td>
<td>Chemical Engineering</td>
<td>342</td>
</tr>
<tr>
<td></td>
<td>Civil Engineering</td>
<td>344</td>
</tr>
<tr>
<td></td>
<td>Computer Science</td>
<td>348</td>
</tr>
<tr>
<td></td>
<td>Electrical Engineering</td>
<td>353</td>
</tr>
<tr>
<td></td>
<td>Materials Science and Engineering</td>
<td>359</td>
</tr>
<tr>
<td></td>
<td>Mechanical, Aerospace, and Nuclear Engineering</td>
<td>362</td>
</tr>
<tr>
<td>Schoolwide Engineering</td>
<td>369</td>
<td></td>
</tr>
<tr>
<td>Chapter 8: Graduate School of Architecture and Urban Planning</td>
<td>371</td>
<td></td>
</tr>
<tr>
<td>Chapter 9: Graduate School of Education</td>
<td>385</td>
<td></td>
</tr>
<tr>
<td>Chapter 10: School of Law</td>
<td>395</td>
<td></td>
</tr>
<tr>
<td>Chapter 11: Graduate School of Library and Information Science</td>
<td>403</td>
<td></td>
</tr>
<tr>
<td>Chapter 12: Graduate School of Management</td>
<td>409</td>
<td></td>
</tr>
<tr>
<td>Chapter 13: School of Social Welfare</td>
<td>423</td>
<td></td>
</tr>
<tr>
<td>Chapter 14: School of Dentistry</td>
<td>427</td>
<td></td>
</tr>
<tr>
<td>Oral Biology</td>
<td>428</td>
<td></td>
</tr>
<tr>
<td>Chapter 15: School of Medicine</td>
<td>431</td>
<td></td>
</tr>
<tr>
<td>Degrees and Programs</td>
<td>432</td>
<td></td>
</tr>
<tr>
<td>Departments:</td>
<td>Anatomy</td>
<td>433</td>
</tr>
<tr>
<td></td>
<td>Medical History Division</td>
<td>435</td>
</tr>
<tr>
<td></td>
<td>Anesthesiology</td>
<td>435</td>
</tr>
<tr>
<td>Appendix</td>
<td>491</td>
<td></td>
</tr>
<tr>
<td>Nondiscrimination</td>
<td>491</td>
<td></td>
</tr>
<tr>
<td>Residence for Tuition Purposes</td>
<td>491</td>
<td></td>
</tr>
<tr>
<td>Grading Regulations</td>
<td>493</td>
<td></td>
</tr>
<tr>
<td>Student Conduct: Violation of University Policies</td>
<td>494</td>
<td></td>
</tr>
<tr>
<td>Disclosure of Student Records</td>
<td>494</td>
<td></td>
</tr>
<tr>
<td>Endowed Chairs</td>
<td>495</td>
<td></td>
</tr>
<tr>
<td>Administrative Officers</td>
<td>496</td>
<td></td>
</tr>
<tr>
<td>Index</td>
<td>498</td>
<td></td>
</tr>
<tr>
<td>Campus Map</td>
<td>504</td>
<td></td>
</tr>
</tbody>
</table>

**About This Catalog**

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Director of Public Affairs
Publications: Hallie Masler
Editor: Leann J. Hennig
Design: Robin Weisz, Juliet Beynon

On the cover: Students on Janss Steps comparing notes, with the Royce Hall towers behind.

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**Please note**

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

Other information about UCLA may be found in the announcements of the Schools of Architecture and Urban Planning, Dentistry, Education, Engineering and Applied Science, Law, Library and Information Science, Management, Medicine, Nursing, Public Health, and Social Welfare, and in literature produced by the College of Fine Arts. Further details on graduate programs are available in the Graduate Division publication, Standards and Procedures for Graduate Study at UCLA.

**UCLA (USPS 646-680)**

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<table>
<thead>
<tr>
<th>Event</th>
<th>Fall 1985</th>
<th>Winter 1986</th>
<th>Spring 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>First day to file undergraduate application with admissions officer, 1147 Murphy Hall (last day will depend on number of applications received)</td>
<td>November 1, 1984</td>
<td>July 1, 1985</td>
<td>October 1, 1985</td>
</tr>
<tr>
<td>Last day to file graduate petitions for change of major with Graduate Division, 1225 Murphy Hall</td>
<td>December 30</td>
<td>October 1</td>
<td>December 30</td>
</tr>
<tr>
<td>Last day to file application for graduate admission, readmission, or renewal of application with complete credentials and application fee, with Graduate Admissions Office, 1247 Murphy Hall</td>
<td>January 14, 1985</td>
<td>October 1</td>
<td>December 30</td>
</tr>
<tr>
<td>First day to obtain Student Parking Request forms at Campus Parking Service</td>
<td>May 1</td>
<td>October 7</td>
<td>January 13, 1986</td>
</tr>
<tr>
<td>Distribution of registration materials by letter groups for continuing students</td>
<td>June 1</td>
<td>November 11</td>
<td>February 10</td>
</tr>
<tr>
<td>Schedule of Classes goes on sale at Students’ Store, Ackerman Union and North Campus facilities</td>
<td>June 5</td>
<td>November 13</td>
<td>February 12</td>
</tr>
<tr>
<td>New and reentrant students eligible to register by mail should receive Registration Forms at permanent address (weekly mailings)</td>
<td>June 24-August 16</td>
<td>November 1-27</td>
<td>February 3-24</td>
</tr>
<tr>
<td>Academic counseling for new students is available by appointment in college and school offices</td>
<td>July 1</td>
<td>Consult college or school</td>
<td>Consult college or school</td>
</tr>
<tr>
<td>Enrollment for student health insurance at A2-143 Center for Health Sciences</td>
<td>July 1-October 11</td>
<td>December 9-January 24</td>
<td>March 24-April 18</td>
</tr>
<tr>
<td>Last day to submit Student Parking Request for campus parking permit</td>
<td>July 10 (1st run)</td>
<td>November 12</td>
<td>February 18</td>
</tr>
<tr>
<td></td>
<td>August 20 (2nd run)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*First mailing date for continuing student registration (fee payment) and enrollment in classes</td>
<td>August 7</td>
<td>November 1</td>
<td>February 1</td>
</tr>
<tr>
<td>Eligibility date for new and reentrant registration by mail (Statement of Legal Residence must be filed by this date in order to receive Registration Forms by mail)</td>
<td>August 15</td>
<td>November 25</td>
<td>February 25</td>
</tr>
<tr>
<td>Last day to file undergraduate application for readmission with Registrar, 1134 Murphy Hall (late applicants will pay a $50 late registration fee)</td>
<td>August 16</td>
<td>November 27</td>
<td>February 28</td>
</tr>
<tr>
<td>*First mailing date for new and reentrant student registration (fee payment) and enrollment in classes</td>
<td>August 30</td>
<td>December 6</td>
<td>March 7</td>
</tr>
<tr>
<td>*Last mailing date for all students to register (pay fees) and/or enroll by mail</td>
<td>September 3-13</td>
<td>December 18</td>
<td>March 20</td>
</tr>
<tr>
<td>Fee payments must be deposited in Cashier’s Drop Box, 1125 Murphy Hall (Reg Card datamailer will be mailed September 16)</td>
<td>September 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registrar mails:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Tentative Study List datamailer with results of enrollment processed by mail, and appointment for undergraduate enrollment in person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Validated Reg Card datamailer for students who paid fees by mail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English as a Second Language Placement Examination (ESLPE)</td>
<td>September 23</td>
<td>January 7, 1986</td>
<td>April 1</td>
</tr>
<tr>
<td>QUARTER BEGINS</td>
<td>September 23</td>
<td>January 8</td>
<td>April 2</td>
</tr>
<tr>
<td>Financial Aid check distribution to registered students begins</td>
<td>September 23</td>
<td>January 8</td>
<td>April 2</td>
</tr>
<tr>
<td>Issuing of UCLA Student I.D. Cards to new and reentering students begins</td>
<td>September 23</td>
<td>January 8</td>
<td>April 2</td>
</tr>
<tr>
<td>Registration in person, 8:30 a.m. to 5 p.m. (allow 30 minutes to complete fee payment process)</td>
<td>September 23-27</td>
<td>January 8-10</td>
<td>April 2-4</td>
</tr>
<tr>
<td>Undergraduate enrollment in person by appointment</td>
<td>September 23-27</td>
<td>January 8-10</td>
<td>April 2-4</td>
</tr>
<tr>
<td>Chemistry/Mathematics Preliminary Examination</td>
<td>September 24</td>
<td>November 12</td>
<td>February 25</td>
</tr>
<tr>
<td>French Placement Examination</td>
<td>September 25</td>
<td>January 10</td>
<td>April 4</td>
</tr>
<tr>
<td>Music Placement Examination</td>
<td>September 25</td>
<td>January 8</td>
<td>April 2</td>
</tr>
<tr>
<td>Spanish and Portuguese Placement Examination</td>
<td>September 26</td>
<td>January 9</td>
<td>April 3</td>
</tr>
<tr>
<td>Subject A Placement Examination and Proficiency Examinations for English 3</td>
<td>September 26</td>
<td>January 9</td>
<td>April 3</td>
</tr>
<tr>
<td>INSTRUCTION BEGINS</td>
<td>September 30</td>
<td>January 13</td>
<td>April 7</td>
</tr>
<tr>
<td>Changes in Study List without fee, 8:30 a.m. to 5 p.m.</td>
<td>September 30-October 11</td>
<td>January 13-24</td>
<td>April 7-18</td>
</tr>
</tbody>
</table>

*Tentative dates, refer to Schedule of Classes.
<table>
<thead>
<tr>
<th>Event Description</th>
<th>Fall 1985</th>
<th>Winter 1986</th>
<th>Spring 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATE registration in person with $50 fee, 8:30 a.m. to 5 p.m.</td>
<td>September 30-</td>
<td>January 13-24</td>
<td>April 7-18</td>
</tr>
<tr>
<td></td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>Graduate Study List Requests should be filed with major department by 4 p.m.;</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>all approved requests due to Registrar, 1134 Murphy Hall, by 5:15 p.m.</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>Last day:</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>(1) To change Study List (add, drop courses) without fee</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>(2) To check waiting lists for courses on computer</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>(3) To file advancement to candidacy petitions for the master’s degree with</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>Graduate Division, 1225 Murphy Hall</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>(4) To file graduate leaves of absence with Graduate Division, 1225 Murphy Hall</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>(5) To file Study List Request without fee</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>(6) To file undergraduate request for fee reduction with college or school</td>
<td>October 11</td>
<td>January 24</td>
<td>April 18</td>
</tr>
<tr>
<td>Registrar mails Official Study List datamailer to all registered students</td>
<td>October 14</td>
<td>January 27</td>
<td>April 21</td>
</tr>
<tr>
<td>WITH APPROVAL OF ACADEMIC DEAN:</td>
<td>October 18</td>
<td>January 31</td>
<td>April 25</td>
</tr>
<tr>
<td><strong>(1)</strong> Last day for graduates to ADD courses with $3 petition fee</td>
<td>October 24-26</td>
<td>January 23-25</td>
<td>April 24-26</td>
</tr>
<tr>
<td><strong>(2)</strong> Last day for graduates to file Late Study List with $50 fee</td>
<td>October 25</td>
<td>February 1</td>
<td>May 2</td>
</tr>
<tr>
<td><strong>(3)</strong> Undergraduates approved for reduced fees are audited (must be enrolled</td>
<td>October 25</td>
<td>February 7</td>
<td>May 2</td>
</tr>
<tr>
<td>in ten units or less to be eligible for reduction</td>
<td>October 25</td>
<td>February 7</td>
<td>May 2</td>
</tr>
<tr>
<td>Orientation meetings on format for master’s theses and doctoral dissertations</td>
<td>October 24-26</td>
<td>January 23-25</td>
<td>April 24-26</td>
</tr>
<tr>
<td>(see Theses and Dissertations Adviser, 134 Powell Library)</td>
<td>October 25</td>
<td>February 7</td>
<td>May 2</td>
</tr>
<tr>
<td>Last day for continuing students to file applications for undergraduate</td>
<td>October 25</td>
<td>February 7</td>
<td>May 2</td>
</tr>
<tr>
<td>scholarships for 1986-87</td>
<td>October 25</td>
<td>February 7</td>
<td>May 2</td>
</tr>
<tr>
<td>Last day to declare bachelor’s degree candidacy for current quarter (without</td>
<td>October 25</td>
<td>February 7</td>
<td>May 2</td>
</tr>
<tr>
<td>fee) with Registrar’s Student Information, 1111 Murphy Hall</td>
<td>October 25</td>
<td>February 7</td>
<td>May 2</td>
</tr>
<tr>
<td>WITH APPROVAL OF ACADEMIC DEAN:</td>
<td>October 25</td>
<td>February 7</td>
<td>May 2</td>
</tr>
<tr>
<td><strong>(1)</strong> For undergraduates to DROP courses or change grading basis</td>
<td>November 1</td>
<td>February 21</td>
<td>May 16</td>
</tr>
<tr>
<td>(optional P/NP) with $3 petition fee and APPROVAL OF ACADEMIC DEAN</td>
<td>November 1</td>
<td>February 21</td>
<td>May 16</td>
</tr>
<tr>
<td><strong>(2)</strong> Last day for undergraduates to file Late Study List with $50 fee</td>
<td>November 1</td>
<td>February 21</td>
<td>May 16</td>
</tr>
<tr>
<td>Last day:</td>
<td>November 1</td>
<td>February 21</td>
<td>May 16</td>
</tr>
<tr>
<td><strong>(1)</strong> To file removal of Incomplete petition ($5 fee) with Registrar’s Student</td>
<td>November 1</td>
<td>February 21</td>
<td>May 16</td>
</tr>
<tr>
<td>Information, 1111 Murphy Hall</td>
<td>November 4</td>
<td>February 17</td>
<td>May 12</td>
</tr>
<tr>
<td>Last day to submit final drafts of dissertations to doctoral committees for</td>
<td>November 4</td>
<td>February 17</td>
<td>May 12</td>
</tr>
<tr>
<td>degrees to be conferred in current quarter</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td>Last day to declare bachelor’s degree candidacy (with $3 fee) with Registrar’s</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td>Student Information, 1111 Murphy Hall</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td>Last day to submit final drafts of theses to master’s committees for degrees to</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td>be conferred in current quarter</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td>Last day to file completed copies of theses for the master’s degree and</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td>dissertations for the doctoral degree to be conferred in current quarter with</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td>Graduate Division, 1225 Murphy Hall</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
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<tr>
<td>Last day to withdraw</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td>WITH APPROVAL OF ACADEMIC DEAN:</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td><strong>(1)</strong> Last day for graduates to change grading basis (optional S/U) with</td>
<td>November 4</td>
<td>February 17</td>
<td>May 12</td>
</tr>
<tr>
<td>$3 petition fee</td>
<td>November 15</td>
<td>February 28</td>
<td>May 23</td>
</tr>
<tr>
<td><strong>(2)</strong> Last day for graduates to DROP courses with $3 petition fee</td>
<td>December 6</td>
<td>March 21</td>
<td>June 13</td>
</tr>
<tr>
<td>INSTRUCTION ENDS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final examinations</td>
<td>December 7</td>
<td>March 22</td>
<td>June 14</td>
</tr>
<tr>
<td>QUARTER ENDS</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Last day to file applications for graduate merit-based financial support for 1986-87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unofficial copy of previous quarter’s grades available at Registrar’s Student</td>
<td>February 3, 1986</td>
<td>April 28</td>
<td>July 11</td>
</tr>
<tr>
<td>Information, 1111 Murphy Hall</td>
<td>February 3, 1986</td>
<td>April 28</td>
<td>July 11</td>
</tr>
<tr>
<td>Commencement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic and administrative holidays</td>
<td>July 4</td>
<td>January 20</td>
<td>May 26</td>
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<tr>
<td></td>
<td>September 2</td>
<td>February 17</td>
<td>May 26</td>
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<td>November 28, 29</td>
<td>March 31</td>
<td>May 26</td>
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<td>December 24, 25</td>
<td>March 31</td>
<td>May 26</td>
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<td>December 31</td>
<td>March 31</td>
<td>May 26</td>
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<td></td>
<td>January 1</td>
<td>January 20</td>
<td>May 26</td>
</tr>
</tbody>
</table>

**Changes to Official Study List after this date will be considered only under extraordinary circumstances and with approval of the academic dean.**
"... in ten years ... we shall look with amazement upon the development of this University, for it is certain to be greater, far greater, than the imagination of any of us can foresee."
— Ernest Carroll Moore
UCLA Director, 1919

Humble Beginnings

The year was 1880. With a population of 11,000, Los Angeles was a gaslit pueblo trying to convince the state to establish in Southern California a second Normal School like the one already existing in San Jose, some 300 miles to the north.

In March of the following year, the State Assembly approved the establishment of such a school. A group of enthusiastic citizens, over 200 of whom contributed between $2 and $500, purchased a site less than a mile from the business section. Soon the towering Victorian form of the school rose from an orange grove which, today, is the site of the Central Los Angeles Public Library. On August 29, 1882, the Los Angeles Branch of the State Normal School welcomed its first students.

By 1914, the little pueblo of Los Angeles had grown to a city of 350,000 and the school, whose enrollment far exceeded its capacity, moved to new quarters — a Hollywood ranch off a dirt road which would later become Vermont Avenue.

With a view toward expansion, Director Ernest Carroll Moore proposed in 1917 that the school become the first branch of the University of California. Two years later, the Los Angeles State Normal School was replaced by the Southern Branch of the University of California, no longer merely a teacher's college but an institution that 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 1929 the Southern Branch had earned its new name: The University of California at Los Angeles (the “at” became a comma in 1958).

The Move Westward

As the student population of the University continued to increase, the need for a new site became obvious and the search was soon underway for a permanent home for UCLA. On September 21, 1927, Director Moore turned the first shovelful of soil that broke ground for the creation of the campus of his dreams.

The choice of Westwood, set squarely in the path of westward-moving Los Angeles, no doubt was an important factor in determining UCLA's future growth. But in 1929, on the barren, chaparral-covered hills of Westwood, the four original buildings — Royce Hall, Powell Library, Haines and Kinsey Halls — formed a lonesome little cluster in the middle of four hundred empty acres. The campus hosted some 5,500 students that fall.

The first priority after the move to Westwood was to establish a graduate curriculum, essential for any major university. The Regents established the master's degree at UCLA in 1933 and, three years later, the doctorate. UCLA was on its way to becoming a full-fledged university offering advanced study in almost every field.

Los Angeles and the University nurtured each other through the years and both experienced phenomenal growth and development during the
next half-century. UCLA's most spectacular period of growth 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 which is now one of the largest and most highly respected in the world.

UCLA Today

Today, UCLA is a large and complex institution devoted to scholarship, research, and public service. Known for academic excellence, many of its programs are rated among the best in the nation, some among the best in the world.

More than 140 buildings on 411 acres house 13 colleges and schools and serve over 33,000 students. UCLA offers its undergraduates a broad and balanced general education that prepares them for the challenges of an increasingly complex world. Graduate students develop mastery of a selected field and prepare for the profession through creative activity and research.

UCLA's top administrative officer is Chancellor Charles E. Young who has provided dynamic leadership for the campus since he took office in the fall of 1968.

The Setting

UCLA is cradled in rolling green hills just five miles inland from the ocean, 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 at its southern gate by Westwood Village. Originally envisioned as a business district to serve UCLA, this picturesque little college town has mushroomed into an entertainment magnet for the entire Los Angeles area. Its first-run movie theaters (about 20 at last count), restaurants, bookstores, and specialty shops of every description are just a brief walk from campus.

The cultural treasures of the Los Angeles County Museum of Art are a few miles to the east as are other museums, the community of Beverly Hills, the Music Center, and the downtown business area. Beyond that the deserts, snowcapped mountains, and ski resorts are little more than an hour's drive.

The Ambience

UCLA is a place of contrasts. Moods range from the activity of Bruin Walk to the serenity of the Japanese Garden. Attend a rock concert on the lawn, or a classical recital in Schoenberg Hall. Contemplate a Rodin or a Lachaise in the Sculpture Garden, or participate in a political rally in Meyerhoff Park.

UCLA is a place of surprises. A unique inverted fountain, where water flows over river rocks, recalls the Yosemite creeks that inspired it. Enter the Bunche Hall Annex and discover a glorious atrium where palms and ferns glisten in filtered sunlight. Step inside the courtyard of Macgowan Hall and come face to face with the impressive stone Tower of Masks, created by the noted sculptress Anna Mahler.

UCLA is a place for serious study in a vibrant, dynamic atmosphere. You must visit the campus to appreciate it. The Visitors Center, located in the Peter V. Ueberroth Olympic Office Building (10945 Le Conte Avenue, 825-4338), has a reception area where visitors are met, welcomed, and assisted. The center arranges group or personal tours of the campus all year round and provides information on campus events, concerts, exhibits, lectures, and recreation areas. The Office of Undergraduate Admissions and Relations with Schools (825-8764) conducts tours for prospective undergraduates.

The Commitment to Research

UCLA is one of the outstanding "research universities" in the country. What does this mean to you as a student?

It means that the same faculty members teach both undergraduate and graduate courses and that these instructors create knowledge as well as transmit it. They spend a major portion of their time engaged in research in libraries and laboratories and out in the field.

At UCLA you are taught by the people making the discoveries, so you learn the latest findings on every front. You may exchange ideas with faculty members who are authorities in their fields, and you will be encouraged to participate in research to experience firsthand the discovery of new knowledge. This inseparable commitment to teaching and research is the hallmark of a research university.

The Question of Size

Although UCLA has a larger enrollment than other University of California campuses, it is small in comparison to some of the Midwestern universities. Its general campus population of some 29,000 students is equal to that at UC Berkeley, but the UCLA campus is enriched by an additional 3,800 men and women studying in its health science schools of Dentistry, Medicine, Nursing, and Public Health. UCLA makes the most of its size by offering an extraordinary breadth of high quality academic programs and a range of student opportunities available at few other universities in the country.

Introducing UCLA / 3

Bruin Walk has a new look: stone pavers, steps, ramps, concrete wall seating, and new landscaping dress up the campus' main street.
A major concern of the faculty and staff is to allow you, the student, to feel that you belong. UCLA provides orientation sessions and special academic assistance programs for new students, a staff of helpful advisers and counselors in every college and academic department, a myriad of student services, and unlimited opportunities for involvement and participation.

All UCLA students share the pride of attending one of the most prestigious educational institutions in the country. Beyond that, no one individual deals with the totality of UCLA. Campus life is made comfortable by interacting and identifying with only certain parts of the whole, whether they be your academic department, residence hall, fraternity or sorority, club or organization, or the spirit of Bruin victories on the athletic fields.

Many prospective students ask about the size of classes at UCLA. Standard instructional formats include lectures, discussion sections, seminars, and laboratory sessions. Lecture groups of more than 200 — especially in introductory courses — are not unusual, but in such cases students generally also enroll in discussion sections of about 25 students. Seminars and laboratory classes usually have fewer than 20 students. There is an overall ratio of one faculty member for approximately 17 students.

Most UCLA faculty members take a genuine interest in their students. They set aside office hours for receiving students, and most appreciate the opportunity for informal conversation. Even professors who seem remote in the classroom may be just the opposite on a one-to-one basis. A brief discussion can benefit both student and instructor.

Professors are often aided, especially in the small discussion sections, by teaching assistants (TAs). These are graduate students who teach on a part-time basis while pursuing their degree. Many students find it helpful to talk to the TAs about academic problems.

Hallmarks of Excellence

Recent surveys indicate that in 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 and is by far the youngest institution in this select group.

ACADEMICS — UCLA has two colleges and eleven professional schools. The College of Letters and Science and the College of Fine Arts offer programs leading to both undergraduate and graduate degrees, as do the School of Engineering and Applied Science and the School of Nursing. The other professional schools offer graduate programs exclusively: the Graduate School of Architecture and Urban Planning, Graduate School of Education, School of Law, Graduate School of Library and Information Science, Graduate School of Management, School of Social Welfare and, in the health sciences, the Schools of Dentistry, Medicine, and Public Health.

Few universities in the world offer the extraordinary range and diversity of academic programs that students enjoy at UCLA. Undergraduates may earn a Bachelor of Arts or Bachelor of Science degree in one of 93 different disciplines; graduate students may earn one of 78 master’s and 95 doctoral and professional degrees.

THE FACULTY — Of the many factors that go into the making of a great university, no single factor is as important as its faculty. UCLA’s distinguished faculty includes Nobel laureates and many members of both the National Academy of Science and the American Academy of Arts and Sciences. During the past academic year 13 faculty members received Fulbright scholarships. Between 1964 and 1981, UCLA ranked sixth in the nation in the number of prestigious John Simon Guggenheim Fellowships awarded to faculty members.

In 1982 the Conference Board of Associated Research Councils evaluated the quality of the faculty in more than 150 American research universities. UCLA was judged second in the nation among public universities, and among the most highly rated overall. Of the 32 disciplines studied, 17 of UCLA’s academic departments were ranked among the top ten in the country.

RESEARCH — UCLA is among the six leading research universities in the country, receiving approximately $157 million a year in extramural grants and contracts to support its research activities. The University hosts several hundred postdoctoral scholars sharing its excellent research 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 sources of energy and safety, and the discovery of new knowledge in a myriad of vital areas, continue to improve the quality of life for people around the world.

TEACHING — Although all UCLA faculty members engage in research and the discovery of new knowledge, they are equally dedicated to disseminating their findings in the classroom. Indeed, excellence in teaching is one of the main criteria for faculty promotion, and distinguished teaching awards are among those most highly prized by UCLA professors.

STUDENT BODY — The diversity of 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 the majority are from California, students come from all 50 states and 116 foreign countries to study at UCLA. Foreign students number more than 2,100, making this one of the most popular American universities for students from abroad. Ethnic minorities comprise about one third of undergraduates and 25 percent of the graduate student population.

NUMEROUS OTHER FACTORS — With nearly six million volumes, UCLA’s library is rated among the finest in the country. Its athletic teams have made the University an acknowledged leader in intercollegiate sports. Its Center for the Performing Arts ranks as the largest, most diversified and comprehensive program of its kind in the country.

The University played a significant role in the 1984 Summer Olympics in Los Angeles, with a 4,000-athlete Olympic Village, all gymnastics and tennis events, the drug-testing laboratory, and most theatrical events of the Olympic Arts Festival on its campus. In the summer of 1985, UCLA
will host three major international gatherings: the fifteenth World Games for the Deaf, the General Conference of the International Association of Universities (IAU), and a conference on artificial intelligence sponsored by the International Joint Conferences on Artificial Intelligence and the American Association for Artificial Intelligence.

All these factors plus its research facilities, its community service, and its international links with all parts of the world, make UCLA today a very special kind of institution.

The University of California

The University of California traces its origins to 1868, when Governor Henry H. Haight signed the Organic Act providing that California's first "complete University" be created.

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 of California 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 nine campuses span the state, from Davis in the north to San Diego in the south. In between are Berkeley, San Francisco, Santa Cruz, Santa Barbara, Riverside, Irvine and, of course, Los Angeles.

All the campuses adhere to the same admission guidelines and high academic standards, yet each has its own distinct character, atmosphere, and — to some degree — academic individuality. Riverside, for example, excels in the plant sciences and entomology; Davis has a large agricultural school and offers 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 three law schools, as well as schools of architecture, business administration, education, engineering, and many others.

The UC campuses have a combined enrollment of 148,000 students, 90 percent of them California residents. Nearly one third 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 nine campuses are surpassed in size on the American continent only by the Library of Congress collection.

The faculty of the University of California is internationally known for its distinguished academic achievements. On its nine campuses the University has 18 Nobel laureates, and membership in the National Academy of Science is the largest of any university in the country.

University Administration

The University of California system is governed by a Board of Regents whose regular members are appointed by the Governor of California. In addition to setting broad general policy and making budgetary decisions for the UC system, The Regents appoint the President of the University, the nine chancellors, and the directors, provosts, 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 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 policy-making at both campuswide and systemwide levels.
Academic Resources and Programs

Research: The Discovery of Knowledge

As one of the largest research universities in the world, UCLA is renowned for its programs of faculty and student research; more than 3,000 funded programs are in progress at a given time. One focus of these efforts is a group of “organized research units” (ORUs) which provide an interdisciplinary approach to the search for knowledge.

ORUs are study centers and research institutes consisting of faculty and students from various departments engaged in continuing research of particular subjects. They do not offer courses of instruction or degrees, although several work in conjunction with interdepartmental instruction programs which lead to bachelor’s and/or advanced degrees. ORUs provide invaluable experience for students and faculty in basic and applied research, and greatly enhance UCLA’s educational program and the overall academic quality of the University.

In the overview which follows, UCLA’s organized research units are listed within five major divisions — health sciences, life sciences, physical sciences and engineering, social sciences, and arts and humanities. Within each division, representative groups and programs are included which, although not formally established as ORUs, are nevertheless doing important research in their respective areas.

Health Sciences

The LABORATORY OF BIOMEDICAL AND ENVIRONMENTAL SCIENCES, located in Warren Hall (900 Veteran Avenue, 825-9431) and funded through a contract with the Department of Energy, conducts research in the fields of biomolecular and cellular science, environmental biology, and nuclear medicine. Its major facilities include a cobalt radiation installation, a biomedical cyclotron, advanced scanning equipment, and environmentally controlled growth chambers.

The BRAIN RESEARCH INSTITUTE, center of neuroscience research at UCLA, is located in the Center for Health Sciences (73-364 BRI, 825-6055). It has the largest investigative program of its kind in the country, with more than 140 scientists working on problems ranging from the nerve cell to human behavior. The institute provides an environment for specific multidisciplinary research and training on the structure and function of the brain.

The DENTAL RESEARCH INSTITUTE, with principal laboratories on the seventh floor of the School of Dentistry, fosters research related to oral health. Areas of investigation include biomaterials, clinical studies, craniofacial biology, immunology/immunogenetics, oral neurology/pain, periodontology, and ultrastructure/cell biology. The Office of the Director is located at Harbor-UCLA Medical Center in Torrance (533-3491) and in 73-016 Center for Health Sciences (206-8045).

The MENTAL RETARDATION RESEARCH CENTER, located in 58-258 NPI (825-5542), provides laboratories and clinical facilities for research and training in mental retardation and related aspects of human development. Its interdisciplinary activities range from anthropological studies to molecular aspects of inherited metabolic diseases.

The JULES STEIN EYE INSTITUTE is one of the best equipped centers for research and treatment of eye diseases anywhere in the world. This comprehensive facility, located in the Center for Health Sciences (825-5051), is devoted to the study of vision, the care of patients with eye disease, and education in the broad field of ophthalmology. Outpatient, inpatient, and surgical facilities are provided.

In the health sciences, research carried out in ORUs is complemented by research on neurological and neuromuscular diseases in the Jerry Lewis Neuromuscular Research Center, the Reed Neurological Research Center, and the Neuropsychiatric Institute. The Jonsson Comprehensive Cancer Center, one of 20 comprehensive centers in the nation, is renowned for the breadth and excellence of its cancer research. The Center for Ulcer Research and Education is a federally funded center doing basic and applied research on the origin and treatment of ulcers, while scholars at the Mark Taper Center for Health Enhancement are improving the health of high-risk patients by initiating lifestyle changes.

Life Sciences

The MOLECULAR BIOLOGY INSTITUTE provides the research and training resources in molecular biology for faculty from the College of Letters and Science and the School of Medicine, and includes the Parvin Cancer Research Laboratories. Administrative offices are located in 168 MBI (825-1018).

The CENTER FOR THE STUDY OF WOMEN, located in 236A Kinsey Hall (825-0590), coordinates and disseminates interdisciplinary research on women, focusing on three programmatic areas: women, work, and the economy; women, language, and the arts; and women, science, and health. The center promotes innovative research by sponsoring conferences, publications, a visiting scholars program, the Graduate Gender Studies Union, and ongoing colloquia on Women, Culture, and Theory and Women in Science. In collaboration with other UC campuses, women’s studies programs, and community groups, the center seeks to address public policies affecting women’s lives.

Physical Sciences and Engineering

The CRUMP INSTITUTE FOR MEDICAL ENGINEERING, located in a modular unit on Circle Drive South at Westwood Plaza (825-4111), applies theory and engineering practice to problems in clinical medicine. Research focuses on noninvasive physiological monitoring of human subjects from infants to the aged, including development of experimental regimens, methods and equipment for data collection, and new mathematical techniques of data analysis, to assess the stability of these complex systems. Additional research areas include biochemical sensors, drug delivery systems, medical electronics, and biomechanics.

The INSTITUTE OF GEOPHYSICS AND PLANETARY PHYSICS (IGPP) is a Universitywide ORU engaged in interdisciplinary research studies of the earth, moon, and other planetary bodies, interplanetary space, and stellar interiors. Laboratories at the UCLA branch include the Space Science Center (space physics, plasma astrophysics), meteorite studies, seismology, glaciology, petrology, geochronology, archaeology, and origins of life on earth and in the solar system. The systemwide director’s office and UCLA branch office are located in Slichter Hall (information in 3839 Slichter Hall, 825-1664).

The WHITE MOUNTAIN RESEARCH STATION is a Universitywide ORU dedicated to high-altitude research. Four separate laboratory sites near Bishop, California, ranging up to 14,250 feet above sea level, include the highest permanent teaching and research facilities in North America. Research includes studies in archaeology and the biological and physical sciences. The administrative office is located in 3805 Geology (825-2093).
Among other interdisciplinary activities in the physical sciences and engineering at UCLA, researchers in the National Center for Intermedia Transport Research are applying the results of their particulate research to practical systems such as synthetic fuel emissions and the chemical and petrochemical industry. On another frontier, faculty and students in the Center for Plasma Physics and Fusion Engineering are studying the plasma fusion process in order to imitate the sun’s production of energy.

Social Sciences

The INSTITUTE OF AMERICAN CULTURES promotes the activities of four major ethnic centers whose goals are to study and illuminate the histories of our country’s minorities, and to apply the University’s capabilities to the analysis and solution of specific minority problems. These centers promote faculty research, encourage the development of new courses and degree programs, assist departments in recruiting scholars, build library and other resources, and publish literature to disseminate the results of their work.

The Center for Afro-American Studies (3111 Campbell Hall, 825-7403) conducts and sponsors research on the Afro-American experience, coordinates the Afro-American Studies curriculum, publishes research results, and sponsors community service programming.

The American Indian Studies Center (3220 Campbell Hall, 825-7315) is one of the largest centers of its kind in the country. It serves as an educational and research catalyst and includes a library, master’s and postdoctoral fellowship programs, and a publishing unit that produces a number of books and a quarterly journal.

The Asian American Studies Center (3232 Campbell Hall, 825-2974) seeks to increase the knowledge and understanding of the experiences of Asian Pacific peoples in America and promotes the development of material resources related to Asian American studies.

The Chicano Studies Research Center (3121 Campbell Hall, 825-2363) facilitates interdisciplinary academic research related to the Chicano experience. The center has research and academic programs and maintains a publications unit and research library that are considered leading contributors to Chicano studies nationally.

In addition to the ethnic centers, UCLA has four major interdisciplinary AREA STUDIES CENTERS which coordinate teaching and research activities concerning major geographic areas. Some of the world’s leading specialists on area studies have joined these centers, which rank among the best in the nation.

The African Studies Center (10244 Bunche Hall, 825-3686) is the major center for African studies in the Western U.S. It furthers teaching and research on Africa involving economics, linguistics, humanities, social sciences, and the College of Fine Arts. The center also works with the professional schools of Architecture and Urban Planning, Education, Management, and Public Health.

The Latin American Center (10343 Bunche Hall, 825-4571) encourages and coordinates interdisciplinary research, academic programs, and publications. By linking campus activities with developments in the field and in other institutional settings, the center benefits UCLA, the broader community of Latin Americanists, and the general public.

The Gustave E. von Grunebaum Center for Near Eastern Studies (10286 Bunche Hall, 825-1181) promotes research and training in basic problems related to the Near and Middle East countries in modern and medieval times. It also sponsors lectures, seminars, and conferences and promotes an extensive publications program.

The Center for Russian and East European Studies (334 Kinsey Hall, 825-4060) promotes research on Russia and the countries of Eastern Europe through conferences, lectures, seminars, and academic exchange programs with Russian and Eastern European universities.

The INSTITUTE OF INDUSTRIAL RELATIONS, located in 9244 Bunche Hall (825-1964), is an interdisciplinary research and publishing program directed primarily toward the study of labor-management relations and related problems. It also conducts community and labor relations programs serving unions, management, and the general public.

The INSTITUTE FOR SOCIAL SCIENCE RESEARCH promotes interdisciplinary research on a broad spectrum of contemporary sociological, psychological, political, and economic problems and community issues. Research components include the Survey Research Center and the Social Science Data Archive. Training in survey research methodology is available to students through participation in the annual Los Angeles area survey. The institute is located in 11252 Bunche Hall (825-0711).

Other interdisciplinary activities in the social sciences involve the study of arms control, nuclear proliferation, and international security in the Center for International and Strategic Affairs. A nationally respected Business Forecasting Project in UCLA’s Graduate School of Management forecasts short-run and long-run economic activity both regionally and nationally. The Center for the Study of Evaluation in the Graduate School of Education is at the forefront of efforts to improve the quality of schooling in America through systematic evaluation practices. And the USC-UCLA Joint East Asian Studies Center promotes curriculum development and faculty seminars on China, Japan, and Korea.

Arts and Humanities

The INSTITUTE OF ARCHAEOLOGY, located in 288 Kinsey Hall (206-8934), develops and coordinates the archaeological research and activities of more than ten academic departments with field interests in the Americas, Asia, Africa, and Europe. Its major goal is to contribute to a reconstruction of the human past based on archaeological evidence. Activities include management of archives and laboratories such as the Rock Art Archive, public lectures, seminars, a publications program, field surveys, and excavations. The center’s Archaeological Survey coordinates research and data collection on Southern California archaeological sites.

The CENTER FOR THE STUDY OF COMPARATIVE FOLKLORE AND MYTHOLOGY, located in 1037 GSM (825-4242), supports and coordinates the comparative study of folklore and mythology. Resources include the Wayland D. Hand Library, the Visual Media and Folk Medicine Archives, the Archive of California and Western Folklore, the American Popular Beliefs and Superstitions Archive and Encyclopedia Project, the Archive of Folk Song and Music, and other collections of field recordings, records, and films.
The CENTER FOR MEDIEVAL AND RENAISSANCE STUDIES supports the research activities of some 20 academic departments dealing with the development of Western civilization between A.D. 300 and 1650. Major programs include training research assistants, appointing postdoctoral associates and visiting professors, organizing conferences and colloquia, and sponsoring publication of research. The center is located in 11365 Bunche Hall (825-1970, 825-1880).

In other research activities, a Fulbright Fellow in the English Department is creating a new edition of the Greek Gospels using original computer programs for textual criticism. In the Linguistics Phonetics Lab, one of the best-known labs of its kind in the nation, researchers are finding new ways to analyze speech functions and make voiceprints for use in law enforcement. Art scholars are reconstructing the original drawings and manuscripts of Leonardo da Vinci. And the College of Fine Arts has established an Advanced Design Research Group to develop innovative ways to manage and store information.

**Resources for Research and Study**

**The University Library System**

Library facilities are crucial to both study and research. The University Library on the UCLA campus is one of the country’s largest and most renowned academic libraries, rated second in the nation last year by the Association of Research Libraries. The 24-unit system consists of the University Research Library, the College Library, 17 specialized subject libraries, and several reading rooms. Collectively they contain nearly six million volumes and extensive holdings of government publications, pamphlets, manuscripts, maps, microtext editions, music scores, recordings, photographs, and slides. They regularly receive over 80,000 serial publications.

The main card catalog in the University Research Library lists older holdings in all campus libraries. ORION, the library’s on-line information system, provides location and holdings information for materials cataloged since 1977, plus current information for materials on order or in processing. ORION on Fiche, available in all campus libraries, is a quarterly microfiche list of information contained in the ORION data base.

Students have access to the stacks in most libraries. A handbook describing the organization, services, and hours of the University libraries is available in all of the campus branches.

**The University Research Library**

The University Research Library on north campus (825-1201) is a modern six-story building designed primarily as a graduate research library serving the social sciences and humanities. The building houses over two million volumes arranged in open stacks, as well as the Reference Room, Circulation Department, Graduate Reserve Service, and Periodicals Room. The Microform Reading Service, with some 400,000 microcopies of newspapers, books, and periodicals, has a variety of reading and copying equipment. During academic sessions library hours on weekdays are 8 a.m. to 10 p.m. (5 p.m. Friday), Saturday 10 a.m. to 6 p.m., Sunday noon to 9 p.m. The Photographic Services office, housed in the Powell Library Building, provides a complete photographic reproduction service for duplicating books, periodicals, manuscripts, and maps. The Powell Library Building, with study space for 1,100 students, is open daily until midnight.

**Specialized Subject Libraries**

The resources of the specialized campus libraries are devoted mainly to subjects of concern to the departments or professional schools which they serve, but their materials are available to all UCLA students and faculty. A recorded message (825-8301) provides current hours of service for each library.

**The Architecture and Urban Planning Library** includes materials treating architecture, building technology, city and regional planning, and selected environmental topics. The Art Library supports the departments’ art, design, and art history programs. For those interested in the Italian Renaissance, one of the greatest research centers in the world for the study of Leonardo da Vinci is the Elmer Belt Library of Vinciana, part of the Art Library.

**The Biomedical Library,** in the Center for Health Sciences, is one of the finest libraries of its kind in the country. Its 420,000 volumes and over 7,000 serial subscriptions serve all the UCLA health and life science schools and the UCLA Medical Center.

The Public Affairs Service, also housed in the Research Library, collects official publications of the United States government, the State of California, California counties and cities, selected United States state and local governments, foreign nations and selected foreign states and provinces, plus those of the United Nations and some of its specialized agencies and a number of other international organizations. Also housed are current English-language, nongovernmental pamphlets on public affairs representing a wide spectrum of political and social opinion, with strong emphasis on social welfare, economic, social, and political conditions, and industrial relations.
The Chemistry Library includes material on chemistry, biochemistry, and molecular biology, while education, teaching English as a second language, kinesiology, and psychology are the principal subjects covered by the Education and Psychology Library. Materials for engineering, astronomy, computer science, meteorology, and mathematics are kept in the Engineering and Mathematical Sciences Library. The English Reading Room mainly duplicates the Research Library's holdings in English and American literature, and major subjects covered by the Geology-Geophysics Library include geoscience, invertebrate paleontology, and planetary and space science, and hydrology.

The UCLA Law Library has a substantial collection of nearly 300,000 volumes selected to further the course of instruction and legal research, while the Management Library serves the Graduate School of Management and the various subjects related to business and management.

The Clark Library, in Bunche Hall, houses maps, city plans, nautical charts, and technical books and serials on all aspects of cartography and is one of the largest of its kind in the Western U.S. The Music Library houses musical scores, ethnomusicology materials, sheet music, recordings, and the personal collections of such composers as Henry Mancini, Alex North, and Ernst Toch. Materials in Chinese, Japanese, and Korean are available in the Oriental Library, while the Physics Library covers all aspects of that science as well as acoustics and spectroscopy.

The Theater Arts Library is the home of many prestigious collections which have been donated to UCLA, such as those of Charlton Heston, Rosalind Russell, director William Wyler, and animator Walter Lantz. The collections include original scripts, contracts, correspondence, shooting diaries, and much more. And the University Elementary School Library contains contemporary materials for children from kindergarten through junior high school age.

The Clark Library

Supplementing the University Library is the William Andrews Clark Memorial Library, with its collection of some 80,000 volumes and 14,900 manuscripts related to English culture of the seventeenth and eighteenth centuries. Its John Dryden collection is among the most complete in the world. The library, located approximately ten miles from the UCLA campus, contains noncirculating materials. Leaflets describing the Clark Library and information about University transportation to it are available at the Reference Desk in the Research Library.

Special Archive Collections

Three unique collections, the UCLA Film, Radio, and Television Archives, are a living resource equally respected by industry and scholars. Students use them to learn the finer points of production techniques and to study the careers of leading actors and directors, many of whom also use the Archives. All three archive collections are located in 1438 Melnitz Hall and are open Monday through Friday from 9 a.m. to 5 p.m. For information and viewing appointments, call 206-8013.

The FILM ARCHIVES, with more than 20,000 titles, is the largest film center west of the Library of Congress. Among its outstanding collections are 22 million feet of Hearst Metrotone News Film dating back to 1919, a recent gift to UCLA. Other noteworthy holdings include the complete nitrate print collection of Twentieth Century-Fox, the pre-1948 studio print holdings of Paramount Pictures, more than 600 Warner Brothers prints, and selected nitrate prints from the Columbia Studios collection.

The RADIO ARCHIVES contains more than 40,000 broadcasts from the early 1930s to the present. Significant collections include 700 Hallmark Company broadcasts and personal collections featuring Jack Benny, Bing Crosby, and Dick Powell. The Collections of Clete Roberts and Edward R. Murrow highlight a range of news and documentary material.

The TELEVISION ARCHIVES, under joint auspices of the Academy of Television Arts and Sciences and UCLA, constitutes the nation's largest university collection of its kind in the country. Its 20,000 titles include kinescope, telefilm, and videotapes spanning television history, with particular emphasis on drama and comedy from 1947 to the present. A special Collection of Television Technology and Design includes over 300 historical television cameras and receivers dating from the 1930s.

Art Galleries and Museums

A tour of all the UCLA museums and art galleries will take you from one corner of campus to the other. Major art exhibitions, both traveling and assembled at UCLA, are displayed in the FREDERICK S. WIGHT ART GALLERY, located in the Dickson Art Center. More than 200,000 visitors each year come to see a series of 12 exhibitions of painting, sculpture, photography, prints and drawings, folk art, architecture, and design. For a schedule of exhibitions, call 825-5517. The gallery is open Tuesday from 11 a.m. to 8 p.m., Wednesday through Friday from 11 a.m. to 5 p.m., and weekends from 1 to 5 p.m. Daily tours are given at 1 p.m. Group tours are by appointment; call 825-3264. The administrative office is located in 1100A Dickson Art Center (825-1461).

On the second floor of the Wight Gallery is the GRUNWALD CENTER FOR THE GRAPHIC ARTS, which houses a distinguished collection of some 30,000 prints, drawings, and photographs. Maintained as a study and research center for the benefit of students and the community, the center's permanent holdings include significant examples from the fifteenth century to the present. It is particularly noted for its collection of German expressionist prints formed by Fred Grunwald and comprehensive holdings of Matisse, Picasso, and Goya. The center, located in 2122 Dickson Art Center (825-3783), is open weekdays from 9 a.m. to 5 p.m.

The FRANKLIN D. MURPHY SCULPTURE GARDEN, located north of Bunche Hall, contains a collection of nearly 70 major works by Rodin, Matisse, Calder, Lachaise, Lipchitz, Moore, Miro, Hepworth, and many other late nineteenth- and twentieth-century masters. All works in the growing collection, situated on a picturesque five-acre expanse, are private gifts to the University.

The MUSEUM OF CULTURAL HISTORY is internationally known for the quality of its collections and exhibits. Its collections encompass the arts and material culture of much of the world, with particular emphasis on West and Central Africa, Oceania, and Latin America. The museum, located in 55A Haines Hall (825-4361), offers assistance with instruction and research and sponsors major exhibitions, lecture programs, and symposia. Gallery hours are noon to 5 p.m. Wednesday through Sunday.

Other Resources

The OFFICE OF ACADEMIC COMPUTING (OAC), with administrative offices in 4302 Math Sciences, is responsible for all general-purpose academic computing activities on the UCLA campus. OAC provides a broad range of services, including operation of IBM 3033 and 4341 computers for general campus use; facilities management and operation
of the IBM 4381 for the Social Sciences Computing Program and of eight VAX 750 systems for the Program on Computing in the College of Letters and Science; assistance to individuals and departments in the selection and use of microcomputer hardware and software through the Microcomputer Information Center in 2035 GSM; maintenance of numerous public computing facilities and a large general library of application software; support of instructional computing for academic classes; instruction in the use of computers through free noncredit classes; and professional consulting services.

UCLA's principal computing system is the IBM 3033, available to all colleges, schools, and departments within UCLA. Any registered student or faculty member can also access the IBM 4341 computer for independent research or to learn computing skills. The campus network of mainframe computers allows students and faculty access to such modern computing services as ORION, the UCLA library information system; BITNET, a rapidly growing computer network connecting universities around the world; and a campuswide electronic mail system. To arrange for use of the IBM 3033 or 4341 computers, apply in the OAC User Relations Office (4302 Math Sciences, 825-7548) weekdays from 8 a.m. to 5 p.m.

The DIVISION OF LABORATORY ANIMAL MEDICINE, located in 2033 Math Sciences (825-7281), 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.

The University of California NATURAL RESERVE SYSTEM offers 26 reserves statewide to be used for field studies in unspoiled natural sites and for protected scientific experiments. Several reserves are close enough to campus for daily access. For more information, contact Arthur Gibson, 124 Botany (825-8062).

The BIOLOGICAL COLLECTIONS of the Biology Department include marine fishes from the Eastern Pacific and Gulf of California, and birds and mammals primarily from the Western U.S., Mexico, and Central America. The department also maintains a more limited collection of amphibians, reptiles, and fossil vertebrates, as well as collections of algae, fungi, and bacteria. For more information, contact James North- ern, 1303 Life Sciences (825-1282).

Although the UCLA campus as a whole has an attractive, park-like atmosphere, there are two distinctive garden areas worthy of special note. This eight-acre MILDRED E. MATHIAS BOTANICAL GARDEN, located in the southeast corner of campus, contains some 4,000 species of native and exotic plants. It is used for botanical and ornithological teaching and research, as are the 250,000 dried plant specimens in the Herbarium. This peaceful wooded area, a center for testing the usefulness of woody subtropical plants, is a favorite spot for quiet strolls. The administrative office is located in 124 Botany (825-3620).

The HANNAH CARTER JAPANESE GARDEN in nearby Bel Air, designed and constructed by Japanese artisans and architects using native plants and artifacts, is an authentic reproduction of Kyoto gardens. The terraced two-acre garden contains such traditional and symbolic features as a teahouse, shrine, antique stone water basins, lanterns, waterfalls, and a pond with Japanese carp (koi) swimming among water lilies. The garden, a private gift to UCLA, is used by faculty and students for study and research, by departments for conferences and receptions, and by others seeking a serene setting for meditation and solitude. It is open to individual visitors and groups by reservation only. Hours are Tuesday 10 a.m. to 1 p.m. and Wednesday noon to 3 p.m. Friday is reserved for group visits. Call the Visitors Center at 825-4574.

Supplementary Educational Programs

In addition to the regular academic programs which are described in Chapters 5 through 17 of this catalog, the following optional programs are available to UCLA's undergraduate and graduate students.

Summer Sessions

UCLA offers more than 500 courses from approximately 50 UCLA departments in six-, eight-, and ten-week sessions. 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 quarter, or complete graduation requirements more quickly.

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 Chapter 2 (undergraduate) or Chapter 3 (graduate).

If you are an undergraduate registered in regular session, you may attend UCLA Summer Sessions for full unit and grade credit. Summer Sessions work is recorded on your UCLA transcript, and grades earned are computed into your grade-point average. Check with your college or school counselor about the possibility of applying these courses toward minimum unit requirements and for any limitations the college or school may impose on Summer Sessions study.

Unlike enrollment in regular quarters, you may attend another college institution for credit while you are enrolled in Summer Sessions. Courses taken in Summer Sessions cannot be taken on a Passed/Not Passed or Satisfactory/Unsatisfactory basis without an approved petition from your college or school or the Graduate Division. Applications and more information on Summer Sessions are available in 1254 Murphy Hall (825-8355).
University Extension

Serving approximately 100,000 adult students 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’s 4,500 Extension classes are innovative and experimental in content, format, and teaching methods. Credit and noncredit courses are offered in nearly every academic discipline and in many interdisciplinary areas. 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 your college or school counselor or graduate adviser before enrolling. For more information, see the sections on “Concurrent Enrollment and Transfer of Credit” and “Courses of Instruction” in Chapter 4. Graduate students should also see “Transfer of Credit” in Chapter 3.

The Extension Advisory Service offers assistance in planning long- or short-term study through Extension. The office is located in 114 UCLA Extension, 10995 Le Conte Avenue (206-8201). To obtain the current UCLA Extension Catalog, call 825-8895. The Registration Office is open 8 a.m. to 6 p.m. weekdays and until 5 p.m. on Friday (825-9971).

Education Abroad Program (EAP)

Each year, more than 650 undergraduate and graduate students from UC campuses study at distinguished universities throughout the world. UCLA students remain registered here while overseas and receive UC units and grade points for work completed abroad. Currently, EAP offers study opportunities on more than 40 different campuses in 25 countries: Australia, Austria, Brazil, China, Egypt, England, France, Germany, Hong Kong, India, Ireland, Israel, Italy, Japan, Kenya, Mexico, Norway, Peru, Scotland, Sierra Leone, Spain, Sweden, Togo, USSR, and Wales. Participants generally spend a full academic year abroad, enjoying a unique opportunity to enhance language skills and become involved in the culture of the host country. A special orientation program and, when necessary, intensive language training are included. During the year UC faculty members at the host campus assist with scholastic or personal problems.

EAP is open to all undergraduate students who have completed a minimum of 90 quarter units (junior standing) prior to departure, at least a B average (3.0 GPA) overall at the time of application, and the support of the UCLA EAP Selection Committee. Some overseas study centers have a language requirement as well.

Graduate students who have completed at least one year of graduate work and have the approval of their graduate adviser and the Dean of the Graduate Division may participate at most study centers.

Costs for participation in EAP vary from $5,200 to $8,000, but University financial aid is available. Applications must be filed several months in advance. For more information, contact the EAP Office in 2221B Bunche Hall (825-4889, 825-4995).

Education at Home Program

Students interested in early American history and culture have the opportunity to spend Winter Quarter 1996 "on location" in three Eastern cities. The Education at Home Program, conducted through the UC Riverside campus, is open to graduate students (with prior approval of their adviser) and undergraduates from any campus in the UC system.

Those selected for participation spend nine weeks in Williamsburg, one in Philadelphia, and a concluding week in Washington, D.C. Formal instruction consists of three American history courses (four units each) comprising classroom work and field trips to places of historical interest. An additional four units of independent study may be arranged. For further information, brochures, or applications, write to the Education at Home Program, Department of History, University of California, Riverside, CA 92521, or call (714) 787-3820.

Interdisciplinary Colloquia

Organized colloquia involving several disciplines are offered from time to time in conformity with faculty and student interests. They are open to all faculty members, interested undergraduates, and graduate students assigned to the colloquia by their advisers. Credit is not awarded directly but may be given through appropriate departmental courses. For information about the committees in charge of these colloquia, call the secretary of the Provost of the College of Letters and Science at 825-4621.

African Studies — The African Studies Center annually sponsors at least one interdisciplinary colloquium on Africa which focuses on topics in the social sciences or humanities. It is the policy of the center to organize its colloquia so that they can be taken for course credit at the graduate or undergraduate level or attended as open lectures. For further information, contact the center at 825-2944.

The Jacob Marschak Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences provides a forum for interaction among faculty and students interested in the application of mathematics and statistics to the behavioral sciences. Disciplines include anthropology, architecture, artificial intelligence, biology, business, computer science, economics, education, engineering, geography, linguistics, management, operations research, philosophy, political science, psychology, public health, public planning and policy, sociology, and systems analysis. An Honors Collegium course (HC 190) is based on the Marschak Colloquium. The colloquium sponsors presentations by leading experts in these fields, including faculty members from UCLA, other UC campuses, and other universities, and meets on alternate Fridays from 1 to 3 p.m. in 2270 GSM during the academic year. Announcements of presentations, including abstracts of the papers to be presented, are circulated and posted on campus; announcements also appear in UCLA Today. For further information, contact Lil Prupes at 825-1581.
Student Life

Living Accommodations

Where you live while attending UCLA can play an important role in your total college experience. Nearly half of UCLA freshmen live on campus, but the majority of undergraduates commute. About a quarter of the total student population lives at home.

There are many different housing options available, though the housing shortage on and near the UCLA campus means your first choice may not be available. You should therefore consider all housing options, decide early which ones you plan to pursue, and apply or follow up on them as soon as possible. If you plan to live off campus, arrive early to make your housing arrangements for the coming academic year. Some students even pay rent year-round to insure accommodations, and try to sublet during the summer months.

The UCLA Housing Office, 78 Dodd Hall (825-4491), provides information and current listings on University-owned apartments, cooperatives, fraternities, sororities, private apartments, roommates, rooms in private homes, room and board in exchange for work, and temporary housing. It also has bus schedules, area maps, neighborhood profiles, and counselors to help resolve landlord-tenant conflicts. A current Registration Card or letter of acceptance and a valid photo identification card are required for service.

The International Student Center on Hilgard Avenue helps foreign students find housing and may also provide temporary facilities until suitable permanent housing arrangements are made.

UCLA Housing Options: Information and Application, a booklet which covers the housing situation in much greater detail, is mailed to all undergraduates who apply to the University. Graduate students receive the booklet when they are accepted for admission (or may request it prior to admission).

On-Campus Housing

Living on campus can add an extra dimension of enjoyment and convenience to your UCLA experience; the demand, however, currently exceeds the space available. Four residence halls (Dykstra, Hedrick, Rieber, and Sproul Halls) and two residential suite complexes (Northern and Southern) accommodate nearly 4,000 undergraduates. There is one residence hall, Mira Hershey Hall, which houses some 355 graduate students. All on-campus housing is coed and within walking distance to classrooms.

Residence hall rooms are shared by two students. Residential suites, shared by four students, consist of two bedrooms, a full bathroom, and a common living room. The residence hall cafeterias, which also accommodate students in the residential suites, serve 19 meals per week.

Applications for on-campus housing are contained in the UCLA Housing Options: Information and Application booklet. It is not necessary to wait until you receive your notice of admission to apply for housing. Applications should be submitted by:

- March 14 (May 14 for graduate students) for Fall Quarter 1985
- October 31 for Winter Quarter 1986
- January 31 for Spring Quarter 1986

On the day following each of the above dates, a lottery will be held to determine the order in which students will be accepted. The full cost for the 1985-86 academic year (Fall, Winter, and Spring Quarters, excluding vacation periods) ranges from $2,520 to $2,772 for residence halls and from $3,120 to $3,432 for suites, plus a $19.50 membership fee in the On-Campus Housing Student Association.

The Office of Residential Life, in the Residential Life Building next to Sproul Hall (825-3401), is responsible for the conduct of students in residence halls and suites and provides professional and student staff members to counsel residents on programming and other problems.

Family Student Housing

UCLA maintains nearly 650 off-campus apartments for married and single-parent students on Sawtelle and Sepulveda Boulevards and 60 units on Barrington Avenue, about five miles from campus. Unfurnished one-, two-, and three-bedroom units are available. Rental rates for 1985-86, excluding utilities, are expected to range from $295 to $410 per month. Since waiting lists for family student housing are long, do not wait until you have been accepted to UCLA to apply. Verification of marriage and/or copies of children's birth certificates must accompany your application. Call the Family Student Housing Office (391-0686) for up-to-date information.

University-Owned Apartments

Approximately 650 students live in three off-campus apartment buildings owned by the University. Two of the locations are within walking distance of campus and the third, about five miles south, has free shuttle bus service on weekdays during regular academic sessions. Rental rates vary depending on the location and size of the apartment. There is no waiting list; apartments are rented on a first come, first served basis. Listings are posted in the UCLA Housing Office as vacancies occur.
Cooperatives

Cooperatives provide a community atmosphere similar to residence halls except that you must work three to six hours per week as partial payment for room and board. There are five privately owned, nonprofit groups within walking distance of campus. Room and board rates for 1984-85 varied between $600 and $850 per quarter. Cooperatives normally have long waiting lists, so apply early. For applications and information, write directly to each cooperative. Addresses are available in the UCLA Housing Office.

Fraternities and Sororities

Some 2,000 Bruins live in the fraternity and sorority houses which border the campus on the west and east sides respectively. To live in a “Greek” house you must participate in rush and join that particular organization, though membership does not guarantee housing accommodations. For more information, contact the UCLA Interfraternity Council (fraternities) or the Panhellenic Council (sororities) through the Office of Greek Affairs (118 Men’s Gym, 206-1285) or through the Dean of Students Office (2224 Murphy Hall, 825-3871).

Apartments

If you would like to rent an apartment off campus, you must consider the kind of living arrangements you can afford. UCLA is located in an affluent area of Los Angeles; rentals decrease as you move farther from campus. Apartments within three miles of UCLA (Westwood, West Los Angeles, parts of Brentwood and Santa Monica) average $484 per month for efficiency units and $710 for one-bedroom units. Apartments more than four miles away (Palm, Mar Vista, Culver City) usually cost $50 to $100 less. Because they change daily, listings cannot be mailed or given over the phone; they are posted in the UCLA Housing Office.

Temporary Housing

If you need temporary quarters until you find something permanent, there are several hotels and motels within five miles of campus with varying rates and accommodations. Some offer discounts to UCLA students. In addition, several fraternities have rooms to rent for the summer at low rates. Check with the Interfraternity Council, 118E Men’s Gym (825-8409). Hotel and motel listings are available in the UCLA Housing Office.

Transportation

There are several different means of transportation to and from campus other than using your car. Bus lines connect UCLA to Santa Monica, Culver City, Beverly Hills, and most of Los Angeles. Bicycles, mopeds, and motorcycles are all popular ways to get around; several bike paths in the local area make your ride easier and safer, and there are parking areas on campus specially marked and equipped for these vehicles. Many students also make their own carpooling and vanpooling arrangements to save money and make the daily commute more pleasant.

All of these alternatives are described in How to Get to UCLA Without Using Your Car, a booklet which also contains a ridesharing application, bus routes, area maps, and a host of helpful hints. It is available at the Campus Parking Service (Structure 8, Level 2, Westwood Plaza at Strathmore Place), at the UCLA Housing Office, and through the Transportation Services Administration (825-7639).

Parking Space and Permits

A limited number of parking permits for campus lots are sold to students each quarter, but parking spaces on campus are at a premium and not all students who request a permit will receive one. Obtain a Student Parking Request at the Campus Parking Service (Structure 8, Level 2) and return it by the deadline. Check dates on the Calendar at the beginning of this catalog or in the quarterly Schedule of Classes.

Parking assignments are based on the distance you live from campus, work commitments, and other information you provide. Students with physical disabilities that preclude walking long distances may apply for parking permits through Student Health Service. If you do not receive a permit, you must reapply every quarter to be reconsidered. For more information, call the Campus Parking Service at 825-9871.

ASUCLA

Every registered UCLA student is a member of the Associated Students of UCLA (ASUCLA), one of the nation’s largest such enterprises in terms of size, scope, and range of programs. The undergraduate and graduate student governments are integral parts of ASUCLA, which supports the following activities and services.

Food Service

ASUCLA operates the food service on the general campus and provides a number of innovative menu options at a variety of locations. Catering for special events is also available.

THE COOPERAGE — On the A Level of Ackerman Union, the Cooperage offers Mexican food, pizza, grill items, croissants, and special salads. In addition to the innovative menu you will find a stage and sound system for live entertainment and a large-screen TV for major events. The Cooperage is open weekdays from 8 a.m. to 12:30 a.m. (1:30 a.m. Friday), Saturday 11 a.m. to 1:30 a.m., Sunday noon to 11 p.m.

NORTH CAMPUS STUDENT CENTER — This facility, just south of the Research Library, offers a variety of pastas, deli and garden sandwiches, a wide selection of international-style entrees, hamburgers, and a salad bar. An outside cart offers quiches and specialty salads. North Campus is open for breakfast, lunch, and dinner. Hours are 7:30 a.m. to 11 p.m. weekdays (9 p.m. Friday), Saturday 10 a.m. to 6 p.m., Sunday 11 a.m. to 9 p.m.

THE BOMBSHELTER DELI AND BURGER BAR — This unique food service in the center of the Court of Sciences offers an assortment of traditional deli sandwiches, hamburgers, and salads at reasonable prices. “Gypsy breakfasts” are served in the morning. It is open weekdays from 7:30 a.m. to 5 p.m., Saturday 10 a.m. to 3 p.m.
THE TREEHOUSE — Located on the first floor of Ackerman Union, the Treehouse is open for breakfast, lunch, and dinner and features Asian and Italian-style dishes, as well as a variety of traditional American favorites. Grilled-to-order sandwiches are offered at the Hole-in-the-Wall. The Treehouse is open weekdays from 7 a.m. to 7:30 p.m. (3 p.m. Friday).

Adjacent to the Treehouse is the Sandwich Room, where you can find a variety of low-cost, made-to-order sandwiches, including Italian-style hot or cold submarine sandwiches. Weekday hours are 8 a.m. to 4 p.m. (3 p.m. Friday).

CAMPUS CORNER — The oldest of the ASUCLA food facilities, the Campus Corner is located just across Bruin Walk from Kerckhoff Hall. Soft frozen yogurt, hamburgers and French fries, and a wide range of pita bread pocket sandwiches are available. It is open weekdays from 7:30 a.m. to 5 p.m. (4 p.m. Friday).

THE KERCKHOFF COFFEE HOUSE, on the second floor of Kerckhoff Hall, offers Baskin-Robbins ice cream specialties and a variety of teas, coffees, and potages (hearty soups). Live entertainment is featured almost every night. The Coffee House is open 7 a.m. to 1 a.m. weekdays and 11 a.m. to midnight weekends.

POTLATCH, a lounge on the first floor of the Graduate School of Management, offers a variety of sandwiches, snacks, and beverages. Hours are 7:45 a.m. to 9 p.m. Monday through Thursday and 8:45 a.m. to 2 p.m. Friday.

JAMES E. LU VALLE COMMONS is the newest addition to the food service family. Located adjacent to the Graduate School of Management, it features thick-crust pizza, grilled and deli specialties, and a coffee house. Hours are 7:30 a.m. to 10 p.m. weekdays (8 p.m. Friday), Saturday 10 a.m. to 5 p.m., Sunday 11 a.m. to 8 p.m.

Students' Store

The ASUCLA Students' Store, the largest on-campus retail store in the nation, is actually a mini department store with four campus locations. The main store (B Level of Ackerman Union, 825-7711) offers textbooks, general books, school and art supplies, computers and electronic items, UCLA insignia merchandise (Bearwear), men's and women's sports wear, groceries, health/beauty aids, and greeting cards. The Health Sciences Store (13-128 CHS, 825-7721) specializes in books and supplies for dental and medical students, while the Lu Valle Commons Students' Store (just south of GSM, 825-7238) specializes in law and management books and supplies. The North Campus Shop (in the North Campus Student Center, 206-0751) is a small convenience store offering school supplies and snacks. Main store hours during school sessions are 7:45 a.m. to 7:30 p.m. weekdays (6 p.m. Friday), Saturday 10 a.m. to 5 p.m., Sunday noon to 5 p.m.

Lecture Notes

The Lecture Notes Office (A206 Ackerman Union, 206-0882) publishes concise weekly summaries of about 130 of UCLA's large lecture classes. Hours during school sessions are 7:45 a.m. to 6:30 p.m. weekdays (6 p.m. Friday), Saturday 10 a.m. to 5 p.m., Sunday noon to 5 p.m.

Job Opportunities on Campus

ASUCLA reserves over 1,800 part-time jobs in food service, the students' stores, Graphic Services, and other departments for UCLA students. Listings are posted outside the Personnel Office, 205 Kerckhoff Hall (825-7055).

The residence halls offer a number of positions, as do the University libraries; check at the residences and the Personnel Office in the University Research Library (825-7947). Other on-campus jobs may be available through the Placement and Career Planning Center (see "Student Services" later in this chapter).

Check Cashing and Money Orders

Students, staff, and faculty with current UCLA identification may cash a personal check or traveler's check for up to $50 a day, with a 25¢ service charge for each check, at the ASUCLA Service Center, 140 Kerckhoff Hall (825-2423). Check cashing hours are 8 a.m. to 4 p.m. weekdays.

Students, staff, and faculty may purchase money orders for up to $300 (cash only) at the same location. There is a service charge of 50¢ for each money order. Students, staff, and faculty may also rent post office boxes there at $12 per quarter for a small box and $15 for a large one. Hours for both services are 8:30 a.m. to 4:30 p.m. weekdays.

Graphic Services

ASUCLA Graphic Services, 150 Kerckhoff Hall (206-0894), is the campus center for photographic, printing, copying, typographic, and other graphic services. Portraits, photography, yearbook sittings, passport photographs, film, photo and darkroom supplies, and discount photofinishing are also provided. Hours are 8 a.m. to 6 p.m. weekdays and 10 a.m. to 2 p.m. Saturday. A satellite Graphic Services Center is located in Lu Valle Commons (825-7568).

Meeting Rooms

A variety of meeting rooms are available for use by the entire campus community. To reserve space in Ackerman Union or Kerckhoff Hall, contact the Student Union Operations Office on the A Level of Ackerman Union (825-0611). Contact the Food Service Office at the North Campus Student Center (206-0720) and the Main Office at Lu Valle Commons (206-0790) to reserve space at those locations.

Travel Service

The ASUCLA Travel Service, located on the A Level of Ackerman Union (825-9131), offers a wide range of domestic and international charter flights, land arrangements and charter packages, student tours, scheduled air and rail tickets, and other travel-related services. The Travel Service is open 8:30 a.m. to 6 p.m. weekdays and 11 a.m. to 3 p.m. Saturday.
**Student Activities**

The opportunities to participate in extracurricular activities at UCLA are virtually unlimited. Though it is impossible to list all the activities here, the following are just a few of the many ways you can get involved in campus life and expand your horizons beyond classroom learning.

**Student Government**

In addition to its Services and Enterprises division, which is responsible for the services described above, ASUCLA includes the Undergraduate Students Association, the Graduate Students Association, and the Communications Board, which publishes the Daily Bruin and other campus publications. Governed by a ten-member Board of Control, ASUCLA operates and manages Ackerman Union, Kerckhoff Hall, the North Campus Student Center, and the James E. Lu Valle Commons.

Many facets of student life at UCLA are sponsored or organized in some way by student government. Getting involved in the decision-making process can be extremely rewarding and can offer avenues of expression you may not find in other aspects of your university experience.

**Undergraduate Student Government** — The Undergraduate Students Association (USA), located on the third floor of Kerckhoff Hall (825-4504), is governed by the Undergraduate Students Association Council. USAC administers the Association's $500,000 annual operating budget through a network of student commissions (Academic Affairs, Campus Events, Community Service, Cultural Affairs, Facilities, Financial Support, and Student Welfare) presided over by the student body president. The undergraduate student body elects officers annually.

A wide variety of student government programs benefit both campus and community. The Community Service Commission (825-2333) serves Los Angeles through such programs as Amigos del Barrio, offering academic and emotional support for Latino students; the Community Theater Workshop for children of low-income families; the UCLA Prison Coalition, providing activities for inmates of juvenile correctional institutions; and the UCLA Special Olympics, to name just a few. More than 1,250 students volunteer annually for community service participation.

Student government also supports the various special interest groups on campus, including the American Indian Students Association, Asian Coalition, Black Students Alliance, Gay and Lesbian Association, MEChA, and the UCLA Jewish Union.

The Campus Events Commission (825-1957) is responsible for such events as Mardi Gras and the Speakers Program (see below), as well as movie and concert programs providing campus entertainment at reduced prices.

**Graduate Student Government** — UCLA's Graduate Students Association (GSA) shares an equal voice with the Undergraduate Students Association in the governance of the Associated Students. For more details on the GSA, see "Administration" in Chapter 3.

**Clubs and Organizations**

Joining a club or organization is an excellent way to make new friends and find your niche on campus. UCLA has about 350 different clubs and registered organizations — more than you will find on almost any other university campus in the country. Political, athletic, recreational, cultural, and religious clubs of almost every description are represented — and if you can't find one to suit your particular interest, you can start your own.

Clubs focusing on sports and recreation are listed in the University Recreation Association Office, located in the John Wooden Center (825-3071). For a full listing of registered student organizations, contact the Center for Student Programming, 161 Kerckhoff Hall (825-7041). This office can help you start a club or join an existing one, and serves as the official registry for all campus organizations. The center assists students with program development and fund-raising, monitors financial activities of student organizations, and interprets and enforces University rules and regulations.

Groups registered through the Center for Student Programming are eligible to use the services of the Campus Activities Service Office (CASO), 12 Royce Hall (825-8981). CASO offers technical advice in the public events area and operates most campus public assembly facilities, classrooms, and auditoriums. Official and general purpose bulletin boards on campus, general assignment lockers, and the sale of UCLA padlocks are administered by CASO.

**Fraternities and Sororities**

There are 31 fraternities and 17 sororities on campus, all chapters of their respective national organizations, with a total UCLA membership of more than 6,000 students.

Serving as small, cohesive communities within the larger UCLA community, fraternities and sororities offer unique experiences and opportunities for personal growth. Some Greek members are leaders in scholarship, community service, student government, athletics, and other facets of UCLA organizational activity.

You can find out more about UCLA's fraternities and sororities by contacting the Panhellenic Council (sororities) or the Interfraternity Council (fraternities) through the Office of Greek Affairs (118 Men's Gym, 206-1285) or through the Dean of Students Office (2224 Murphy Hall, 825-3871).

**Mardi Gras**

UCLA's annual Mardi Gras has become the world's largest student-operated collegiate activity. Each Spring Quarter over 5,000 Bruins from all types of campus organizations help to prepare and present this carnival. Students design and operate more than 65 booths featuring games, food, and live entertainment. There are celebrity judges, carnival rides, clowns, balloons, fireworks, and much more.

The three-day event generates well over $100,000 annually for UCLA's official charity, UniCamp, a summer camp for underprivileged children in Los Angeles. For more information, contact the Mardi Gras Committee in 129 Kerckhoff Hall (825-8001) or the Campus Events Commission in 300A Kerckhoff Hall (825-1957).
UCLA Campus Events Speakers Program

Headed by the Campus Events Commission, the Speakers Program brings many of the foremost literary and political leaders and entertainers to the campus. Past speakers have included Jack Lemmon, Itzhak Perlman, Jane Fonda, David Letterman, Joan Rivers, Bob Hope, Gilda Radner, Sean Penn, and Bette Davis from the entertainment world; Jimmy Carter, Jerry Brown, Gerald Ford, Justice William O. Douglas, and Senator Gary Hart representing government and politics; and authors Gore Vidal, John Irving, William F. Buckley, Jr., Gloria Steinem, and Hunter S. Thompson.

Publications and Broadcast Media

UCLA’s publications and broadcast media, operated by the ASUCLA Communications Board, provide excellent training grounds for aspiring writers, journalists, photographers, radio announcers, and television performers while serving the communication needs of the campus and community. The following are the major student-operated sources of information on campus:

The Daily Bruin, with a circulation of 21,000, is the fourth largest daily newspaper in Los Angeles. As the principal outlet for campus news, the Bruin is published each weekday of the regular academic year (twice weekly during the summer) and is distributed free from kiosks around campus. Students work as reporters, editors, proofreaders, photographers, and advertising sales representatives; new staff members are always welcome. Bruin offices are located in 112 Kerckhoff Hall (825-9898).

Six student special interest papers are published twice each quarter to serve special segments of the campus community: Ha’Am for Jewish students, La Gente for Chicano and Latinx students, Nommo for black audiences, Pacific Ties for Asian readers, TenPercent for gay and lesbian groups, and Together for women. Each includes news and features on political and cultural affairs — both on and off campus — of interest to its audience. Prospective staffers are welcome. The offices of the special interest periodicals are located in 112 Kerckhoff Hall.

The UCLA yearbook, Bruin Life, is one of the largest student publication efforts on campus. Available each spring, it contains photographs and information on graduating seniors, athletic teams, fraternities and sororities, and campus activities. If you would like to participate on the yearbook staff, contact the office in 112F Kerckhoff Hall (825-2640). Like many other large universities, UCLA has its own radio station. KLA Radio provides music, news, and sports 24 hours a day during the academic year (12 hours daily during Summer Sessions). The carrier current signal is sent to the residence halls and parts of Ackerman Union and Kerckhoff Hall, while the Cable FM signal is broadcast to many parts of the Los Angeles area. The studios are located at the rear of the Grand Ballroom in 2400A Ackerman Union (825-9104; request line: 825-8300). All positions, including on-air, news staff, and advertising representatives, are open to students.

The Performing Arts

UCLA offers a rich variety of concerts, art exhibits, dance recitals, and theater productions as an integral part of University life. A full calendar of exceptional programs by the Music, Dance, and Theater Arts Departments of the College of Fine Arts provides opportunities for student involvement and personal growth.

The Music Department offers more than 20 performance organizations. Instrumentalists are invited to play with one of seven different bands and orchestras. An extensive ethnomusicology program allows you to perform with various non-Western and ethnic groups. Campus choral organizations include an A Cappella Choir, the Madrigal Singers, Men’s and Women’s Glee Clubs, and the University Chorus which, with 120 members, is the largest of the groups.

The Dance Department presents afternoon and evening modern dance concerts and demonstrations both on and off campus, and folk and ethnic performing groups meet regularly. Dance students have the opportunity to design and choreograph as well as perform.

The Theater Arts Department, one of the finest in the country, offers students several opportunities for artistic expression. Each year the Theater Division presents a series of major productions to the general public. The Motion Picture/Television Division produces about 300 student-directed films each year in addition to hundreds of television programs. Professionals appearing on campus frequently visit classes to share their skills and many have established awards and scholarships in the performing arts at UCLA.

Be a Spectator

If you’d rather be entertained than do the entertaining, UCLA’s Center for the Performing Arts stages more than 200 public concerts and events each year. Ever since Royce Hall was dedicated in 1929, UCLA has been a premiere West Coast showcase for both new talent and the world’s leading artists. The Los Angeles Philharmonic and Chamber Orchestras perform regularly each season, as do several major dance ensembles, theatrical companies, and performance artists. Numerous celebrities have appeared on UCLA stages, from Luciano Pavarotti to Marcel Marceau, Isaac Stern to Cleo Laine, Pierre Boulez to Liv Ullman. Discount tickets for students, faculty, and staff are available to all events.

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. In 1982-83 the UCLA men’s athletic program was judged the finest in the country and has now won the award for national all-around excellence.
four times in the last seven years. The women's program captured the same honors in 1981-82 for the fifth consecutive time. UCLA is the only university in the country to win five National Collegiate Athletic Association (NCAA) men's and women's championships in a single year (1981-82).

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 46 NCAA men's championships — second highest in the nation — including 15 in tennis, 11 in volleyball, and ten in basketball under the legendary John Wooden. In addition, the basketball team, led by Coach Walt Hazzard, won the National Invitational Tournament (NIT) Championship in 1985. You can participate on the varsity level in football, basketball, track, baseball, tennis, crew, volleyball, gymnastics, swimming, water polo, golf, soccer, and cross-country. For more information, contact the Men's Athletic Office in the John Wooden Center (825-3236).

WOMEN'S INTERCOLLEGIATE SPORTS — With ten 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 many national, regional, and conference titles, including the 1981-82, 1983-84, and 1984-85 NCAA championships in softball, the 1981-82 and 1982-83 track and field crowns, and the 1984 and 1985 volleyball titles. Other nationally ranked teams are those in basketball, swimming, tennis, cross-country, and gymnastics. Athletic grants-in-aid are available on a selective basis in most sports. For more information, contact the Women's Athletic Office at 206-6780.

INTERCOLLEGIATE ATHLETIC FACILITIES — UCLA's major indoor arena is the famed Edwin W. 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, the Elvin C. Drake Stadium is the home of UCLA track and field competitions and site of many outdoor events including Commencement. The Los Angeles Tennis Center, a new 5,800-seat outdoor tennis stadium and clubhouse, was the site of the 1984 Olympic tennis competition. The refurbished J.D. Morgan Intercollegiate Athletics Center houses the newly established UCLA Athletic Hall of Fame. Off-campus facilities include the Jackie Robinson Stadium for varsity baseball, the Marina del Rey Boathouse for the UCLA crew and sailing programs, and the renowned Rose Bowl in Pasadena, home of the UCLA football team.

Athletics for Everyone

Whether you want to practice your favorite sport or learn a new one, you can do it all at UCLA. The extraordinary scope of athletic opportunities ranges from intercollegiate team play to an enjoyable jog around campus.

INTRAMURALS — Competitive intramural teams at UCLA are open to students, faculty, and staff. There are 55 activities in men's, women's, and coed competition, and many are divided into size or skill divisions so students at any level can get involved. For more information, contact the Intramural Sports Office in the John Wooden Center (825-3701).

RECREATIONAL CLUBS AND CLASSES — Recreational clubs are formed at UCLA to bring people interested in a particular sport or activity together. Through more than 40 different clubs with a combined membership of some 3,900 students, you can learn (and meet people who enjoy) bowling, flying, waterskiing, cricket, karate, sailing, or lacrosse, to name just a few. For club information, contact the University Recreation Association in the John Wooden Center (825-3701).

You'll also find a broad range of noncredit recreation classes in aquatics, boating and sailing, dance, fine arts, outdoor studies, physical fitness, and sports skills. For class information, contact the Recreation Instruction Program Office in the John Wooden Center (825-3701).

RECREATION FACILITIES — UCLA students have several major facilities in which to practice and play. The recently completed John Wooden Recreation and Sports Center is a comprehensive student activities building with several gymnasium, ten racquetball/handball courts, a weight training facility, and exercise and martial arts workout rooms. The Sunset Canyon Recreation Center, open seven days a week the year round, features an Olympic-sized swimming pool, a family pool, picnic-barbeque areas, multipurpose play fields, an outdoor amphitheater, and various meeting rooms and lounges. Students also have the use of Pauley Pavilion, Drake Stadium, and the Los Angeles Tennis Center for recreational sports.
Student Services

UCLA students enjoy an extremely broad range of benefits and support services which enrich their college careers and help them attain their academic and career goals.

Academic Counseling

Many sources of academic counseling are available. Faculty advisers and counselors in each college and school help students with major selection, program planning, academic difficulties, degree requirements, and petitions for exceptions to these requirements.

Advisers in each major department counsel undergraduates concerning majors offered and their requirements, and possible career and graduate school options (see “Academic Resources and Assistance” in Chapter 2 of this catalog). In addition, special graduate advisers are available in each department to assist prospective and currently enrolled graduate students.

Placement and Career Planning Center

The Placement and Career Planning Center (PCPC) offers career guidance and placement services to all UCLA students. Services are located in the PCPC Building (825-2981) and in two satellite locations: 1349 GSM (specializing in management, 825-3325) and 5289 Boelter Hall (specializing in engineering and the physical sciences, 825-4605).

Career Development — A staff of career counselors assists you in career exploration and the job search. Information on planning further education and alternative careers is available in the Career Resources Library. In addition to bringing graduate school representatives to campus, the Campus Interview Program brings employer representatives to discuss career opportunities with seniors and graduate students, and career-related summer employment with continuing students. The direct referral service posts a large number of currently available jobs in a variety of organizations.

Student Employment — A job listing and referral system helps students and their spouses find part-time, temporary, or vacation employment. Career-related opportunities include internships and cooperative education possibilities.

Educational Career Services — This is a specialized source of information and counsel for students and alumni interested in university, college, and secondary and elementary school positions. Current lists of educational job opportunities, internships, and a professional file service are available.

Student Health Service

The Student Health Service (SHS) is designed to offer the health care and information you may need as a UCLA student. Services are provided on an appointment basis at little or no cost to all registered students on presentation of Registration and UCLA Student I.D. Cards. You are encouraged to select a clinician who will provide ongoing health care. Additional information on all phases of SHS is available in the UCLA Student Health Service booklet produced by SHS, or by calling SHS information at 825-4073.

Location and Hours — General and emergency care is available in A2-130 Center for Health Sciences. Office hours are 8 a.m. to 5 p.m. weekdays except Tuesday, when service begins at 9 a.m. Emergency care is also available for athletic injuries at Gate 10 in Pauley Pavilion (825-5704) from 1:30 to 6 p.m. weekdays. For emergency care when these facilities are closed, you may obtain treatment at the UCLA Hospital Emergency Room on a fee-for-service basis.

Primary Care Clinics provide outpatient diagnosis, treatment, and consultation for most general health care needs. Call 825-2463 to schedule an appointment.

Specialty Clinics provide specialized care when you are referred by the Primary Care Clinics. Services include dermatology, orthopedics, surgery, gynecology, internal medicine, allergy, chest, ENT (ear, nose, and throat), ophthalmology, urology, and neurology. Routine physicals, health clearances, immunizations, and travel shots are available for a moderate fee. Call 825-1163.

Women’s Health Service provides care for routine women’s health needs and treatment of gynecological problems. Family planning (birth control) services are available, as are testing, counseling, and referrals for pregnancy. Counseling for sexual problems and relationship concerns is also provided. Call 825-0854.

Men’s Health Clinic, the newest SHS service and the first of its kind in the UC system, treats genital and urinary problems, both sexual and nonsexual in nature. The clinic also provides sexual counseling for UCLA’s male students. Call 825-0861.

Dental Clinic services are available by appointment without need of a referral. While the primary function of this clinic is to treat dental emergencies, a limited number of general dentistry and dental hygienic services are available. Fees are charged for all services. Call 825-5858.

Outreach Programs, such as the Peer Health Counselor and Student Health Advocate Programs, provide peer care and educational counseling for health concerns. The programs allow students to be involved in the planning and delivery of all aspects of health care. Call 825-4730.
Supplemental Health Insurance is recommended for all fully enrolled students because certain major expenses, including hospitalization, surgery, and emergency room costs, are not covered by the regular SHS program. The University requires, as a condition of registration, that foreign students attending UCLA on nonimmigrant visas have adequate health insurance, and it reserves the right to make the same requirement of all students.

A low-cost insurance policy is available for purchase at SHS at the beginning of each quarter. Students are not automatically enrolled in the plan nor is coverage automatically renewed. The deadline for purchasing insurance for Fall Quarter is October 11. For information on insurance available through SHS, call 825-1856.

Student Psychological Services

Student Psychological Services offers short-term personal counsel and psychotherapy at two locations. The Mid-Campus Office is located in 4223 Math Sciences (825-0768, 825-4207); the South Campus Office is in A3-068 CHS (825-7985).

Psychologists, clinical social workers, and psychiatrists are available at both locations, offering assistance with situational stresses and emotional problems from the most mild to the most 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.

The service is confidential and free to regularly enrolled students. Students are seen individually or may choose from a number of groups offered each quarter. Appointments are made on weekdays between 8 a.m. and 5 p.m. Emergency counseling is also available.

Helpline

Helpline (825-HELP) provides information, referrals, crisis intervention, and a friendly ear when you don’t know where else to turn. It is open daily from 6 p.m. to midnight (1 a.m. on Friday and Saturday). For more information, contact Patsy Mendoza, A253A Murphy Hall (825-6100).

Ombudsman

The Ombudsman seeks to resolve personal grievances of any members of the campus community who feel they have been adversely affected by University policies, practices, and/or personalities. As an independent agent with investigatory powers, the Ombudsman serves as a trouble-shooter for students, faculty, and staff whose problems (including sexual harassment) have not been resolved by other campus agencies. For assistance, contact the Ombudsman in 274 Kinsey Hall (825-7627).

Student Legal Services

If you are a currently registered and enrolled student with a legal problem, you can get assistance free of charge from attorneys or law students under direct supervision of attorneys. They will help you solve legal problems, including those related to landlord/tenant relations, domestic relations, accident and injury problems, criminal matters, and contract and debt problems. Assistance is available on a walk-in basis from 9 a.m. to 12:30 p.m. weekdays in 70 Dodd Hall (825-9694).

Central Ticket Office

Tickets are available at two locations on the UCLA campus: the ticket office on the ground floor of the James E. West Center (825-2101) and the trailer at 650 Westwood Plaza (825-2953). Tickets for all UCLA events are sold at both locations. In addition, each location provides special ticket services as follows:

The West Center location offers student discount tickets to campus athletic events and local motion picture theaters. You may also purchase tickets to off-campus events through Ticketmaster and Ticketron, as well as student discount tickets for RTD buses and tokens for the Santa Monica bus system.

The 650 Westwood Plaza location offers student discount tickets for on-campus cultural events, subsidized by the Student Committee for the Arts (Registration and UCLA Student I.D. Cards must be shown). There is a limit of two tickets per person. Watch the Daily Bruin ads for ticket sale dates.

Services for International Students

The Office of International Students and Scholars (OISS) works closely with the International Student Center to provide services and programs specifically for UCLA's 5,500 foreign students and postdoctoral scholars. Together they provide a comprehensive orientation program for these students which helps them to pursue their academic goals and a series of programs which allow them to share their viewpoints with American students and the community.
The OISS staff, located in 297 Dodd Hall (825-1681), includes professional and peer counselors especially prepared to assist with questions about immigration, employment, government regulations, financial aid, cross-cultural adjustment, and personal matters.

The International Student Center, 1023 Hilgard Avenue (208-4587), focuses on student-community relations and helps with language, housing, and other problems in addition to sponsoring cultural, educational, and social programs.

Special Services/Veterans Affairs

The Special Services/Veterans Affairs Office, A255 Murphy Hall (825-1501), provides information for veterans and their dependents about V.A. educational benefits, tutorial assistance, and V.A. work-study and loan programs.

The office issues fee waivers to dependents of California veterans who are deceased or disabled because of service-connected injuries and who meet certain income restrictions, and certifies student status for recipients of Social Security benefits.

Services for disabled and handicapped students include assistance with registration and class enrollment, parking permits, fee deferments authorized by the California Department of Rehabilitation, readers for the blind, interpreters for the deaf, note takers, examination proctors, and minor wheelchair repairs. Ramps, elevators, and specially equipped restrooms for the handicapped are provided in all campus buildings.

Women’s Resource Center

The Women’s Resource Center, located in 2 Dodd Hall (825-3945), offers services to all UCLA students, with special focus on women’s needs.

The center presents workshops and support groups on many topics, including child care, self-defense, assertiveness training, rape prevention and education, career development, single parenting, returning to school, and personal relationships. It also offers referrals for medical, legal, career planning, personal counseling, and other services both on and off campus. A library includes specialized publications on women’s issues. Internships are offered in areas such as creative writing, editing, legislative research, publicity, and program development.

The Women’s Resource Center, committed to improving the status of women on campus, works with other campus agencies to help women reach their full potential.

Child Care Services

The Child Care Center provides full- and part-time care for children aged two months to six years. Fees range from $178 to $380 per month depending on care. Some grants are available for eligible student families. The center is located in Building 1 at 10833 Le Conte Avenue (825-5086).

The Outreach Program helps parents make off-campus child care arrangements. The Outreach Coordinator meets parents each Monday from noon to 1 p.m. in 2 Dodd Hall. For more information, call 825-8474.

The UCLA Parent Toddler School is open to children 18 months to three years of age. Participating parents must work at school one morning in every four that their child attends. The school, open 9 a.m. to noon weekdays, is located in the Family Student Housing complex four miles south of campus. For more information, call 391-9155 or 399-8739.

The University Parents Cooperative Nursery School offers a supportive educational environment to children of the UCLA community aged three to seven years. Hours are 9 a.m. to noon and/or noon to 3:45 p.m. weekdays, with extended care available until 5:30 p.m. The nursery school is located in the Family Student Housing complex (397-2735).

Safety and Security

Emergency: Campus Police — If you need to call the Campus Police Department, just dial two digits — 35 — from any campus phone. For nonemergency information, contact them at 601 Westwood Plaza (825-1491).

Escort Service — The Department of Community Safety provides free escort service every day of the year from dusk to 1 a.m. Uniformed escorts — specially trained UCLA students — are available to walk students, faculty, and staff members between campus buildings and local living areas west of campus. To obtain an escort, call 825-1493 about 20 minutes before you need one.

Evening Van Service — The free service provides a safe and convenient mode of transportation around campus at night. Five vans operate Sunday through Thursday from 5 p.m. to midnight (6 p.m. to midnight in Spring Quarter) and serve many campus areas, including the residence halls, sororities, libraries, and living areas west of campus. For further information, call 825-1493.

UCLA Rape Prevention and Education Services are cosponsored by the Women’s Resource Center and the Department of Community Safety.

Services include workshops, self-defense classes, intake counseling, and referrals to offer women practical safety suggestions, increase physical and psychological preparedness, and heighten awareness of the complex issues of rape and sexual assault. For more information, call 206-8240 or 825-7661.

CPR — Free three-hour day or evening cardiopulmonary resuscitation classes (composed of a two-hour lecture and slide presentation and an hour of hands-on practice on Resusci-Annie torsos) are offered to UCLA students, staff, faculty, and visitors. For more information and scheduling, call 206-8886.

UCLA Alumni Association

The UCLA Alumni Association, which celebrated its 50th anniversary in 1984, serves to advance the University’s interests and to benefit students and alumni. With some 45,000 members, it ranks among the six largest dues-paying alumni groups in the country. Students, graduates, parents, staff, and University Extension students are all eligible to join and serve on one of approximately 85 regional clubs, professional and school organizations, and student support and honorary clubs.

The Alumni Association awards scholarships to freshmen and continuing students each year; sponsors UCLA’s Homecoming festivities and holds “Dinners for Twelve Strangers,” which bring together students, alumni, and faculty; and supports student events such as the Chancellor’s Freshman and Graduate Receptions, Spring Sing, and Mardi Gras. The Alumni Travel Program enables alumni to participate in educational and cultural travel and to support UCLA athletic teams at major away games. The Governmental Relations Program promotes constructive relations between the University and government officials. UCLA’s Young Alumni organization serves the needs of recent graduates.

Benefits of Alumni Association membership include free library privileges as well as discounts on UCLA Fine Arts Productions, athletic events, group medical insurance, and travel programs. Graduating seniors who join receive special discounts on cap and gown rental, diploma lamination, graduation announcements, and an Extension class of their choice. The Alumni Association is located in the James E. West Center, 325 Westwood Plaza (825-3901).
Undergraduate Admission

Preparing for University Work

A carefully planned program of high school courses best prepares you for University work. It can give you a definite edge in your undergraduate studies and a head start in your chosen field. Most important, if you master certain basic subjects and skills in high school, you increase your chance of success at the University.

As a prospective UCLA student, you should give priority to completing the high school courses required for admission — the A-F pattern of courses listed later in this chapter. In addition, you should give careful thought to the general field of study, if not the specific major, you want to pursue. If you can make this decision early, you can take additional high school courses related to your field.

You should understand that the A-F requirements for admission are minimum entrance standards. Completing the required high school courses with satisfactory grades will not automatically prepare you for freshman work in every subject, much less in your major or program of study.

Good study habits and skills developed in the more advanced high school courses are essential for success at UCLA. University courses assume that you know how to read a textbook effectively, take notes, and plan a proper study schedule. Background material is expected to be thoroughly mastered.

To prepare for the demands of University work, you should take a full load of challenging, advanced courses in your senior year in high school. Since grades earned in academic courses beyond those required for admission are not used in determining your high school grade-point average, your chances for success at the University can be improved without jeopardizing your eligibility for admission.

READING — Many students are not prepared for either the kinds or amounts of reading demanded of freshmen at UCLA. You should become proficient in reading and understanding technical materials and scholarly works. Learn to read analytically and critically, questioning yourself about the author's intentions, viewpoint, arguments, and conclusions. Become familiar, and comfortable, with the conventions of standard written English and with various writing strategies and techniques. Your reading experience should include original works in their entirety, not just textbooks and anthologies, and should encompass a wide variety of forms and topics.

WRITING — Effective critical thinking and proficiency with the written language are skills which every UCLA student must master. By University standards, a student who is proficient in English composition is able to (1) understand the assigned topic; (2) select and develop a theme by argument and example; (3) choose words which aptly and precisely convey the intended meaning; (4) construct effective sentences which economically convey the writer's ideas and display a variety of structures; (5) know the conventions of standard written English, avoiding sentence fragments, run-together sentences, faulty agreements, and improper pronoun references; and (6) punctuate, capitalize, and spell correctly.

If you plan to attend UCLA, you must take English courses in high school that require the development and practice of these skills. You must take at least four years of English composition and literature that stress expository writing: the development of persuasive critical thinking on the written page.

MATHEMATICS — Many students are unaware of the large number of fields that require advanced preparation in mathematics. Calculus courses are included in all majors in engineering and the physical, mathematical, and life sciences, as well as in programs leading to professional degrees in medicine, dentistry, optometry, and pharmacy. Moreover, many majors in the social sciences require statistics or calculus, and sometimes both.

If you select a major that includes statistics or calculus, you should expect to take that course during your freshman year at UCLA. You should prepare for such courses in high school. In addition to the two years of mathematics required for admission, you should take a second year of algebra and a year of precalculus mathematics. These courses should include (1) basic operations with numerical and algebraic functions; (2) operations with exponents and radicals; (3) linear equations and inequalities; (4) polynomials and polynomial equations; (5) functions and their graphs; (6) trigonometry, logarithms, and exponential functions; and (7) applications and word problems. Students who plan to enter a field which requires statistics should take at least the second year of algebra.

If you are not proficient in basic and intermediate algebra, you will have to take one or more precalculus courses before beginning calculus at UCLA and may also have to take preparatory courses before beginning statistics. These preparatory courses could seriously delay your undergraduate studies.

Applying for Admission

The first step in applying for admission to UCLA is obtaining a Undergraduate Application Packet from your high school or community college counselor or from any University of California Admissions Office. The same application is used for applying to all UC campuses.

Complete the application, taking care to list the college or school you wish to attend at UCLA and your desired major. Then send the completed application, along with your personal essay and a $35 nonrefundable application fee, to Undergraduate Admissions and Relations with Schools, 1147 Murphy Hall, University of California, Los Angeles, CA 90024.

Checks or money orders should be made payable to The Regents of the University of California. (If you have applied previously and were ineligible, or if you were admitted previously and did not register, you must file a new application for the quarter you want to attend and submit a new application fee.)
Undergraduate Admission Checklist

- Obtain and complete the Undergraduate Application Packet, listing the UCLA college or school and major you prefer.
- Submit the Application Packet, along with a $35 nonrefundable fee, to the UCLA Office of Undergraduate Admissions and Relations with Schools (UARS) as soon as possible after the filing period opens.
- Take the SAT or ACT examination as early as possible and have your scores sent to UARS.
- Request that official transcripts, including work in progress, be sent from your high school and any colleges you have attended to the UARS Office.

Next, if you are in high school when you apply (freshman applicant), request that your high school send an official transcript of work completed, as well as a separate list of courses in progress, to the UCLA Office of Undergraduate Admissions and Relations with Schools. A final transcript, including a statement of graduation or proficiency, will be required later.

If you have attended or are attending another college when you apply (transfer applicant), request that transcripts of all your high school and college work be sent to UCLA. It is your responsibility to arrange for transcripts and to assure that they arrive promptly; hand-carried transcripts are not acceptable for final evaluation. Transcripts and other documents cannot be returned or forwarded to other institutions.

Finally, if you are a freshman applicant, you must also submit official results of the Scholastic Aptitude Test (SAT) or American College Test (ACT) and three achievement tests. See "Entrance Requirements" later in this chapter.

When to Apply

The open or priority filing period for admission is as follows:

- Spring Quarter 1986: File October 1-31, 1985
- Fall Quarter 1986: File November 1-30, 1985

(Applications for admission to Fall Quarter 1985 would have had to be filed during November 1984.)

All applications received during the priority filing period will be accepted for consideration. After this period, however, some departments, colleges, or schools at UCLA may close to new applicants as enrollment targets are met. So, it is important to apply for admission during the open filing period. (Certain colleges, schools, and departments at UCLA accept applications for the Fall Quarter only. Check the appropriate school announcement or departmental listings for details.)

Notification of Admission

You will be mailed a notice, which you should keep, acknowledging receipt of your application. Later, you will receive a letter explaining your admission status. The length of time before admission notification varies depending on how complete your application is and how quickly your records are received. In general, most Fall Quarter applicants are notified by spring.

If you are accepted for admission, you will be asked to sign and return a Statement of Intention to Register and a Statement of Legal Residence. A nonrefundable $50 deposit, also required at this time, will be applied to your University registration fee if you register in the quarter to which you are admitted.

Entrance Requirements

All campuses of the University of California have the same undergraduate admission requirements. The requirements are based on two principles: (1) the best indicator of success in the University is a record of high grades in previous schoolwork; (2) the completion of certain academic courses in high school prepares you to begin University work and choose a general field of study.

Fulfilling the admission requirements, however, does not necessarily assure admission to the campus of your first choice. Some UC campuses with enrollment limits cannot admit everyone who meets the minimum requirements.

Note, too, that admission requirements vary for California residents and nonresidents. Since the University of California is partially state-funded, admission requirements are necessarily somewhat more restrictive for out-of-state applicants. The UC requirements are designed to admit nonresidents whose standing is in the upper half of those who would be eligible as residents. The term “resident” as used here should not be confused with the definition of legal residence for tuition purposes as defined in the Appendix.

Admission as a Freshman
(California Residents)

You are considered a freshman applicant if you have not enrolled in a regular session of any college-level institution since graduation from high school (except for summer session immediately following high school graduation). A high school diploma or proficiency certificate is required for admission to the University.

To qualify for admission as a freshman, you must meet three major requirements: (1) the Subject Requirement, (2) the Scholarship Requirement, and (3) the Examination Requirement. You may also qualify for admission by examination alone.

(1) Subject Requirement

The following subject pattern, called the A through F subjects, is required for admission to UCLA. You must have earned a grade of C (2.0 grade-point average) or higher in each semester of each course.

(A) History — 1 Year
A one-year course in United States history, or one-half year of United States history and one-half year of civics or American government.
(B) English — 4 Years
University preparatory courses in English composition and/or literature with no more than one year taken in the ninth grade.

(C) Mathematics — 2 Years*
University preparatory courses in such subjects as algebra, geometry, trigonometry, calculus, elementary functions, and mathematical analysis.

(D) Laboratory Science — 1 Year, completed after the ninth grade
A one-year course in one laboratory science.

(E) Foreign Language — 2 Years
Two years in one language. Any foreign language with a written literature is acceptable.

(F) Advanced Course — 1 or 2 Years*
This must be selected from one of the following:
- Mathematics — A total of one year of mathematics beyond the two years offered toward the mathematics requirement.
- Foreign Language — Either an additional year in the same language offered toward the foreign language requirement or two years of another foreign language.
- Science — A year course in laboratory science taken after the one-year science requirement is completed.

These courses constitute the minimum subject requirements for admission, but it is strongly recommended that you take additional courses. See “Preparing for University Work” at the beginning of this chapter.

(2) Scholarship Requirement
Eligibility for admission to UCLA is based on a combination of your grade-point average (GPA) in the A-F subjects and your American College Test (ACT) or Scholastic Aptitude Test (SAT) scores. For detailed scholarship requirements, see the Undergraduate Application Packet or contact Undergraduate Admissions and Relations with Schools.

(3) Examination Requirement
All freshman applicants must submit scores from the following tests:

(a) One Aptitude Test:
- (1) The American College Test (ACT), composite score, OR
- (2) The Scholastic Aptitude Test (SAT), total score.

(b) Three College Board Achievement Tests (ACH) which must include:
- (1) English composition
- (2) Mathematics, level 1 or 2, AND
- (3) Either English literature, foreign languages, sciences, social sciences.

If you are applying for admission to the Fall Quarter, you should take these tests by December of your senior year in high school. Do not wait to apply for admission until you have taken the tests; apply as soon as possible after the priority filing period opens (see “When to Apply” earlier in this chapter).

For detailed information about these requirements, consult the Information for Prospective Students brochure or the Undergraduate Application Packet, available in the Undergraduate Admissions Office at any UC campus and in high schools and community colleges.

Admission by Examination Alone
If you do not meet the subject and scholarship requirements for admission, you may be able to qualify for admission to the University by examination alone. To qualify, you must score at least 1100 on the Scholastic Aptitude Test (SAT) or 26 on the American College Test (ACT). In addition, your total score on the three College Board Achievement Tests must be 1650 or higher, with a minimum score of 500 on each test.

You cannot qualify by examination alone if you completed 12 or more units of transferable college credit before taking the tests. Also, you cannot qualify if you have taken transferable college courses in one or more of the academic subjects covered by the College Board Achievement Tests.

Admission as a Freshman (Nonresidents)
Admissions procedures and examination requirements are the same as for California residents as described above. For nonresident freshmen, however, the minimum required grade-point average for A-F courses in high school is 3.4. Admission by examination alone requires the same total score of 26 on the ACT or 1100 on the SAT, but a higher total score on the three Achievement Tests (1730 or higher, with a minimum score of 500 on each test).

If you do not meet the requirements for admission to freshman standing or if you cannot qualify by examination alone, you may still gain admission as a transfer student.

Admission as a Transfer Student (California Residents)
A transfer applicant has been a registered student (1) at another college or university or (2) in college-level extension courses other than summer session immediately following high school graduation. You may not disregard your college record and apply for admission as a freshman.

Requirements for admission as a transfer student vary depending on your high school record and the date of your high school graduation, though a GPA of 2.0 or better is usually required in transferable courses. If you wish to transfer to UCLA, you should follow these general guidelines:

1) See your college counselor, who can help you identify the courses you should take to prepare for your intended major, and make certain the courses you are currently taking are transferable.

2) Take as many English and mathematics courses as possible. UCLA’s academic program is rigorous and requires a strong background in both critical and quantitative skills. English and mathematics are the most important subjects you can take.

3) Begin to satisfy breadth (general education) requirements and fulfill prerequisites for your intended major. Because a sound liberal arts education encompasses more than an in-depth knowledge of one field, most colleges and schools at UCLA require that students take coursework in areas outside their major. Before transferring to UCLA, you can take courses to satisfy these breadth requirements as well as fulfill some of the required “prerequisite” courses for your major.

For more detailed information on admission requirements for transfer students, see the Undergraduate Application Packet or contact UARS.

Admission as a Transfer Student (Nonresidents)
If you were eligible for freshman admission as a nonresident and want to apply as a transfer student, you must have a GPA of 2.8 or higher in transferable college courses. If you graduated from high school with less
The University gives unit credit to transfer students for certain courses toward a University degree at an accredited two-year college. Each college offers a full program of courses, so many students who plan to earn a University degree find it to their advantage to complete their freshman and sophomore work at a California community college. UCLA Extension courses in the X and XL series are transferable for unit credit and some subject credit. For more information, contact the Extension Advisory Service at 206-6201.

Transfer Credit and Credit by Examination

The University gives 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 the Office of Undergraduate Admissions and Relations with Schools (UARS). Extension courses taken either at UCLA or at another institution may not be acceptable for credit. UCLA Extension courses in the X and XL series are transferable for unit credit and some subject credit. For more information, contact the Extension Advisory Service at 206-6201.

College credit for examinations given by national testing services is generally not allowed except for the Advanced Placement examinations given by the College Board. Contact UARS for more information.

Applicants from Other Countries

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 which would enable them to be admitted to a university in the home country.

Your application for admission, copies of official certificates, and detailed records of all secondary schools attended should be submitted as early as possible after the priority filing period opens (see “When to Apply” at the beginning of this chapter). This will allow time for the necessary correspondence and, if you are admitted, to obtain your passport visa.

Students whose native language is not English must have sufficient command of English to benefit from instruction at UCLA. To demonstrate that command, you will be required to pass the English as a Second Language Placement Examination (ESLPE) given by the University. In addition, you are advised to take the Test of English as a Foreign Language (TOEFL) as a preliminary means of testing your ability. Make arrangements for this test by writing to the Educational Testing Service, 1947 Center Street, Berkeley, CA 94704. Have your test results sent directly to the UCLA Office of Undergraduate Admissions and Relations with Schools.

All new and reentering foreign students must obtain clearance in person at the Student Health Service by completing and returning a Health Evaluation form, by verifying adequate health insurance coverage, and by establishing absence of active tuberculosis. In addition, all foreign students must obtain an annual health insurance clearance each fall at the SHS Insurance Office. For information, call 825-4073.

Readmission

Undergraduate students are required to apply for readmission only if they were absent from the University for more than one quarter. Thus, if you complete a quarter and then withdraw, cancel, or fail to register for the next quarter, registration materials will be available for you for the term immediately following.

If you are absent for two or more consecutive quarters, you must file an application for readmission with the Registrar. During the 1985-86 academic year, all such students returning in the same standing (undergraduate) must file applications for readmission as follows:

**Filing Deadlines**

- August 15 for Fall Quarter 1985
- November 25 for Winter Quarter 1986
- February 25 for Spring Quarter 1986

Applications are available at the Registrar’s Office, 1134 Murphy Hall. Your completed application must be accompanied by a $35 application fee (nonrefundable) and transcripts of records from any other institutions (including University Extension) you attended during your absence. Within enrollment limitations, readmission is generally approved if you were in good academic standing (2.0 grade-point average) when you left the University, if coursework completed elsewhere in the interim is satisfactory, and if applications for readmission are filed on time. Contact the Registrar’s Office (825-1091) for further information on readmission.
Registration and Enrollment

Information:
Registrar’s Office
1134 Murphy Hall
825-1091

Detailed information on registration and enrollment procedures is contained in the quarterly Schedule of Classes, available for purchase at the Students’ Store several weeks before the beginning of each quarter. To obtain a copy by mail, write to ASUCLA Students’ Store, 308 Westwood Plaza, Los Angeles, CA 90024, Attn: Mail Out. Include a check or money order for $1.50 payable to ASUCLA.

Registration consists of paying fees and enrolling in classes. The Registration Form, issued by the Registrar, is used for paying fees and for requesting enrollment in classes. You must complete both processes by the established deadlines to be officially registered and enrolled for the quarter.

Registration may be accomplished by mail or in person. You may use a combination of both processes to pay fees and enroll in classes, but all eligible students are encouraged to register by mail. It will save you the time and trouble of waiting in line.

Enrolling in classes, like paying fees, is accomplished most effectively and most easily by mail. Because enrollment by mail is processed according to a postmarked date, you will increase your chances of getting the classes you want if you send your Study List Request to the Registrar’s Office on the first mailing date. Consult the Schedule of Classes for firm dates and for all details on enrollment procedures.

Study List Changes

Tentative Study Lists showing enrollment results are mailed to each student ten days before the term begins. Before the first day of class, you may make program changes (add/drop courses, switch sections, or change grading options) by keeping the appointment to enroll which is printed on your Tentative Study List. Once instruction begins, and through the tenth day (second week) of classes, you may make as many program changes as you wish, without appointment and without fee, at the enrollment terminals in the Ackerman Union second-floor lounge.

Viewing Terminal — If you want to take an up-to-date look at your Study List or obtain an extra copy of it, you may do so before instruction begins or during the first ten days of classes at the viewing terminal on the east balcony of Ackerman Union or at 1134 Murphy Hall. On each visit to the terminal, you will receive a copy of your Study List showing enrolled courses and waiting list courses, including your position on the waiting list. You may also use the viewing terminal to drop courses or change the grading basis of courses, but in order to add courses or switch sections you must use a regular enrollment terminal.

On the tenth day of instruction the Study List of enrolled courses becomes “official,” and a computerized Official Study List is mailed to each registered student. (If you do not receive yours on time, obtain a copy in the Registration/Enrollment Office, 1134 Murphy Hall.) You are responsible for all courses and the grading basis as listed on the Official Study List, and you cannot receive credit for courses not listed.

Unapproved withdrawal from or neglect of a course entered on the Study List will result in a failing grade.

Changes to your Official Study List require an Enrollment Petition from your college or school. Each petition costs $3, but you may make any number of changes on the same form. If you plan to add a course, you must bring a Permission to Enroll slip from the instructor or ask the instructor to sign the petition. If you add a special studies (199) course, you must also bring an approved copy of the Petition for Enrollment in Special Studies 199 Course. The deadline to drop classes has been extended to the end of the sixth week of instruction (see Calendar).

Change of College or Major

Changing your college or major requires the approval of the college or department you want to attend. Applications are made by petition, which is available without charge from the college or school office. You may not change majors after the opening of the last quarter of your senior year.

Last Mailing Dates to Register and Enroll by Mail
(Tentative only; refer to the Schedule of Classes for firm dates)

<table>
<thead>
<tr>
<th>Date</th>
<th>Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 30</td>
<td>Fall Quarter 1985</td>
</tr>
<tr>
<td>December 6</td>
<td>Winter Quarter 1986</td>
</tr>
<tr>
<td>March 7</td>
<td>Spring Quarter 1986</td>
</tr>
</tbody>
</table>

You may register in person on certain days immediately preceding the beginning of classes each quarter. Hours are 8:30 a.m. to 5 p.m. on the following days:

Registration in Person

<table>
<thead>
<tr>
<th>Date</th>
<th>Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 23-27</td>
<td>Fall Quarter 1985</td>
</tr>
<tr>
<td>January 8-10</td>
<td>Winter Quarter 1986</td>
</tr>
<tr>
<td>April 2-4</td>
<td>Spring Quarter 1986</td>
</tr>
</tbody>
</table>

Enrollment in Classes

The quarterly Schedule of Classes contains up-to-date listings of class times, meeting rooms, instructors, and all information necessary for enrolling in classes. Using the Schedule and with the aid of academic counseling from your school or college advisers, you can assemble a program of courses (see “Choosing a Major” and “Planning a Program” later in this chapter).

You should plan two or three alternate programs in case your first choice of courses is not available. You may not choose two courses in the same final examination group and should not select classes that conflict in meeting times. If conflicts are unavoidable, consult with the instructor of each course at the first class meeting.
**Fees**

Although the exact cost of attending UCLA will vary according to personal habits, tastes, and financial resources, there are some fees that all UCLA students must pay. Each entering and readmitted student is required to submit a Statement of Legal Residence to the Registrar’s Office. Legal residents of California are not required to pay tuition at the University. Students classified as nonresidents must pay tuition of $1,272 per quarter (for a full definition of residence and nonresidence, see the Appendix of this catalog).

At the time of registration each quarter, all undergraduates must pay the following fixed fees. Fees for Fall Quarter 1985 are current as of publication date but are subject to change without notice by The Regents.

<table>
<thead>
<tr>
<th>Quarterly Expenses, Fall 1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>University registration fee</td>
</tr>
<tr>
<td>Education fee</td>
</tr>
<tr>
<td>Ackerman Student Union fee</td>
</tr>
<tr>
<td>Associated Students (ASUCLA) fee</td>
</tr>
<tr>
<td>Wooden Recreation Center fee</td>
</tr>
<tr>
<td><strong>Total for California residents</strong></td>
</tr>
<tr>
<td>Nonresident tuition fee</td>
</tr>
<tr>
<td><strong>Total for nonresidents</strong></td>
</tr>
</tbody>
</table>

The registration fee covers certain student expenses for counseling service, all laboratory and course fees, athletic and gymnasium facilities and equipment, lockers, registration, graduation, and care and treatment on campus by the Student Health Service. This fee is charged whether or not you make use of these services.

**Other Fees**

Miscellaneous fees charged to UCLA undergraduates include a $50 charge for late payment of registration fees or late filing of the Study List (after the tenth day of classes). Minimal charges of $5 or less are assessed for most petitions and other special requests. A complete list of fees may be found in the Schedule of Classes.

**Fee Refunds**

Students who formally withdraw from the University during the first five weeks of instruction may receive partial refunds of fees. For the refund schedule and more information, see “Withdrawal” in Chapter 4 of this catalog or refer to the Schedule of Classes.

**Reduced Fee Programs**

UCLA recognizes the need for part-time study in special circumstances. If you have family or employment responsibilities or health problems which preclude full-time study, you may qualify for part-time enrollment.

If you have approval from your college or school to enroll in ten units or less, you may qualify for a fee reduction. Nonresident students pay only half the nonresident tuition fee; residents pay one-half the education fee. You must file the Request for Fee Reduction form with your college or school by the tenth day of instruction. Fee assessment is based on total units enrolled as of Friday of the third week of instruction.

**Lapse of Status**

Your status may lapse if you fail to settle financial obligations when due (or make satisfactory arrangements with the Main Cashier if payment cannot be made) or if you fail to respond to official University notices.

With lapsed status you are not entitled to any University services except assistance toward reinstatement. After you have satisfied the obligation, a petition for reinstatement must be approved by the office recommending the lapse of status and filed with the Registrar’s Office, 1111 Murphy Hall, with a $10 reinstatement fee.

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**Estimated Annual Budget for California Residents**

<table>
<thead>
<tr>
<th></th>
<th>Single, Commuter, Living at Parents' Home</th>
<th>Single, Living at UCLA Residence Hall, Co-Op, Sorority, or Fraternity</th>
<th>Single, Living in Off-Campus Apartment or House</th>
<th>Married, Living in UCLA Family Student Housing</th>
<th>Married, Living in Off-Campus Apartment or House</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Fees</td>
<td>$1,295</td>
<td>$1,295</td>
<td>$1,295</td>
<td>$1,295</td>
<td>$1,295</td>
</tr>
<tr>
<td>Books &amp; Supplies</td>
<td>460</td>
<td>460</td>
<td>460</td>
<td>460</td>
<td>460</td>
</tr>
<tr>
<td>Food &amp; Rent</td>
<td>1,290</td>
<td>2,790*</td>
<td>4,320</td>
<td>5,900</td>
<td>7,600</td>
</tr>
<tr>
<td>Transportation</td>
<td>260</td>
<td>260</td>
<td>260</td>
<td>520</td>
<td>520</td>
</tr>
<tr>
<td>(local bus)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>960</td>
<td>1,200**</td>
<td>1,090</td>
<td>1,660</td>
<td>1,660</td>
</tr>
<tr>
<td><strong>Total Budget</strong></td>
<td><strong>$4,265</strong></td>
<td><strong>$6,005</strong></td>
<td><strong>$7,425</strong></td>
<td><strong>$9,835</strong></td>
<td><strong>$11,535</strong></td>
</tr>
</tbody>
</table>

*If you are assigned a room in a residential suite, add $600.
**Includes $100 for extra meals during breaks.

For more information on housing, see Chapter 1 or contact the UCLA Housing Office in 78 Dodd Hall (825-4491).
Living Expenses
Printed on the previous page is an estimated yearly budget for undergraduate California residents. Nonresidents must add the $3,816 annual tuition fee to their total expenses for an accurate estimate. Expenses cover the three regular session quarters of the 1985-86 academic year and do not include Summer Sessions. This budget is designed to serve as a guide only.

Financial Support
Information:
Financial Aid Office
A107 Murphy Hall
206-0432

It is not required that you come from a low-income family in order to qualify for financial aid. You must, however, demonstrate "financial need," which is defined as the difference between the cost of attending UCLA and the amount that you and your family should be able to contribute. The University expects that students and their families will bear as much of the necessary cost of a student's education as their circumstances will permit.

The Financial Aid Office publishes a Financial Aid Handbook which provides more complete information than this catalog can give. You can get a copy free of charge from your high school counselor or from the Financial Aid Office, A107 Murphy Hall, University of California, Los Angeles, CA 90024.

Applying for Financial Aid
The deadline for filing all undergraduate financial aid applications for academic year 1986-87 is early February 1986 (applications for 1985-86 would have had to be filed by February 1985). Because of the limits being placed on financial aid funding, meeting deadlines is more crucial than ever. Applications received after the deadline will be considered only if funds are still available. The Daily Bruin and other campus media publish information on deadline dates.

Prospective students must first apply for admission to UCLA by filing the Undergraduate Application Packet during the priority filing period (see "Undergraduate Admission" at the beginning of this chapter). On the application, check the boxes requesting financial aid and scholarship application materials. The Financial Aid Office will send you complete instructions and applications well before the deadline.

Continuing students may obtain UCLA Scholarship and Financial Aid Application Packets at the Financial Aid Office in December of each year. Continuing students from foreign countries may obtain a Financial Aid Application for International Students at the Financial Aid Counseling Window, A107 Murphy Hall. No financial aid can be awarded to foreign students in their first year of attendance at UCLA.

Student Aid Application for California (SAAC)
One of the key assumptions of financial aid is that parents, to the extent that they can contribute, have primary responsibility for financing the cost of a student's education. To permit an evaluation of need, all students who apply for need-based aid must provide financial information on the Student Aid Application for California (SAAC). If you are financially independent, your own financial circumstances are analyzed rather than those of your parents (see the Financial Aid Handbook for the definition of financial independence).

The SAAC is used to apply for Pell Grants, funds administered by UCLA, and Cal Grants administered by the California Student Aid Commission. It is available at California high schools and colleges and the UCLA Financial Aid Office, and should be filed in early February with the College Scholarship Service, P.O. Box 70, Berkeley, CA 94701. Be sure to indicate that a report is to be sent to UCLA.

Kinds of Financial Aid
There are four basic kinds of aid: scholarships, grants, loans, and work-study employment. Since most students are eligible for several of these, the Financial Aid Office usually offers a combination "package" consisting of some money that is a gift (scholarship or grant) and some that will have to be paid back or worked for. If you indicate a preference for work or loan, we will attempt to honor it.

Unless otherwise stated, you must demonstrate financial need to qualify for aid, and you must be making normal academic progress as defined by your college or school and department.

Scholarships
Scholarships are gifts that do not have to be repaid. Undergraduate scholarships at UCLA honor outstanding past achievement and make possible greater academic excellence in the future. UCLA administers about 100 different scholarship funds which are either honorary or need-based.

Honorary scholarships come with a small honorarium (usually $300) and are awarded solely on the basis of academic performance and promise. No financial information is required. Need-based scholarships, which often carry substantial yearly stipends, are given to students who demonstrate financial need as well as high academic performance. For eligibility requirements, read the scholarship instructions sent to all financial aid applicants.

All scholarships require annual reapplication. To maintain eligibility, you must carry at least 12 units per quarter.

Regents Scholarships
One of the highest honors that may be conferred on an undergraduate student is the awarding of a Regents Scholarship. Unlike other University scholarships, these are awarded for four years to students entering from high school, and for two years to entering or continuing juniors. You are eligible to apply if you have achieved an outstanding academic record (minimum 3.5 GPA) and show a high degree of promise. Financial need is not a criterion for this award, but if you are eligible for financial assistance and have filed the SAAC, you may receive a stipend to cover the difference between your resources and the cost of your UCLA education. Regents Scholars receive an honorarium of $300 regardless of need.

National Merit Scholarships
UCLA sponsors National Merit Scholarships for entering freshmen who are finalists in the National Merit Scholarship competition. Finalists who select UCLA as their first choice will be offered a minimum of $750 in recognition of their academic achievement.

UCLA Alumni Association Scholarships
Alumni Scholarships are available to California high school graduates who will be UCLA freshmen in the Fall Quarter. No financial need is involved, but you must show academic promise. Alumni Scholarships are merit-based and competitively awarded. Amounts for 1985-86 range from $1,000 to $10,000. The Ralph Bunche Scholarship, also awarded by the UCLA Alumni Association and named in honor of the Nobel Peace Prize laureate and UCLA alumnus, is awarded to students who meet the University's Student Affirmative Action definition.

Prizes
The generosity of alumni and friends of the University provides for competitive prizes and awards in several fields. Selections are made by committees in appropriate academic departments. See your departmental adviser for details.

Grants
Grants are gifts that do not have to be repaid and are based solely on need. Whenever guidelines and funds permit, your financial aid package will include a grant.
Pell Grants

Pell Grants are federal aid programs intended to be the “floor” of financial aid packages. As such, they may be combined with other forms of aid in order to meet the full costs of education. Amounts for 1985-86 range from $250 to $1,900 and are determined by your own and your family's financial resources. U.S. citizens, permanent residents, and refugees are eligible to apply by filing the SAAC. The University requires all eligible undergraduates to apply for a Pell Grant.

Cal Grants A and B

California residents who have not completed more than nine quarters or six semesters of college work prior to September 1985 are eligible to apply for a California Student Aid Commission Cal Grant award. The SAAC and Cal Grant Supplements are the official applications for these programs. “Cal Grant A” awards are applied toward education and registration fees. They are based on need and academic achievement and are renewable each year. “Cal Grant B” awards are intended to assist low-income families with amounts from $300 to $2,182 and are renewable annually. The state sends renewal applications to continuing Cal Grant recipients.

Grants-in-Aid

Grants-in-Aid provide eligible students with financial assistance from University funds. Awards range from $100 to $5,010. All students may apply.

Supplemental Educational Opportunity Grants

These awards are federally funded and are granted only to undergraduates with financial need. Awards range from $200 to $1,500.

Loans

Loans allow you to postpone paying some of the costs of your education until you have completed school. A financial aid offer almost always includes a long-term, low-interest loan. The loans come from revolving funds; most repayments are immediately reloaned to current students.

It is essential that borrowers realize their commitment and responsibility to repay according to repayment schedules. Before accepting a loan, you should assess your total educational debt and your ability to repay following graduation. If you are a first-time borrower, schedule an appointment with a financial aid counselor. The University will make every effort to assist you during the repayment of your obligation, but University services, including registration and the release of official transcripts, will be withheld if your loan becomes delinquent. Seriously delinquent accounts are referred to a professional collection agency for action.

All loan recipients must come to the Student Loan Services Office (A227 Murphy Hall) for a loan exit interview before leaving UCLA for any reason. This interview will help you understand your loan agreement and your rights and responsibilities. If you fail to participate in an exit interview, the University will place a hold on your academic records and registration materials. Call 825-9864 for an interview appointment before graduating, transferring, or withdrawing from UCLA.

National Direct Student Loans (NDSL)

These low-interest loans are available to all students who are U.S. citizens, permanent residents, or refugees and who are carrying at least one-half the full-time academic workload. Repayment begins nine months after you terminate at least half-time study. Minimum repayment is $90 per quarter, including interest, for a maximum of ten years.

Nursing Loans

To be eligible for a nursing loan, you must be a U.S. citizen, permanent resident, refugee and a student in the School of Nursing. Up to $2,500 is available per academic year. For more information, contact the financial aid counselor either in the Financial Aid Office or in the School of Nursing.

Emergency Educational Loans

You need not be receiving financial aid to apply for emergency loans. You may borrow up to $75 for immediate emergency needs; this amount is repayable within five weeks. To qualify, you must be a registered UCLA student with a satisfactory loan repayment record. Applications are available at the Student Loan Services Office, A227 Murphy Hall.

Guaranteed Student Loans (GSL)

Federal and California Guaranteed Student Loans are long-term budget-based loans made by banks, savings and loan associations, and credit unions. They are available to U.S. citizens, permanent residents, or refugees who are enrolled in at least a half-time program at UCLA. You should check with various lending institutions to determine their particular loan policies, but the Financial Aid Office must process applications before you submit them to a lending institution. Applications are available at the Financial Aid GSL Office, A128 Murphy Hall.

Repayment of the GSL begins six to nine months after graduation or withdrawal and continues for a maximum of ten years. If you receive a federal or state interest subsidy, the loan is interest-free while you are a student and for six to nine months thereafter. Undergraduates may borrow $2,500 per academic year up to a total of $12,500. GSL processing takes approximately ten to 12 weeks.

Work-Study Programs

Work-study is a need-based program designed to expand part-time job opportunities for students. The program allows you to work a maximum of 20 hours per week while attending school and 40 hours per week during breaks. An academic year’s work-study award may range from $600 to $5,200, but your gross earnings may not exceed the amount awarded to you. There are two basic work-study programs available.

Under College Work-Study, the federal government pays a portion of your hourly wage; your employer contributes the balance. Whenever possible, work is related to your educational objectives. Employment may be on or off campus. Hourly pay rates comply with minimum wage laws and vary with the nature of your work, experience, and capabilities. To be eligible you must be a U.S. citizen, permanent resident, or a refugee.

The President's Work-Study program is administered in the same manner as College Work-Study except that The Regents of the University and your employer provide funding, and you are limited to on-campus jobs. All students are eligible to apply.
### Undergraduate Majors and Degrees

<table>
<thead>
<tr>
<th>College of Letters and Science</th>
<th>MAJORS</th>
<th>DEGREES</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Studies</td>
<td>—</td>
<td>—</td>
<td>Special Program (taken jointly with an organized major)</td>
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<tr>
<td>Afro-American Studies</td>
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<td>B.A.</td>
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<tr>
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<td>Asian American Studies</td>
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<tr>
<td>Astronomy</td>
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<tr>
<td>Atmospheric Sciences</td>
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<td>Biology</td>
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<tr>
<td>Business and Administration</td>
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<td>Program (taken jointly with an organized major)</td>
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<td>Chemistry</td>
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<td>Chemistry/Materials Science</td>
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<td>Chicano Studies</td>
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<tr>
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<td>Greek</td>
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<td>Computing, Program in</td>
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<tr>
<td>Cybernetics</td>
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<td>Diversified Liberal Arts</td>
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<td>Earth and Space Sciences</td>
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<td>Geology</td>
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<td>B.S.</td>
<td></td>
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<td></td>
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<tr>
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<td>B.A.</td>
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<tr>
<td>Psychobiology</td>
<td>B.S.</td>
<td></td>
<td></td>
</tr>
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<td>Psychology/Developmental Disabilities Immersion Program</td>
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<td></td>
<td></td>
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<td>Religion, Study of</td>
<td>B.A.</td>
<td></td>
<td></td>
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<td>Slavic Languages and Literatures</td>
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<td>Russian Civilization</td>
<td>B.A.</td>
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<td>B.A.</td>
<td></td>
<td></td>
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<td>B.A.</td>
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<td>Spanish and Portuguese</td>
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<td></td>
<td></td>
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<td>Special Program (taken jointly with an organized major)</td>
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<td></td>
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<td></td>
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<tr>
<td>World Arts and Cultures</td>
<td>B.A.</td>
<td></td>
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</tbody>
</table>

**College of Fine Arts**

Art, Design, and Art History

| Art                                           | B.A.   |
| Art History                                   | B.A.   |
| Design                                       | B.A.   |
| Dance                                        | B.A.   |
| Music                                        | B.A.   |

Theater Arts

| Motion Picture/Television                     | B.A.   |
| Theater                                      | B.A.   |

World Arts and Cultures                       | B.A.   |

**School of Engineering and Applied Science**

Chemical Engineering                          | B.S.   |

Civil Engineering                             | B.S.   |

Computer Science and Engineering              | B.S.   |

Electrical Engineering                        | B.S.   |

Engineering                                   | B.S.   |

**School of Nursing**

Nursing                                      | B.S.   |
Getting Your Bachelor’s Degree

Colleges and Schools

The UCLA campus consists of 13 colleges and schools, most of which are subdivided into departments. The courses of instruction are administered within the departments.

Colleges at UCLA provide a broad, nonprofessionally oriented curriculum leading to both undergraduate and graduate degrees. UCLA has two colleges: the College of Letters and Science and the College of Fine Arts.

Schools provide training for specific professions and are authorized to grant professional degrees (e.g., Master of Business Administration, Master of Engineering, Doctor of Education). UCLA has 11 professional schools, two of which offer undergraduate degree programs: the School of Engineering and Applied Science and the School of Nursing.

Each of the colleges and schools has its own degree requirements and is headed by a dean or provost who has final academic authority. Thus, when you attend UCLA, you are enrolled not only at the University of California, Los Angeles campus, but in a specific college or school within the University. Your academic life is governed by the college or school which houses your major.

As the chart on the previous pages shows, UCLA offers Bachelor of Arts (B.A.) and Bachelor of Science (B.S.) degrees in a broad range of disciplines. There are no undergraduate minors at UCLA, but there are a number of special programs which you may complete as an adjunct to your major. The bachelor’s degree (you may earn only one) is the culmination of your undergraduate work; master’s and doctoral degrees are earned in graduate study.

Knowing Your Responsibilities

UCLA provides its students with a wide variety of academic assistance and personal support resources, but it is up to you to realize when you need help and to seek it out. It is also your responsibility to stay informed of rules, regulations, and policies affecting your life as a UCLA student and your academic standing, and to comply with them. Consult this catalog, the college and school announcements, and the Schedule of Classes for the information you need; watch for official announcements in the Daily Bruin and on campus bulletin boards. Meeting academic deadlines, monitoring your Study List for accuracy, completing prerequisites, and fulfilling degree requirements are all part of your academic duties as a student. Living up to your responsibilities will add immeasurably to the value and enjoyment of your education (also see “Student Conduct” in the Appendix of this catalog).

Choosing Your Major

One of the most important decisions you will have to make in college is your choice of major — the field of study which represents your principal academic interest and which will possibly contribute toward your career goals. Some students select their major at the time they fill out the University’s application for admission. A far greater number, however, are undecided about their major and enter UCLA as “undeclared.”

If you are in the College of Letters and Science, you do not need to declare your major in your freshman year. The college allows you to attend with an undeclared major until the end of your sophomore year. In fact, if you are not certain of your specific academic goals, it is often wise to wait and explore the diversity of subject areas offered at UCLA.

Enroll in introductory courses (usually numbered below 100) in a variety of disciplines to learn the scope and vocabulary of the major. It is not unusual for students to become enthusiastic about disciplines previously unfamiliar to them. With careful planning, such courses may also apply toward fulfilling college requirements for whatever major you choose.

To narrow your choices further, carefully consider general college or school requirements, the description of courses offered in the major, and the departmental requirements for completing the program of study. Look at the books required for each course. Sit in on a few classes and talk with professors during their office hours. Discuss your interests and plans with a departmental counselor or faculty adviser, a college counselor, or with advisers in the Placement and Career Planning Center.

A few words of warning: certain majors, especially in engineering and the sciences, require early declaration. Some have enrollment quotas and will allow application by new majors only during a specified quarter. Check with the departmental adviser for the majors that interest you.

In addition, each UCLA undergraduate is limited to between 208 and 213 quarter units, depending on the college or school, to complete the academic program and fulfill all degree requirements. So, if you want to declare a major, don’t wait too long. In any case, you must declare a major by the beginning of your junior year (90 quarter units).

When you are ready to declare your major, or if you wish to change from one major to another, pick up a Petition for Change of Major at the college or school office. There is no fee for this petition.

Planning a Program

Every new student should obtain academic counseling before enrolling in classes at UCLA (counseling is required in the School of Engineering and Applied Science). Working with a tentative major in mind, you need to plan courses to satisfy all of the degree requirements while staying within the minimum and maximum number of units required for graduation. The Orientation program for new students will take you through a step-by-step plan for an effective program (see “Orientation” later in this chapter). If you cannot attend Orientation, see your college or school adviser or, if you have selected a major, make an appointment with your major department adviser before enrolling in classes.

Undergraduate Degree Requirements

In all campus units except the School of Engineering and Applied Science, you are required to earn a minimum of 180 units from all college coursework for the bachelor’s degree at UCLA. A maximum of 208 units is allowed. (If you have credit for English 1 taken Fall Quarter 1979 through Summer Quarter 1984 at UCLA, the minimum and maximum unit requirements are increased to 182 and 210 respectively.) In the School of Engineering and Applied Science, the minimum units allowed are between 186 and 201 (depending on the department program); 215 maximum units are allowed.

In working toward a bachelor’s degree, you should be aware that in addition to unit requirements there are three levels of requirements which you must satisfy. The first level consists of University-wide requirements which all undergraduates must satisfy; the rest vary depending on your major and the college or school which offers it.

(1) University requirements (Subject A, and American History and Institutions);
University Requirements

The University of California has established two requirements which all undergraduates must satisfy in order to graduate: Subject A, and American History and Institutions. It is your responsibility to see that these requirements are fulfilled.

Subject A

Because proficiency in English composition is so important to successful performance in many courses, Subject A is the only requirement for graduation that you must satisfy before entering UCLA or in your first quarter of residence. You may meet this requirement by:

(1) Scoring 3, 4, or 5 on the College Entrance Examination Board (CEEB) Advanced Placement Test in English Composition, OR
(2) Scoring 600 or better on the CEEB Achievement Test in English Composition, OR
(3) Presenting transfer credit for an acceptable college-level course in English composition at another institution, OR
(4) Passing a Subject A Placement Test required of all students who have not otherwise met the requirement.

If you do not meet the requirement in one of the ways described above, during your first quarter of residence at UCLA you must enroll in either English A or B (determined by performance on the Subject A Placement Test). Effective Fall Quarter 1984, each course must be taken for a letter grade and passed with a grade of C or better. No credit toward a degree is granted for either course whether taken at UCLA or another UC campus. If you receive a final grade of C- or less, you must repeat the course in your next quarter of residence. You will not receive credit for any English course (except English A or B) unless the Subject A requirement is satisfied.

English as a Second Language (ESL) Students: If your native language is not English, you will be required to take the English as a Second Language Placement Examination (ESLPE). You are exempt from the Subject A examination, but must take the ESLPE and may have to complete one or more courses in the English (ESL) 33A through 33C series, beginning in your first quarter of residence at UCLA. These courses must be passed with a grade of C or better (C- or a Passed grade is not acceptable).

American History and Institutions

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

(1) Successfully 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:

- Afro-American Studies M104A, M104B
- Chicano Studies M159A, M159B
- Economics 183
- English 80, 85, M104A, M104B, 115A, 170, 171, 172, 173, 174, 176, 177
- Geography 136
- Political Science 1, 70, 114A, 114B, 143, 144, 145, 172A, 172B, 180, 186

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

(3) Presenting a certificate of satisfaction of the present California requirement as administered at another college institution within the state. Candidates for a teaching credential, but not for a degree, must take one of the following courses: History 7A, 7B, 151A, 151B, Political Science 172A, or 172B.

Aliens attending the University on an F-1 or J-1 student visa may petition for exemption from this requirement by showing proof of temporary residence in the United States.

For more information on this requirement, contact the undergraduate History counselor in 6248 Bunche Hall (625-3720).

Course Credit and Minimum Scholarship

In acceptable courses, the grades A through C and Passed denote satisfactory progress toward the bachelor's degree. The grades C- through D- yield unit credit toward the degree but must be offset by grades of C+ or better in other courses.

In order to qualify for a bachelor's degree in any college or school at UCLA, you must earn at least a C (2.0) average in all courses taken at any University of California campus. If you fail to maintain this level, you may be placed on academic probation or may become subject to dismissal.
Academic Probation

You will be placed on probation if your overall grade-point average falls between 1.5 and 1.9 or if you do not earn at least a 2.0 GPA in any one quarter. While you are on probation, you may not take any course on a Passed/Not Passed basis, and you should limit your Study List to 12 units.

You may terminate probation at the end of a regular quarter if you have attained a C (2.0) average for the term and a cumulative C average in all University work. If you do not end probation within two quarters, you may become subject to dismissal from the University.

Academic Dismissal

You will be subject to dismissal from the University under any of the following conditions:

1. If your grade-point average in any one quarter is less than 1.5, OR
2. If you do not earn at least a C (2.0) average in any quarter when you are on probation, OR
3. If you do not end probation within two quarters.

Note: In some colleges and schools, you may be subject to disqualification for failing to meet minimum progress requirements. Check with your college or school counselor.

If you are subject to dismissal, your transcript will carry the notation "Academic Probation, Continuance Subject to Dean’s Approval." You should make an appointment with your college or school counselor. Depending on your situation, you will be given conditions for continuation, or you will be dismissed from the University.

Your college or school counselor can explain the conditions for readmission if you wish to return to the University after dismissal (see “Readmission” earlier in this chapter).

Progress Toward the Bachelor’s Degree

UCLA is a full-time educational institution, and students are expected to complete their undergraduate degree requirements and graduate within four years. Maintaining the recommended study load will enhance your learning experience and the coherence of your studies.

The normal program for undergraduate students is three to four courses (12 to 16 units) per quarter; colleges and schools enforce minimum enrollment or minimum progress regulations. Please read the degree requirements section under each college and school for specific Study List limits. See Chapter 4 for information on concurrent enrollment, credit by examination and credit from other institutions, and special studies (199) course limitations.
Academic Resources and Assistance

Alternative Academics

UCLA has a broad range of options that can lend an added dimension to your undergraduate academic program. You will find other services and programs available to both graduate students and undergraduates in Chapter 1 of this catalog.

Council on Educational Development

The Council on Educational Development (CED) offers special courses and programs that encourage educational diversity and enrichment for undergraduates. CED works closely with colleges, schools, and research centers on campus to support new academic programs and courses. Many of these courses cover socially important issues which, because they are new, are not taught in existing academic departments. Many involve nontraditional educational concepts, interdisciplinary topics, and subjects on the leading edge of faculty interest.

Each quarter several courses focus on medicine, law, and human values. Students analyze ethical, legal, and scientific values in medical and mental health care issues, such as genetic screening, human experimentation, patients' rights, and medical technology.

For information about CED courses, consult the Schedule of Classes. Your college, school, or department can advise you about degree credit for CED courses. The office is located in 80 Powell Library (825-5467).

EXPO Center

The Extramural Programs and Opportunities (EXPO) Center offers access to a wide variety of off-campus learning experiences. For more information on any of the programs or services listed below, contact the EXPO Center, A213 Ackerman Union (825-0831).

Government Internship Program — More than 2,700 UCLA students have learned about the inner workings of government while serving in this program, the largest of its kind in any university in the nation. Bruins serve full-time internships for one or more quarters on the staffs of elected officials, public interest groups, and government agencies in Sacramento, Washington, and overseas. Others are participating in business, banking, and the arts in New York and San Francisco. The positions carry a small stipend.

International Opportunity Counseling Service — The EXPO Center counsels students on study, travel, and work opportunities outside the United States, offering information on some 1,800 overseas study programs open to UCLA students. EXPO also maintains a library of current materials related to study and travel opportunities abroad. International Student Identity Cards and Youth Hostel memberships are issued at the center.

Volunteer Income Tax Assistance Program (VITA) — Each winter the VITA program provides free income tax aid to UCLA students and a variety of disadvantaged people off campus. Student volunteers receive extensive training by the IRS in preparing tax returns and tax counseling.

Field Studies Development

Field Studies Development, a division of the Office of Instructional Development, helps students, faculty, and academic departments to develop meaningful learning experiences outside the classroom. These may be in the form of internships, field studies or research, community service, or cooperative education programs. The office is located in 70 Powell Library (825-7867).

Departmental Field Studies Development — This program encourages the development of coherent field programs for academic credit in relevant departments. Departmental coordinators work with you to develop field projects and find placements and academic sponsors.

Independent Field Studies — You may design internships and field study opportunities to meet your specific academic, personal, and career goals. A field study coordinator helps you with your plans on a one-to-one basis and helps arrange Passed/Not Passed credit for appropriate field experience.

Developmental Disabilities Immersion Program (DDIP) — Cosponsored by Field Studies Development and the Departments of Psychology and Psychiatry, DDIP offers an intensive living, studying, and working experience in developmental disabilities. One session is offered each year during Winter and Spring Quarters. For more information, call 825-1627.

Freshman and Sophomore Programs

Honors Collegium

The Honors Collegium is an innovative educational alternative designed primarily for UCLA's promising freshmen and sophomores. For a complete description of this program, see Chapter 5 on the College of Letters and Science.

Professional Schools Seminar Program

This program focuses on the relationships between various academic disciplines and professional practice, and the characteristics common to the professions. Students seeking to define their own academic and career goals will gain valuable exposure to the views of professionals and the challenges and demands that stimulate professional activity.

Seminars are offered in the Fall, Winter, and Spring Quarters. Enrollment is limited to allow students close contact with professional school faculty members; lower division students are preferred. For further information, contact the Program Office in 80 Powell Library (825-5467).

Individual Classes

Most departments offer the individual study (199) course for seniors — or juniors with at least a B average — who want to pursue a particular research interest. Consult your department or the departmental listings in this catalog for further information.

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.
Reserve Officer Training Corps (ROTC)

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 you to qualify for an officer’s commission in the Army, Navy, Air Force, or Marine Corps while completing your 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 carry a monthly stipend in the junior and senior years, and additional financial aid is available to qualified students. Individual programs are described in detail in Chapter 5 on the College of Letters and Science.

Advising and Academic Assistance

UCLA’s academic standards are high, and many students find they need some form of academic assistance. Help is available in several forms: staff and student counselors, faculty advisers, services, and special programs. You need only to seek it out. This section will introduce you to the many kinds of assistance available to undergraduates. Refer to the section on “Student Services” in Chapter 1 for other helpful programs.

College and School Advisers

Each college, school, and academic department at UCLA has a staff of academic counselors and advisers who are knowledgeable and experienced. They are eager to help you plan your academic program, monitor your progress toward the bachelor’s degree, provide information about college and major requirements and prerequisites, and assist you with academic problems, improving study habits, and program planning. Counseling offices for each undergraduate college and school are listed below.

College of Letters and Science — A316 Murphy Hall, 825-1965 or 825-3382 (Division of Honors — A311 Murphy Hall, 825-1553 or 825-3786)
College of Fine Arts — A239 Murphy Hall, 825-9705
School of Engineering and Applied Science — 6426 Boelter Hall, 825-2826
School of Nursing — 2-200 Louis Factor Building, 825-7181

Counseling Assistants

Counseling assistants (CAs) are UCLA graduate students who have been specially trained to help new students with the transition into University life. Although employed in the College of Letters and Science, they represent a number of academic disciplines in several colleges and schools on campus. CAs help new students during Orientation with program planning and course selection, and are available throughout the year for follow-up visits and to provide help with program planning, skill building, and personal support. You may make an appointment with a CA in A316 Murphy Hall (206-6681).

ASK Peer Counselors

ASK is a network of 15 academic peer counselors trained by the College of Letters and Science to advise you regarding college and University requirements and procedures and to make appropriate referrals to other campus resource offices. Stop by one of the ASK tables and talk with a fellow student in a convenient informal setting.

You can find ASK counselors at these campus locations: Campbell/Rolfe Quad, weekdays 10 a.m. to 1 p.m.; Murphy Hall, weekdays 8:30 a.m. to 5 p.m.; Placement and Career Planning Center (south side), weekdays 10 a.m. to 1 p.m.; Powell Library (north and south sides), weekdays 10 a.m. to 1 p.m. During registration week counselors are available from 8:30 a.m. to 4:30 p.m. in the second-floor lounge (also during the first week of classes) and the Grand Ballroom in Ackerman Union.

Preparatory Programs for New Students

The Office of Preparatory Programs, located in A316 Murphy Hall (206-1217), administers six important programs to help new students adjust and succeed academically at UCLA: Orientation, Freshman Summer Program, Transfer Summer Program, Academic Advancement Program, ARC Math/Sciences Tutorials, and ARC Composition Tutoring Lab and ESL Service Courses Tutorials. Since most of the courses which new students take are offered by the College of Letters and Science, the Office of Preparatory Programs is a part of that academic unit; however, the programs are open to new students enrolled in any college or school on campus.

Orientation

Orientation at UCLA provides a comprehensive introduction to campus life. During the summer and before the beginning of the Winter and Spring Quarters, special programs offer new undergraduates extensive academic counseling and educational planning. During Orientation you work in small groups with peer counselors. You gain insight into necessary academic skills, learn how to plan and construct your academic program, and become familiar with the educational opportunities, student services, and facilities available at UCLA. Individual counseling sessions help you adjust to University life and fulfill the advising requirements of some colleges and schools. Sessions for parents are also offered.

During the summer, Orientation offers three-day, two-night dormitory live-in programs for freshmen and two-day, one-night programs for transfer students. Prior to the Winter and Spring Quarters, one-day on-campus programs are offered. There is a fee for participation. For more information, contact the Orientation Office in A316 Murphy Hall (206-6685).

Freshman Summer Program (FSP)

The Freshman Summer Program is a seven-week instructional program designed to help entering freshmen meet UCLA’s high academic standards by improving composition, mathematical, and general learning skills.

Several hundred new freshmen get a head start every summer through the program’s classroom instruction, tutorials, and learning workshops held for four hours each day. Special English courses — English A and B — help students improve writing skills and meet the University’s initial
university-level math courses - including calculus - required for many majors at UCLA. Moreover, students receive guidance on academic planning and are assured enrollment in Fall Quarter classes.

FSP offers a firsthand introduction to UCLA. You can live in the residence halls (optional), take part in academic and personal counseling sessions, and generally get to know the campus and its facilities. The application fee is $10; if you have applied and are eligible for financial aid, there are no additional registration or tuition fees. (If you are not financial aid-eligible, you will have to pay a portion of the program's expense.) Other program costs are relatively low. You are eligible for the program if you have scored below 500 on the CEEB English Achievement Test and/or below 530 on the SAT Math, and if you have not taken advanced placement calculus. For more information, contact the Freshman Summer Program Office in 2235 Campbell Hall (206-1585).

Transfer Summer Program (TSP)
The Transfer Summer Program is an intensive seven-week instructional program to improve the composition and general learning skills of new transfer students. Its goal is to prepare such students for UCLA through approximately 16 hours per week of classroom instruction, tutorial assistance, and workshops.

The Transfer Summer Program consists of combinations of a composition course and an upper division course which, if completed successfully, yield credit toward your bachelor's degree. You have the option of residence hall living (strongly recommended) or commuter status; cultural, social, recreational activities, and counseling are available to help you adjust to UCLA. Academic advising sessions will help you plan — and guarantee your enrollment in — Fall Quarter classes. The application fee is $10; if you have applied and are eligible for financial aid, there are no additional registration or tuition fees. (If you are not financial aid-eligible, you will have to pay a portion of the program's expense.) Other program costs are relatively low.

For details on TSP, contact the Transfer Summer Program Office in 2235 Campbell Hall (206-1586).

Academic Advancement Program
The Academic Advancement Program (AAP), formerly EOP, is the primary student affirmative action program at UCLA. AAP provides academic and personal support each year to some 4,200 students from low-income and ethnic backgrounds who have been historically underrepresented at UCLA. Its major goals are to help these students adjust to the University and to increase the likelihood of their college graduation. Among its services are peer counseling for all new students, professional/academic/personal counseling, individual and group tutoring sessions, career and graduate/professional school advising, and seminars to prepare students for graduate school entrance examinations.

Applicants must meet regular University requirements for undergraduate admission and must be U.S. citizens or permanent residents who also are residents of California (American Indians excepted). For more information, contact the AAP Office in 1209 Campbell Hall (825-1481).

ARC Math/Sciences Tutorials
The Academic Resources Center Math/Sciences Tutorials (3973 Math Sciences) provide an organized appointment tutorial program for most math courses between Mathematics A and 32A, Chemistry 2, 11A, and 11B, Physics 6A, 6B, 8A, 8B, and 10, and Biology 2 and 5. Trained tutors meet in small group sessions on a weekly basis, teaching methods to improve problem-solving skills and test-taking strategies. Requests for tutors must be made during the first four weeks of the quarter; early registration is advised.

For math and science courses not served by the appointment tutorials and for additional help with specific problems, the Math/Sciences Tutors also coordinate a drop-in tutorial facility in 3970 and 3974 Math Sciences.

ARC Composition Tutoring Lab and ESL Service Courses Tutorials
The Academic Resources Center Composition Tutoring Lab, developed in collaboration with the UCLA Writing Programs, provides individual assistance to students enrolled in English A, B, and 3, and, as available, to students writing for other UCLA courses. The lab is staffed by trained undergraduate peer tutors who have shown outstanding ability in advanced composition courses.

The ARC ESL Service Courses Tutorials assist nonnative-speaking students with English grammar, idiom, pronunciation, and listening comprehension. Priority is given to students enrolled in English (ESL) 33A, 33B, and 33C, and other ESL courses. The tutors are all graduate students in the ESL Section.

Both of these services are located in 280 Powell Library. For tutoring appointments and further information, call 206-1211 or visit the reception desk in 290 Powell Library.

Learning Resource Center (LRC)
Learning Resource Center services include the Language Laboratory, the Multimedia Learning Laboratory, and the Instructional Media Library. All of these resources rely on the new information technologies to help you improve academic skills, augment traditional classroom learning, and enrich your educational experiences. For general information, contact the LRC Office in 46 Powell Library (206-1248).

Language Laboratory — Students enrolled in foreign language classes are assigned by faculty to practice pronunciation and comprehension skills in the laboratory. 190 Powell Library (206-8855). Audiotape programs which accompany specific texts used in classes and listening, recording, and monitoring equipment are available.

Multimedia Learning Laboratory — Today many academic programs in the sciences, arts, and humanities depend on materials that are available only in video or audio formats or as computer software. You can use these resources at your own pace in the Multimedia Learning Laboratory located in 290 Powell Library (206-1211). The noncirculating collection includes materials placed on reserve by faculty and assigned for independent study, as well as materials designed to help you develop a wide range of learning skills. Lab personnel are available to monitor and discuss your progress.

Instructional Media Library maintains a large collection of educational films, videotapes, and slide/tape modules which it lends to regularly scheduled UCLA classes and campus organizations. Reference books and catalogs from educational and feature film distributors are available. The library staff offers assistance in researching films on any subject and obtaining materials from outside sources. Two preview rooms, located in 46 Powell Library, are available by appointment (825-0755).

Dean of Students Office
The Dean of Students Office, located in 2224 Murphy Hall (825-3871), exists to help you, either directly or by referral, with whatever needs you might have. Direct services include general counseling; locating or sending emergency messages to students; verifying eligibility for automobile insurance discount; and helping in understanding University policies and procedures, including grievance procedures regarding student records, discrimination, student debts, and sexual harassment.

The Dean of Students Office also plays a role in administering campus discipline and applying the standards of citizenship which you are expected to follow at UCLA. Those standards involve complying with the policies and regulations governing this campus and being aware that infractions of those policies or regulations can result in disciplinary action. See “Student Conduct: Violation of University Policies” in the Appendix for more information.
Petitions

A petition is a piece of paper representing your need or desire to be excepted from any standard rule or regulation in the University. It is the only way to obtain formal approval from the department, the college or school, the Registrar, or whoever has authority over your particular request. Some petitions carry a small fee; others are free.

An approved petition for a waiver or substitution in degree requirements represents an agreement between you, your college or school and, in some cases, the department chair, granting you an exception from the existing regulations.

Petitions are also used at UCLA to change your college or major, take more or fewer units than regulations permit, make late changes to your Study List, remove an Incomplete grade, or obtain credit by examination. In addition, you may petition for concurrent enrollment, double major, or waiver of scholarship requirements. Petitions for most of these exceptions are available from your college or school or department.

Academic Excellence

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

Dean’s Honors List

The Colleges of Letters and Science and Fine Arts, and the School of Engineering and Applied Science, all award Dean’s Honors to deserving students each quarter. The School of Nursing awards Dean’s Honors on an annual basis. These honors are based on the grade-point average attained within a specified number of units. Consult your college or school for further information.

Honors with the Bachelor’s Degree

Your college or school awards graduation honors according to your overall GPA at the beginning of your last quarter of academic work or at graduation. To be eligible, you must have completed at least 90 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 included in the appropriate college and school chapters.

Departmental Honors

In all campus units except the School of Engineering and Applied Science, departmental honors and highest honors are awarded at graduation on your major department’s recommendation, based on successful completion of a departmental honors program. Consult your department for its requirements.

Departmental Scholar Program

Departments 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 or provost for recommendation to the Dean of the Graduate Division. If you are interested in becoming a Departmental Scholar, consult your department 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 these national freshman honor societies is based solely on academic achievement during your freshman year. To be eligible you must have a 3.5 GPA with 12 graded University of California units in the first quarter of your freshman year, or a cumulative 3.5 GPA at the end of the second and/or third quarters. Invitations are issued in Winter Quarter, and initiation is held during Spring Quarter. For more information, contact the Dean of Students Office, 2224 Murphy Hall (825-3871).

Mortar Board

Mortar Board is a national honor society for college seniors which recognizes scholastic ability (a 3.0 GPA is required), outstanding and continual leadership, and dedicated service to the community. Membership applications are available in the Dean of Students Office, 2224 Murphy Hall (825-3871), during Winter Quarter.

Phi Beta Kappa

Phi Beta Kappa is a national honorary society in the humanities, 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 are elected to membership. The annual election is held in May, with the initiation in June. At present, the minimum GPA considered is 3.65 (for 140 or more UC units); the minimum number of UC units considered is 75 (students at the 75-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.) If you are elected, you will be notified by mail. For more information, contact the Phi Beta Kappa Office, Division of Honors, A311 Murphy Hall (825-0192).

Outstanding Senior Award

The Outstanding Senior Award offers recognition to graduating seniors who have demonstrated scholastic excellence, creativity in the department, and service to the University and community. Nominations are accepted during Fall Quarter, and awards are presented at the annual Alumni Awards Ceremony in June. For more information, contact the UCLA Alumni Association in the James E. West Center, 325 Westwood Plaza (825-3901).
Graduate Study

Victoria A. Fromkin
Dean of the Graduate Division,
Vice Chancellor — Graduate Programs
Nature of Graduate Education

The principal characteristic of graduate study is the pursuit of new knowledge through research. At UCLA graduate students benefit from — and contribute to — the resources of one of the outstanding research universities in the country. A distinguished faculty committed to research and teaching, an extensive library system ranked among the best in the nation, excellent research centers, institutes, and laboratories in virtually every major discipline (see details in Chapter 1) all provide an extraordinary scope of opportunities for graduate endeavor.

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

The first stage of graduate education leads to the degree of Master of Arts or Master of Science, or one of several professional degrees such as Master of Business Administration or Juris Doctor. The master's program is intended to develop your mastery of a field and prepare you for the practice of a profession.

The second stage leads to a doctoral degree (Ph.D., Ed.D., etc.) and is designed to prepare you for creative activity and original research, often in association with college or university teaching.

Administration

The Graduate Division

The UCLA Graduate Division is responsible for administering policy established by the Academic Senate's Graduate Council for master's, doctoral, and certain graduate professional degree programs. It oversees graduate recruitment and admissions, fellowships, teaching and research assistantships and other graduate student support, affirmative action, and the maintenance of high quality standards in all UCLA graduate programs. The Dean of the Graduate Division also serves as Vice Chancellor — Graduate Programs.

The Graduate Council

The Graduate Council is a standing committee of the UCLA Academic Senate. In keeping with the University's philosophy of shared governance, it establishes policy for graduate education at UCLA, including requirements, standards for admission, and graduate degree programs. It also makes recommendations regarding fellowships and apprentice personnel. A major responsibility of the Graduate Council is the periodic review and evaluation of all graduate programs.

The Graduate Adviser

After admission to a department, program, or school, each graduate student is assigned a graduate adviser who approves Official Study Lists and assists the student in program planning and completing degree requirements. The graduate adviser is available for counseling whenever needed, but departments usually require at least one student consultation each quarter. When the master's or doctoral committee is established, the faculty chair of that committee often assumes the adviser's role.

Graduate Students Association (GSA)

The Graduate Students Association is the official organization representing the interests of UCLA graduate students in academic, administrative, campus, and statewide areas. GSA appoints or elects graduate student members to important campus organizations and committees, including the ASUCLA Board of Control and the Student Fee Advisory Committee, as well as to departmental student organizations and committees of the Academic Senate. In addition, GSA sponsors various graduate student journals, programs, and social events. The GSA Office is located in 301 Kerckhoff Hall (206-8512).
Graduate Admission

Admission Requirements

All applicants to graduate standing must hold a bachelor's degree or the equivalent from a regionally accredited institution comparable in standard to that awarded at the University of California. A scholastic average of B or better is required in junior- and senior-year coursework and in any graduate study.

Applicants who have completed their first university degrees at institutions outside the U.S. must pass the Test of English as a Foreign Language (TOEFL). For details, see "Proficiency in English" below.

Meeting the minimum requirements does not ensure graduate admission, which is limited by the number of places available in UCLA's schools, colleges, and departments. Applications are evaluated in terms of scholastic qualifications and formal preparation for the graduate field of study. Departments may have special requirements for admission, which are included under individual departmental listings in this catalog.

Applying for Admission

Graduate students at UCLA must submit the Application for Graduate Admission, Fellowship and Financial Aid to the Graduate Division. You may obtain this form, in person or by mail, from your prospective school or department.

Applications are generally accepted for Fall, Winter, and Spring Quarters, although some departments limit admission to Fall Quarter due to course sequencing. Such restrictions are stated in this catalog's departmental listings and in the application packet. Enrollment in Summer Sessions courses does not constitute admission to graduate standing.

Applications and supporting papers should be on file in the Graduate Admissions Office by the following dates:

- October 1, 1985, for Winter Quarter 1986
- December 30, 1985, for Spring Quarter 1986
- January 14, 1986, for Fall Quarter 1986

Applications postmarked after these dates will be considered only when enrollment and funding limitations permit.

Supporting papers and materials to be submitted, including official transcripts of record and a $35 nonrefundable application fee, are specified in the application packet.

Graduate Record Examination — If you are applying for admission to a department or school which requires Graduate Record Examination (GRE) scores, you should arrange to take the examination no later than February so your scores arrive on time. GRE scores should be sent directly to your prospective department and not to the Graduate Division.

Foreign Applicants

Applicants who have credentials from universities and colleges in foreign countries should submit applications at least two months before the dates listed above. Foreign applicants should have an academic degree or professional title and will be evaluated on the basis of grades (marks) and class or rank achieved.

Foreign applicants must have adequate preparation for admission to graduate study at UCLA. If your examinations have been graded Excellent, Very Good, Good, and Pass, you must have at least a Very Good general rating to qualify for admission. A three- or four-year ordinary or pass degree or professional diploma, or a certificate from a technical, vocational, or postsecondary specialized school, does not qualify you for graduate admission.

You should submit official transcripts of record, in duplicate, for all college and university work. Specific instructions are given in the application packet. Unless the $35 application fee was paid at another UC campus, applications received without the fee will not be processed.

Proficiency in English

Test of English as a Foreign Language (TOEFL) — Foreign students who hold a bachelor's or higher degree from a university in which English is the spoken tongue and the medium of instruction, or who have completed at least two years of full-time study at such an institution, are exempt from both the TOEFL and the UCLA English as a Second Language Placement Examination (ESLPE). All other applicants must take and pass the TOEFL, administered by the Educational Testing Service in some 95 foreign centers. Applications are available from the Educational Testing Service, Box 995, Princeton, NJ 08541.

UCLA English as a Second Language Placement Examination (ESLPE) — If your first language is not English, you will be required to take the UCLA ESLPE before the term in which you are to register.

Test of Spoken English — If you are a foreign student and wish an appointment as a teaching assistant, you should take the Test of Spoken English offered at the TOEFL Center in your home country.
## Graduate Majors and Degrees

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<thead>
<tr>
<th>MAJORS</th>
<th>DEGREES</th>
<th>OTHER</th>
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<tbody>
<tr>
<td>African Area Studies</td>
<td>M.A.</td>
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<td>Afro-American Studies</td>
<td>M.A.</td>
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<td>American Indian Studies</td>
<td>M.A.</td>
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<tr>
<td>Anatomy</td>
<td>M.S., C.Phil., Ph.D.</td>
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<tr>
<td>Anesthesiology</td>
<td>Nurse Anesthesia</td>
<td>M.S.</td>
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<td>Anthropology</td>
<td>M.A., Ph.D.</td>
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<tr>
<td>Applied Linguistics</td>
<td>C.Phil., Ph.D.</td>
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<tr>
<td>Archaeology</td>
<td>M.A., C.Phil., Ph.D.</td>
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<td>Architecture and Urban Planning</td>
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<tr>
<td>Art, Design, and Art History</td>
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<tr>
<td>Art (Art, Design)</td>
<td>M.A., M.F.A.</td>
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<td>Art History</td>
<td>M.A., Ph.D.</td>
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<td>Asian American Studies</td>
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<td>Astronomy</td>
<td>M.S., M.A.T., Ph.D.</td>
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<td>Atmospheric Sciences</td>
<td>M.S., C.Phil., Ph.D.</td>
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<td>Biological Chemistry</td>
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<td>Biology</td>
<td>M.A., C.Phil., Ph.D.</td>
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<td>Biomathematics</td>
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<td>Chemistry and Biochemistry</td>
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<td>Biochemistry</td>
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<td>Chemistry</td>
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<td>Classics</td>
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<td>Greek</td>
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<td>Latin</td>
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<td>Comparative Literature</td>
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<td>Dance</td>
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<td>Dance/Movement Therapy</td>
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<td>Dentistry</td>
<td>D.D.S.</td>
<td>Postgraduate Certificate Programs</td>
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<td>Oral Biology</td>
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<td>Earth and Space Sciences</td>
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<td>Geochemistry</td>
<td>M.S., C.Phil., Ph.D.</td>
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<td>Geology</td>
<td>M.S., C.Phil., Ph.D.</td>
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<tr>
<td>(Nonrenewable Natural Resources)</td>
<td>M.S.</td>
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<tr>
<td>Geophysics and Space Physics</td>
<td>M.S., Ph.D.</td>
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<td>East Asian Languages and Cultures</td>
<td>M.A., C.Phil., Ph.D.</td>
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<td>Economics</td>
<td>M.A., C.Phil., Ph.D.</td>
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<tr>
<td>Education</td>
<td>M.Ed., M.A., Ed.D., Ph.D.</td>
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<td>Special Education</td>
<td>Joint Ph.D. with Cal State University, L.A.</td>
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<td>Engineering and Applied Science</td>
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<td>Certificate of Specialization (Engineering and Applied Science)</td>
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<td>Nuclear Engineering</td>
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<tr>
<td>MAJORS</td>
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<td>OTHER</td>
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<td>English</td>
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<td>English as a Second Language</td>
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<td>Teaching English as a Second Language</td>
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<td>Certificate of Specialization Program</td>
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<td>Microbiology and Immunology</td>
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<td>Molecular Biology</td>
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<td>Experimental Pathology</td>
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<td>Pharmacology</td>
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<td>Philosophy</td>
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<td>Physics</td>
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<td>Physiology</td>
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<td>Psychiatry and Biobehavioral Sciences</td>
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<td>Certificate Program in Clinical Psychology Internship</td>
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<tr>
<td>Social Psychiatry</td>
<td>M.S.P. (not admitting new students at this time)</td>
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<tr>
<td>Psychology</td>
<td>M.A.*, C.Phil., Ph.D.</td>
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<td>Public Health</td>
<td>M.P.H., M.S., Dr.P.H., Ph.D.</td>
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<td>Biostatistics</td>
<td>M.S., Ph.D.</td>
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<td>Preventive Medicine and Public Health</td>
<td>M.S.</td>
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<td>Radiological Sciences</td>
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<td>Biomedical Physics</td>
<td>M.S., Ph.D.</td>
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<td>Romance Linguistics and Literature</td>
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<td>Slavic Languages and Literatures</td>
<td>M.A., C.Phil., Ph.D.</td>
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<td>M.S.W., D.S.W.</td>
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<td>Sociology</td>
<td>M.A., C.Phil., Ph.D.</td>
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<td>Spanish and Portuguese</td>
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<td>Hispanic Languages and Literatures</td>
<td>C.Phil., Ph.D.</td>
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<td>Portuguese</td>
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<td>Spanish</td>
<td>M.A.</td>
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<tr>
<td>Theater Arts (Motion Picture/Television, Theater)</td>
<td>M.A., M.F.A., C.Phil., Ph.D.</td>
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</table>

*The department admits only applicants whose objective is the Ph.D.*
No Degree Objective

UCLA has no special graduate, limited, or unclassified categories of admission. Under some circumstances, however, applicants may be admitted for coursework without a degree objective. Teachers with a master's degree who wish some refresher study, or foreign students on a year's stay in the United States, may wish to apply in this manner. Requirements for admission are the same as those for degree programs.

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" later in this chapter). If you are applying for a second academic degree at the same level or lower than the one you already hold, you will be required to show compelling cause to the department. All degree requirements and University regulations apply just as they do for a first degree. Courses 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. If you wish to apply Summer Sessions courses to your subsequent graduate program, you should consult in advance with your departmental adviser. This is also true if you have been readmitted to graduate standing and you wish to resume graduate study in Summer Sessions. Information and applications are available from the Office of Summer Sessions, 1254 Murphy Hall. (Also refer to the sections on "Academic Residence" and "Transfer of Credit" later in this chapter.)

Renewal of Application

An offer of admission is valid for a specific quarter only. If you were not admitted, or failed to register in the quarter for which you were first accepted, you should file a Renewal of Application form for admission to a later quarter. Forms are available from the departments and should be submitted to the Graduate Admissions Office, 1247 Murphy Hall. Filing dates are the same as those for new applications. Forms should be accompanied by official transcripts, in duplicate, of any graduate work completed since the former application and by a $35 application fee. You may file only one Renewal of Application without the $35 fee. Acceptance for admission at any earlier date does not guarantee approval of the renewal. Since application records are kept no longer than two years, you may apply for admission after this period only by completing a new application and providing all necessary documents.

Readmission

Students who are granted a formal leave of absence (see "Leaving UCLA" in Chapter 4) 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 quarter through cancellation or withdrawal, must compete for readmission with new applicants.

If you have registered at any time as a graduate student at UCLA and are returning after an absence (except a formal leave of absence), you must file an Application for Readmission. Forms are available from the departments and should be submitted to the Graduate Admissions Office, 1247 Murphy Hall. The following materials must accompany the Application for Readmission:

1. A check or money order for $35 (nonrefundable) made payable to The Regents of the University of California.
2. Official transcripts of record, in duplicate, for all graduate work completed since your last registration at UCLA. If you are returning to UCLA after more than ten years, submit transcripts of all academic work previously submitted.
3. The Graduate Petition for Change of Major, if appropriate. (If you are reapplying in a new major, request this form along with the Application for Readmission.)

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., and M.D. degree programs in the Schools of Dentistry, Law, and Medicine, write to the respective schools for their announcement booklets and for information and application procedures.
Registration and Enrollment

Information:
Registrar's Office
1134 Murphy Hall
825-1091

Detailed information on registration and enrollment procedures is contained in the quarterly Schedule of Classes, available for purchase at the Students' Store several weeks before the beginning of each quarter. To obtain a copy by mail, write to ASUCLA Students' Store, 308 Westwood Plaza, Los Angeles, CA 90024, Attn: Mail Out. Include a check or money order for $1.50 payable to ASUCLA.

Registration consists of paying fees and enrolling in classes. The Registration Form, issued by the Registrar, is used for paying fees and for requesting enrollment in classes. You must complete both processes by the established deadlines to be officially registered and enrolled for the quarter.

Registration may be accomplished by mail or in person. You may use a combination of both processes, but all eligible students are encouraged to pay fees by mail. It will save you the time and trouble of waiting in line.

Last Mailing Dates to Register by Mail
(Tentative only; refer to the Schedule of Classes for firm dates)
August 30 for Fall Quarter 1985
December 6 for Winter Quarter 1986
March 7 for Spring Quarter 1986

You may register in person on certain days immediately preceding the beginning of classes each quarter. Hours are 8:30 a.m. to 5 p.m. on the following days:

Registration in Person
September 23-27 for Fall Quarter 1985
January 8-10 for Winter Quarter 1986
April 2-4 for Spring Quarter 1986

Enrollment in Classes

Enrollment requests are processed from the completed Study List Request portion of the Registration Form. To be enrolled for credit, you must complete the request, obtain your adviser's signature approval, and file it with your major department by the tenth day of classes (there is a $50 fee for late filing of the Study List Request).

You are guaranteed enrollment in courses in your major department provided that department is coded correctly on your Study List Request. If you have recently changed majors and your Study List Request is incorrect, you need proof that the Graduate Division has approved the change. For guaranteed enrollment in restricted or possibly closed courses outside your major department, you must submit an approved Permission to Enroll form with the Study List Request.

Change of Major

Continuing graduate students may petition for a change of major after discussing plans with — and obtaining the acceptance of — the new department. Forms for this purpose are available from, and should be filed with, the Graduate Division, Student and Academic Affairs Section, 1225 Murphy Hall. Deadlines are generally the same as those for the graduate admissions procedure, but you should consult with the adviser in the new program before filing an application.

Full-Time Graduate Program

Three graduate courses (or 12 units) per quarter are considered the normal enrollment for graduate students. A minimum of eight units is required for full-time standing for all students, including teaching assistants, research assistants, and fellowship awardees.

Teaching and research assistants are required to take at least two courses per quarter, or the equivalent of eight units, throughout their appointments. Those assistants who take a leave of absence or withdraw, terminate their appointments. Course 375 for teaching assistants and independent studies at the 500 level may be included in reaching the eight-unit load.

Graduate students holding fellowships must be enrolled full-time students, both before and after advancement to candidacy. The two courses required per quarter 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 Veterans Administration regulations is available in the Office of Special Services/Veterans Affairs, A255 Murphy Hall.

Continuous Registration

Graduate students are normally required to register in all three quarters of each academic year, including the quarter in which their degrees or certificates are to be awarded. If you are granted a formal leave of absence or are eligible to pay the filing fee for a degree (see below), you are exempt from this requirement. You must be registered in order to use University facilities or to take any University examination except the master's comprehensive or doctoral final oral examination.

If you fail to register or to file for an official leave of absence by the end of the second week of instruction, you are assumed to have withdrawn from UCLA. You will then have to reapply and compete for readmission with all other graduate applicants if you wish to return to graduate study at UCLA.

Continuing graduate students studying or doing research outside California throughout a quarter may register "in absentia" and pay one-half the registration fee, plus all other fees in full. Petitions for the reduced fee are available from the department and from the Graduate Fellowship and Assistantship Section, 1228 Murphy Hall.
Registration in the Final Quarter for the Award of the Degree

(1) You must register in the final quarter in which the degree is to be conferred if you are (a) completing coursework, (b) using library or other University facilities, (c) taking up faculty time other than for a final reading of the thesis or dissertation or to administer the comprehensive or final examination, or (d) participating in the In-Candidacy Fee Offset Grant Program and were not registered the quarter immediately preceding the quarter in which your dissertation is filed. If you were not continuously registered or on leave of absence and you are required to register to receive your degree, you must apply for readmission.

(2) If only the thesis or dissertation and/or comprehensive or final examination remain to be completed in your final quarter, you may be eligible to pay the filing fee instead of registering (see below).

(3) If you were registered in the preceding quarter and have completed all degree requirements, including final examinations and filing your thesis/dissertation, during the interval between quarters and before the first day of instruction, you are not required to register (or pay the filing fee) to receive your degree at the end of the following quarter.

The Filing Fee

If you have completed all requirements for a degree except filing the thesis or dissertation and/or taking the master's comprehensive or doctoral final oral examination, you may be eligible to pay a filing fee of one-half the registration fee instead of registering and paying all required fees. Applications are available at the Graduate Division, Student and Academic Affairs Section, 1225 Murphy Hall. For eligibility conditions and further information on the filing fee and registration in the final quarter, please consult Standards and Procedures for Graduate Study at UCLA, available in 1225 Murphy Hall or in individual departments.

Health Evaluation

New students enrolling in the School of Dentistry, Education, Medicine, Nursing, or Social Welfare must complete and return to the Student Health Service the Health Evaluation form provided by their departments.

All new and reentering foreign students must obtain clearance in person at the Student Health Service by completing and returning a Health Evaluation form, by verifying adequate health insurance coverage, and by establishing absence of active tuberculosis. In addition, all foreign students must obtain an annual health insurance clearance each fall at the SHS Insurance Office. For information, call 825-4073.
Graduate Fees and Financial Support

**Fees**

Although the exact cost of attending UCLA will vary according to your academic program, personal habits, tastes, and financial resources, there are some fees that all UCLA students must pay. Each entering and returning student is required to submit a Statement of Legal Residence to the Registrar's Office. Legal residents of California are not required to pay tuition at the University. Students classified as nonresidents must pay tuition of $1,272 per quarter (for a full definition of residence and nonresidence, see the Appendix of this catalog).

At the time of registration each quarter, all graduate students (except Law School students*) must pay the following fixed fees. **Fees for Fall Quarter 1985** are current as of publication date but are subject to change without notice by The Regents.

<table>
<thead>
<tr>
<th>Quarterly Expenses, Fall 1985</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>University registration fee</td>
<td>$ 174</td>
</tr>
<tr>
<td>Education fee</td>
<td>261</td>
</tr>
<tr>
<td>Ackerman Student Union fee</td>
<td>4</td>
</tr>
<tr>
<td>Graduate Students Association (GSA) fee</td>
<td>5</td>
</tr>
<tr>
<td>Wooden Recreation Center fee</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total for California residents</strong></td>
<td><strong>$ 449</strong></td>
</tr>
<tr>
<td>Nonresident tuition fee</td>
<td>$1,272</td>
</tr>
<tr>
<td><strong>Total for nonresidents</strong></td>
<td><strong>$1,721</strong></td>
</tr>
</tbody>
</table>

*Students in the School of Law should refer to that school's announcement for explanation of fees per semester.

**Other Fees**

Miscellaneous fees charged to UCLA graduate students include a $50 charge for late payment of registration fees or late filing of the Study List (after the tenth day of classes); $25 for advancement to doctoral candidacy; and $5 or less for most petitions and other special requests. A complete list of fees may be found in the Schedule of Classes.

**Fee Refunds**

Students who formally withdraw from the University during the first five weeks of instruction or take an approved leave of absence by the end of the second week of classes may receive partial refunds of fees. For the refund schedule and more information, see "Withdrawal" in Chapter 4 of this catalog or refer to the Schedule of Classes.

**Nonresident Tuition Waivers**

A limited number of nonresident tuition waivers are awarded each year to graduate students with distinguished academic records. Details of eligibility are available in your department or the Graduate Fellowship and Assistantship Section, 1228 Murphy Hall.

**Lapse of Status**

Your status may lapse if you fail to settle financial obligations when due (or make satisfactory arrangements with the Main Cashier if payment cannot be made) or if you fail to respond to official University notices.

With lapsed status you are not entitled to any University services except assistance toward reinstatement. After you have satisfied the obligation, a petition for reinstatement must be approved by the office recommending the lapse of status and filed with the Registrar's Office, 1111 Murphy Hall, with a $10 reinstatement fee.

**Estimated Annual Budget for California Residents**

<table>
<thead>
<tr>
<th></th>
<th>Single, Commuter, Living at Parents* Home</th>
<th>Single, Living at UCLA Residence Hall, Co-Op, Sorority, or Fraternity</th>
<th>Single, Living In Off-Campus Apartment or House</th>
<th>Married, Living in UCLA Family Student Housing</th>
<th>Married, Living in Off-Campus Apartment or House</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Fees</td>
<td>$1,346</td>
<td>$1,346</td>
<td>$1,346</td>
<td>$1,346</td>
<td>$1,346</td>
</tr>
<tr>
<td>Books &amp; Supplies</td>
<td>525</td>
<td>525</td>
<td>525</td>
<td>525</td>
<td>525</td>
</tr>
<tr>
<td>Food &amp; Rent</td>
<td>1,290</td>
<td>2,790</td>
<td>5,215</td>
<td>5,900</td>
<td>8,700</td>
</tr>
<tr>
<td>Transportation (local bus)</td>
<td>260</td>
<td>260</td>
<td>260</td>
<td>520</td>
<td>520</td>
</tr>
<tr>
<td>Personal</td>
<td>1,084</td>
<td>1,414*</td>
<td>1,239</td>
<td>2,034</td>
<td>2,034</td>
</tr>
<tr>
<td><strong>Total Budget</strong></td>
<td><strong>$4,505</strong></td>
<td><strong>$6,335</strong></td>
<td><strong>$8,585</strong></td>
<td><strong>$10,325</strong></td>
<td><strong>$13,125</strong></td>
</tr>
</tbody>
</table>

*Includes $100 for extra meals during breaks.

For more information on housing, see Chapter 1 or contact the UCLA Housing Office in 78 Dodd Hall (825-4491).
Living Expenses

Printed on the previous page is an estimated yearly budget for graduate California residents. Nonresidents must add the $3,816 annual tuition fee to their total expenses for an accurate estimate. Expenses cover the three regular session quarters of the 1985-86 academic year and do not include Summer Sessions. (Budgets for the Schools of Medicine, Dentistry, and Nursing are higher, reflecting the expense of specialized books and supplies; figures are available from your health professions counselor.)

Financial Support

Information:
Graduate Fellowship and Assistantship Section
1228 Murphy Hall
825-3521

As a major center for graduate study, UCLA offers its qualified graduate students substantial support through several types of financial assistance. Awards are based on either academic merit or financial need, but the two types are not mutually exclusive. You are strongly urged to apply in all categories for which you may qualify.

Entering graduate students interested in University-administered awards should complete the Application for Graduate Admission, Fellowship and Financial Aid. Readmitted students should request the Graduate Application for Readmission form, and continuing graduate students should complete the Fellowship and Assistantship Application for Continuing Students. Completed applications must be returned by December 30. (Some departments have earlier deadlines; consult the application packet for details.)

Graduate Student Support, a booklet describing the full range of financial assistance available, is published annually by the Graduate Fellowship and Assistantship Section. Contact your department for more detailed information.

Awards Based on Academic Merit

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 individual benefactors.

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 quarter in the form of an interest-free advance loan check. Interested students should apply to their departments.) Research Assistantships give students experience working on faculty-supervised research projects.

Fellowships and Grants

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

In-Candidacy Fee Offset Grant Program

The In-Candidacy Fee Offset Grant Program pays the education fee for eligible doctoral students who have been advanced to candidacy. This program is described in detail in Standards and Procedures for Graduate Study at UCLA, available in 1225 Murphy Hall or in individual departments.

Graduate Affirmative Action Awards

These programs were established to increase the graduate enrollment of students from groups which, as a result of societal inequities, have been traditionally underrepresented in graduate education. These include American Indians, blacks, Chicanos, Filipinos, and Puerto Ricans. In addition, women are eligible in fields where they are underrepresented.

There is one need-based financial aid program (GAP), as well as several merit-based fellowship programs. Students are encouraged to apply for both need- and merit-based assistance; fellowship awards will reduce the size of financial aid support. All applicants for merit-based awards must be U.S. citizens. For more information on these programs, contact the Graduate Affirmative Affairs Office, 1242 Murphy Hall (825-2780).

1) Graduate Advancement Program (GAP) - Awards are made on the basis of need as demonstrated by normal University financial aid standards and must meet GAP criteria. These awards, which differ from ordinary financial aid in that grants may be slightly larger and work-study awards do not require matching funds by employers.

2) Graduate and Professional Opportunity Program (G*POP) - For 1985-86 awards provide stipends and fees to students in the fields of management, urban planning, biology, psychology, social welfare, and engineering. Continuation of this program is contingent on annual federal support.

3) Graduate Opportunity Fellowship Program (GOFP) - Merit-based fellowships provide stipends and registration fees to students from groups traditionally underrepresented in graduate programs (e.g., women are eligible for fellowships in such fields as engineering and physical science).

4) Dorothy Danforth Compton Fellowship - UCLA is one of ten universities selected to receive a grant from the Danforth Foundation to support outstanding black, Mexican American, American Indian, and Puerto Rican students committed to careers in college and university teaching. A limited number of fellowships are awarded to Ph.D. students in the humanities, social sciences, health sciences, and fine arts. Applicants must be in departments offering a doctoral program having teaching or research provisions.

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 your financial resources.

Financial aid awards include educational grants, low-interest loans, and work-study employment. Students are usually awarded a financial aid "package" which is a combination of these forms of assistance. Further information is available at the Financial Aid Office, A107 Murphy Hall.
Requirements for Graduate Degrees

UCLA offers instruction leading to a broad range of master's and doctoral degrees, both academic and professional. Graduate students earn master's or doctoral degrees through distinguished achievement in study and research. Achievement in study is evaluated principally by means of the qualifying and comprehensive examinations. Achievement in research is judged by the merits of the thesis or dissertation.

The Master's Degree

University Minimum Standards

The requirements described here are minimum standards set by the University. Individual schools or departments may set higher standards and may require additional courses and/or examinations for their master's degree. You are advised to consult the appropriate school announcement or your graduate adviser.

Academic Residence

The minimum residence requirement consists of three academic quarters in graduate standing at the University of California, including at least two quarters at UCLA. Academic residency is established by successfully completing at least one graduate or upper division course (four units) during a quarter.

You may earn one quarter of residence for summer study in either of these ways: (1) enroll in two six-week Summer Sessions taking at least two units of upper division and/or graduate work in each session OR (2) enroll in one eight-week session for at least four units of credit. Residence earned through Summer Sessions enrollment is limited to one third of the degree requirements.

University Minimum Standards For Advanced Degrees*

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>MASTER'S DEGREE</th>
<th>DOCTORAL DEGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACADEMIC RESIDENCE</td>
<td>1 year (3 quarters) in graduate standing at University of California, including</td>
<td>2 years (6 quarters) in graduate standing at University of California, including</td>
</tr>
<tr>
<td></td>
<td>2 quarters at UCLA.</td>
<td>3 consecutive quarters at UCLA.** In most cases a longer period of residence is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>necessary.</td>
</tr>
<tr>
<td>PROGRAM OF STUDY</td>
<td>9 graduate and upper division courses (36 units) in graduate standing, including</td>
<td>No specific course requirements. Program is planned with adviser and guidance</td>
</tr>
<tr>
<td></td>
<td>at least 5 graduate courses.</td>
<td>committee.</td>
</tr>
<tr>
<td>SCHOLARSHIP</td>
<td>B average required in all courses taken in graduate standing at UC and in all</td>
<td>B average required in all courses taken in graduate standing at UC.</td>
</tr>
<tr>
<td></td>
<td>courses applied toward the master's degree.</td>
<td></td>
</tr>
<tr>
<td>FOREIGN LANGUAGE</td>
<td>Requirements are determined by individual departments and programs.</td>
<td>Requirements are determined by individual departments and programs.</td>
</tr>
<tr>
<td>ADVANCEMENT TO CANDIDACY</td>
<td>All requirements for advancement, including foreign language examinations, must</td>
<td>The departmental written and University Oral Qualifying Examinations must be</td>
</tr>
<tr>
<td></td>
<td>be satisfied. Forms must be filed by second week of the quarter in which degree</td>
<td>passed; departmental, course, and language requirements must be completed.</td>
</tr>
<tr>
<td></td>
<td>is to be awarded.</td>
<td>Advancement is officially granted when you obtain your committee chair's</td>
</tr>
<tr>
<td></td>
<td></td>
<td>signature, pay the $25 fee, and return the application to the Graduate Division.</td>
</tr>
<tr>
<td>FINAL REQUIREMENT FOR THE DEGREE</td>
<td>Master's thesis or comprehensive examination (written, oral, or both).</td>
<td>Doctoral dissertation. A final oral examination in defense of the dissertation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>may also be required.</td>
</tr>
</tbody>
</table>

* Individual departments and programs may set higher standards. Please refer to departmental listings under the appropriate college or school chapter or consult with your graduate adviser for details.
** If the master's degree was earned at UCLA, one year of residence will have been satisfied.
Courses and Grades

The master's program at UCLA consists of at least nine graduate and upper-division courses (or any number of fractional courses totaling 36 units) completed in graduate standing, of which at least five must be graduate. To maintain satisfactory progress toward the master's degree, UCLA requires at least a B average in all courses taken in graduate standing at the University and in all courses applied toward the master's degree.

Transfer of Credit

There are two general regulations governing transfer of credit. No courses completed before the award of the bachelor's degree may be applied toward a graduate degree unless you are a Departmental Scholar. Also, courses taken for any other degree may not be applied toward a master's degree at UCLA unless you are enrolled in a Graduate Council-approved concurrent degree program (see "Concurrent and Articulated Degree Programs" later in this chapter).

From Within the University — You may petition to have units and grade points for graduate work completed at other campuses of the University applied toward satisfaction of master's degree requirements at UCLA. Such courses may fulfill up to one half of both the total course and grade requirements of your program, and one third of the academic residence requirement.

From Outside the University — With approval of the Dean of the Graduate Division and your major department, courses completed with a grade of B or higher in graduate standing at institutions outside the University of California may apply toward UCLA master's programs. However, courses taken for any degree awarded at another institution may not be applied toward a graduate degree at UCLA. A maximum of two courses (eight quarter units or five semester units) may be applied, but they cannot be used to reduce either the minimum graduate course requirement or the academic residence requirement.

From Summer Sessions — Regular session courses offered in UCLA Summer Sessions by regular faculty qualify for credit toward a higher degree with departmental approval. Courses offered by visiting faculty may apply, with a recommendation from the department chair. It is best to consult your graduate adviser about applying Summer Sessions courses to your graduate program.

From University Extension — University Extension courses (100 series) taken before July 1, 1969, may apply on approval of the department and Dean of the Graduate Division. No more than two such courses (eight units) may be applied.

Extension courses taken after July 1, 1969, can be applied only if they were concurrent courses (offered for students in degree programs and open to Extension students by petition) in the 100, 200, or 400 series, completed with a grade of B or better. By petition to the Dean of the Graduate Division and with departmental approval, a maximum of two such courses may be applied toward the nine-course minimum and the five-graduate-course requirements for the master's degree. The master's program, then, would include at least three courses in the 200 or 500 series for academic degrees, or three courses in the 200, 400, or 500 series for professional degrees.

If your master's program requires more than nine courses, concurrent Extension courses may be applied toward one-half the course requirements over the minimum of nine.

Grades earned in Extension courses or in courses taken outside the University of California are not included in computing your grade-point average nor may they be used to remove scholarship deficiencies. Correspondence courses are not applicable to graduate degrees.

Foreign Language Requirements

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

Depending on your department's regulations, you may fulfill foreign language requirements either by passing the Educational Testing Service (ETS) Graduate School Tests in French, German, Russian, or Spanish (in languages not offered by ETS) by passing examinations given by UCLA language departments. You may register for the ETS examination at the University Extension Cashier's Office, 10995 Le Conte Avenue. UCLA enrollment is not required. Consult University Extension for registration procedures.

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 your native language.

For further details on foreign language requirements, refer to Standards and Procedures for Graduate Study at UCLA or see your graduate adviser.

Advancement to Candidacy

When you have completed approximately half the program for the master's degree (usually at least two quarters), you should formally apply for advancement to candidacy. Application forms are available from your department or the Graduate Division. Student and Academic Affairs Section (1225 Murphy Hall), and must be filed in your major department no later than the second week of the quarter in which you expect to receive your degree (by the end of the second week of the first Summer Session for a September degree).

You may not be advanced to candidacy until all departmental requirements for advancement, including foreign language examinations, have been satisfied. You then have one year from the date of advancement to complete all requirements for the degree, including your thesis or comprehensive examination. Candidacy expires at the end of one year and reinstatement during the quarter in which you plan to receive the degree is by petition only.

Plans of Study

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 you must consult with your adviser to determine the plan for meeting your degree requirements. University minimum requirements are the same under either plan.

Master's Thesis (Plan I)

After advancement to candidacy, students under Plan I must submit a thesis reporting on the results of their original investigation of a problem. While the problem may be one 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 Standards and Procedures for Graduate Study at UCLA for more details on committee members' eligibility requirements). The thesis committee, which must be appointed before you 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 have approved the subject for the thesis, work may begin. You are responsible for preparing the thesis in the proper form and for observing filing deadlines. For guidance in the final preparation of the thesis, you may:
(1) Consult the Theses and Dissertations Adviser, Office of the University Archivist, 134 Powell Library.

(2) Read Regulations for Thesis and Dissertation Preparation, available in the Graduate Division, Student and Academic Affairs Section, or in the Archivist’s Office.

(3) Attend an orientation meeting on manuscript preparation and filing procedures conducted soon after the start of each quarter (see the Calendar at the beginning of this catalog).

When all members of the committee have approved the thesis and you are ready to file it, you must initiate the final steps in the process by submitting the original signature (approval) page, title page, and any other required forms to the Graduate Division, Student and Academic Affairs Section, where completion of degree requirements will be verified. After final approval by the Dean of the Graduate Division, you must file the thesis with the Theses and Dissertations Adviser approximately two weeks before the degree is to be awarded. Deadlines for this academic year are:

December 2 for Fall Quarter 1985
March 17 for Winter Quarter 1986
June 9 for Spring Quarter 1986

Master’s Comprehensive Examination (Plan II)
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 form (written, oral, or both) is available from your graduate adviser.

The Candidate in Philosophy Degree
In several departments, as approved by the Graduate Council, the intermediate degree of Candidate in Philosophy (C.Phil.) is awarded to qualified students on advancement to candidacy for the Ph.D. degree.

The C.Phil. is not a terminal degree but gives formal recognition to a definite state of progress toward the doctorate. Academic requirements are the same as for advancement to candidacy for the Ph.D. (see below). Four quarters in academic residence, three of them (usually the last three) in continuous residence at UCLA, are required. (Also refer to “Academic Residence” under doctoral programs below.)

The C.Phil. may not be conferred after or simultaneously with the Ph.D. For departments offering the C.Phil., see the degree chart at the beginning of this chapter. For further details, consult Standards and Procedures for Graduate Study at UCLA, available in 1225 Murphy Hall and in individual departments.

The Doctoral Degree
The doctorate, and specifically the Doctor of Philosophy degree, is awarded in recognition of a candidate’s in-depth knowledge of a broad field of learning, and for demonstrated ability to make original and distinguished contributions to the field. More generally, the degree is an affidavit of critical aptitude in scholarship, imaginative enterprise in research, and proficiency and style in communication.

University Minimum Standards
The requirements described here are the University’s minimum standards for doctoral degrees. Each department may adopt additional requirements according to the demands of the field of study. Please consult your graduate adviser for details.

Academic Residence
The minimum residence requirement for the doctoral degree is two years (six quarters) in graduate standing at the University of California, including one year (usually the second) in continuous residence at UCLA. If you 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 is established by successfully completing one graduate or upper division course (four units) during a quarter.

You may earn one quarter of residence for summer study in either of these ways: (1) enroll in two consecutive six-week Summer Sessions taking at least two units of upper division and/or graduate work in each session OR (2) enroll in one eight-week session for at least four units of credit. Residence earned through Summer Sessions enrollment is limited to one third of the degree requirements.

Program of Study and Scholarship
Programs of study for doctoral degrees are more individualized than those for master’s degrees, permitting a higher degree of specialization. The University does not specify course requirements for doctoral programs. However, individual programs have course work or other requirements which must be completed before taking the University Oral Qualifying Examination. You will determine your course of study in consultation with the adviser and guidance committee who supervise your activities until the doctoral committee is appointed.

Satisfactory progress toward the doctoral degree requires that you maintain at least a B average in all courses taken in graduate standing on any University of California campus.

Foreign Language Requirements
Most departments require doctoral candidates to demonstrate proficiency in one or more foreign languages, so that you can acquire broad knowledge in your field of study and keep abreast of foreign developments in the field.

You are urged to complete language requirements as early as possible in your graduate career. If your department requires two or more foreign languages, you must complete at least one before the Oral Qualifying Examination. See “Foreign Language Requirements” under the Master’s Degree for information on fulfilling these requirements.

Examinations Before Advancement to Candidacy
A doctoral program generally involves two stages, separated by advancement to candidacy. The first stage is spent in fulfilling the coursework, teaching, and/or examinations required by the major department or group. You 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 you complete the recommended or required work. Once all departmental and foreign language requirements are met, the department chair consults with you and then nominates a doctoral committee.

University Oral Qualifying Examination
The doctoral committee, consisting of at least five faculty members nominated by your 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 your qualifications for advancement to candidacy, the committee administers the University Oral Qualifying Examination and, at its option, a written examination.
Advancement to Candidacy
You are eligible for advancement to doctoral candidacy after passing the University Oral Qualifying Examination with no more than one negative vote, completing four quarters of academic residence and any additional departmental requirements, and maintaining a 3.0 grade-point average in graduate standing. You must complete the application for candidacy form sent to you by the Registrar's Office, have it signed by your doctoral committee chair, pay a $25 advancement to candidacy fee, and submit the form to the Graduate Division, Student and Academic Affairs Section. You are officially advanced to candidacy on the date the completed form is submitted.

Writing the Dissertation
Once the doctoral committee approves the subject for your dissertation, the second or in-candidacy stage of the doctoral program begins and is devoted primarily to independent study and research and to the preparation of the dissertation, which demonstrates your ability for independent investigation. The doctoral committee guides your progress toward its completion.

Final Oral Examination
A final oral examination may be required at the option of any member of the doctoral committee, and in some departments is required of all doctoral candidates. The examination, for which all committee members must be present, may be held before you have prepared the final copy of your dissertation, but passing the examination (with no more than one negative vote of the committee members) does not imply approval of the final manuscript. Consult your doctoral committee chair or graduate adviser for further information.

Filing the Dissertation
You are responsible for following instructions on the preparation of the dissertation and for observing filing deadlines. For guidance in the preparation and submission of the dissertation and accompanying abstract, you may:

1. Consult the Theses and Dissertations Adviser, Office of the University Archivist, 134 Powell Library.
2. Read Regulations for Thesis and Dissertation Preparation, available in the Graduate Division, Student and Academic Affairs Section, or in the Archivist's Office.
3. Attend an orientation meeting on manuscript preparation and filing procedures conducted soon after the start of each quarter (see the Calendar at the beginning of this catalog).

When your final dissertation has been approved by the doctoral committee and you are ready to file it, you must submit the original signature (approval) page and title page to the Graduate Division, Student and Academic Affairs Section, where completion of degree requirements will be verified. After final approval by the Dean of the Graduate Division, you must file two paper copies of the dissertation with the Theses and Dissertations Adviser approximately two weeks before the degree is to be awarded. Deadlines for this academic year are:

December 2 for Fall Quarter 1985
March 17 for Winter Quarter 1986
June 9 for Spring Quarter 1986

Individual Ph.D. Programs
Although the University of California offers an extraordinary range of established doctoral programs, these cannot meet the needs and specific career goals of every student. The Individual Ph.D. Program therefore makes it possible for superior students to design their own coherent programs of interdisciplinary studies leading to the Ph.D. degree.

To qualify for this program, you must have been a full-time graduate student at UCLA for at least one year, making satisfactory progress toward a doctoral degree. After at least three faculty members have agreed to sponsor your proposal for an individual program of study, you may submit it to the Graduate Council for review. University minimum standards regarding courses, scholarship, residence, and dissertation apply. Further information on this program is available in the Graduate Division, Student and Academic Affairs Section, 1225 Murphy Hall.

Interdepartmental Degree Programs
In addition to graduate degree programs offered within schools and departments, UCLA offers interdisciplinary programs involving two or more participating departments. A total of 26 interdepartmental programs offer bachelor's, master's, and doctoral degrees in some combination; several units offer all three degrees. These 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 faculty division, a subject area is studied from the perspectives of different disciplines and a greater degree of program flexibility is achieved.

Interdepartmental degree programs which currently lead to advanced degrees are listed below. All are described more fully in Chapter 5 under the College of Letters and Science, with the exceptions of Environmental Science and Engineering which is in the School of Public Health and Neuroscience which is in the School of Medicine. For further information, contact the chair or graduate adviser of the specific program that interests you.

African Area Studies (M.A.)
Afro-American Studies (M.A.)
American Indian Studies (M.A.)
Applied Linguistics (Ph.D.)
Archaeology (M.A., Ph.D.)
Asian American Studies (M.A.)
Comparative Literature (M.A., Ph.D.)
Environmental Science and Engineering (D.Env.)
Folklore and Mythology (M.A., Ph.D.)
Indo-European Studies (Ph.D.)
Islamic Studies (M.A., Ph.D.)
Latin American Studies (M.A.)
Molecular Biology (Ph.D.)
Neuroscience (Ph.D.)
Romance Linguistics and Literature (M.A., Ph.D.)

Concurrent and Articulated Degree Programs
Each of the programs described thus far leads to a single degree — either master's or doctoral. UCLA also offers concurrent and articulated degree programs, which allow you to earn two degrees simultaneously by combining two free-standing degree programs into a coordinated course of study. You may petition to design your own articulated program (with departmental and Graduate Division approval), but you may not apply credits for one degree to the other. Concurrent degree programs, which may not be individually designed, allow some credit overlap.

These programs accomplish several important objectives: they enable the University to respond to societal changes by creating new fields of study; they prepare students more fully for the world's complexities by combining the cultural (political-social-economic) aspects of their field with the tools of a professional degree; and they allow faculty members to cross departmental lines and interact on a broader scale.
Concurrent degree programs, by allowing a specified amount of credit to apply to both degrees, permit students to reduce the total number of courses required for the two degrees and thereby reduce the time normally required if courses were taken in sequence. Programs leading to concurrent degrees are offered in the following disciplines:

- Architecture and Urban Planning, M.A. — Law, J.D.
- Education, M.A., Ph.D., M.Ed., or Ed.D.— Law, J.D.
- History, M.A. — Library and Information Science, M.L.S.
- Management, M.B.A. — Computer Science, M.S. (School of Engineering and Applied Science)
- 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.S.
- Management, M.B.A. — Public Health, M.P.H.

Articulated degree programs permit no credit overlap, and students must complete degree requirements separately for each degree. Programs leading to articulated degrees are offered in the following disciplines:

- African Area Studies, Interdepartmental M.A. — Public Health, M.P.H.
- African Area Studies, Interdepartmental M.A. — Theater Arts, M.F.A. in Motion Picture/Television
- Latin American Studies, Interdepartmental M.A. — Architecture and Urban Planning, M.A.
- Latin American Studies, Interdepartmental M.A. — Education, M.Ed. in Curriculum
- Latin American Studies, Interdepartmental M.A. — Engineering and Applied Science, M.S.
- Latin American Studies, Interdepartmental M.A. — Library and Information Science, M.L.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. — Dentistry, D.D.S. or Certificate

Inquiries about concurrent and articulated degree programs should be directed to graduate advisers in the departments and schools involved. Contact the Graduate Division, Student and Academic Affairs Section, for information on designing your own articulated programs.
**Graduate Cross-Enrollment Program with USC**

As an integral part of an Academic Resource Sharing program linking UCLA with the University of Southern California, the Graduate Cross-Enrollment Program makes possible graduate student exchanges in many departments. The program is limited to specialized courses which would not otherwise be available to UCLA students.

If you have completed at least one quarter of graduate study at UCLA and have obtained the necessary approvals, you may sign up for a 501 course with your UCLA adviser. When you have completed the course at USC, your grade will be forwarded to UCLA to be recorded for the 501 course. Only eight units of cross-enrollment courses may be applied toward requirements for the master's degree, and these courses may not be used to satisfy the five-graduate-course requirement. Applications, available in the Graduate Division, Student and Academic Affairs Section, should be completed before the start of the term in which the course is offered.

**Intercampus Exchange Program**

If you have completed one quarter of graduate study on any campus of the University, you may attend another campus as an Intercampus Exchange Graduate Student with the approval of your department chair, the chair of the department or group in which you wish to study on the host campus, and the Dean of the Graduate Division on both the home and host campuses. The privilege should be used only by students whose graduate study may be enhanced by work with certain faculty or use of facilities and resources accessible only on another campus.

Although you are considered to be in residence on your home campus, as an Intercampus Exchange Student you have library, health service, and other privileges on the host campus. Grades are transferred to your home campus and entered on your official record.

Applications are available in the Graduate Division, Student and Academic Affairs Section, 1225 Murphy Hall, and should be filed at least four weeks before the beginning of the quarter in which you expect to enter the program.

Graduate students may also take advantage of the Education Abroad and Education at Home Programs, described in Chapter 1 of this catalog.

**Postdoctoral and Visiting Scholars**

The University makes opportunities and facilities available to qualified scholars — those holding doctoral degrees or foreign equivalents — to continue advanced study and research under faculty guidance. Postdoctoral Scholar standing, which does not lead to any degree, is limited to a maximum of three years and must begin within three years after the doctoral degree is awarded. Interested candidates should make advance arrangements with the relevant department or research unit.

The same opportunities are made available to Visiting Scholars — senior scholars and distinguished visitors holding doctoral degrees or foreign equivalents — who wish to pursue independent research or advanced study at UCLA for a limited time, normally no more than one year. Visiting Scholars are distinguished from Postdoctoral Scholars and academic appointees in that they usually have adequate support funds from sources outside the University.

Further information on both Postdoctoral and Visiting Scholars is available in the Fellowship and Assistantship Section, 1228 Murphy Hall.
General Policies and Regulations

Standards of Scholarship
To maintain satisfactory progress toward a graduate degree, UCLA requires at least a B (3.0) average in all courses taken in graduate standing on any campus of the University and in all courses applied toward advanced degrees. This standard applies to all graduate students, including candidates in certificate programs. In courses graded on an S/U basis, the grade of S (Satisfactory) is awarded for work which would otherwise receive a B or better. Grades S and U are not included in calculating grade-point averages.

Scholarship Probation
You are on probation and are subject to dismissal if your cumulative average in all work attempted in graduate standing falls below a B (3.0) or if work in any two consecutive quarters falls below a B average. The Dean of the Graduate Division, in consultation with your department, determines your eligibility to continue graduate study in probationary status. If you are allowed to continue, you must make timely progress toward improving your grade-point average.

Disqualification and Appeal
If you are subject to disqualification for reasons other than failure to maintain the minimum grade-point average, you will have your records reviewed by the Graduate Division, in consultation with the graduate adviser. If disqualification results, you may submit a written appeal to the Dean of the Graduate Division for reconsideration.

Appeals will be considered only if based on appropriate cause such as (1) procedural error, (2) judgments based on nonacademic criteria, (3) personal bias, or (4) specific mitigating circumstances contributing to performance. Alleged errors in academic judgment or evaluation are not considered appropriate causes for appeal.

In cases of appropriate cause, the Dean of the Graduate Division refers the appeal to the Graduate Council’s Committee on Instruction and Degree Requirements. You are required to submit a written statement on the basis for your appeal and are entitled to a personal appearance before the committee. After obtaining information on the matter from any appropriate person or office, the committee makes a recommendation to the Dean of the Graduate Division, who makes the final decision. In reporting the decision, the committee includes the basis for the decision, its effective date, and any specific recommendations.

Graduate Student Complaints
Because of the separation of functions within the University, students are sometimes uncertain where they should direct their complaints. The following information may be helpful.

If you have complaints of a scholastic or professional nature involving faculty, you should take them up with the faculty member concerned or, if that is not feasible, with the chair of the department. If the department as a whole is involved, you should take the matter to the appropriate divisional or school dean. Should the issue not be resolved at that level, you may appeal to the Dean of the Graduate Division, 1237 Murphy Hall.

Complaints of misconduct against a student or group of students should be made at the Dean of Students Office, 2224 Murphy Hall.

Complaints concerning alleged violation of the policies and regulations governing graduate study should be made to the Dean or Associate Dean of the Graduate Division, 1237 Murphy Hall.

Complaints about a violation of University policy regarding the conduct of one or more faculty members should be made to the Charges Committee of the Academic Senate, 3125 Murphy Hall.
Academics
Units and Grading Policy

UCLA students are responsible for understanding the grading policies and regulations established by the Academic Senate. Should any semantic variations exist between explanations in this catalog and regulations in the Manual of the Academic Senate, the manual will prevail in all cases. Copies of the Senate manual are available for your review in the Academic Senate Office, 3125 Murphy Hall.

Grades

Instructors are required to assign a final grade for each student registered in a course. The following grades are used to report the quality of a student's work at UCLA:

<table>
<thead>
<tr>
<th>Undergraduate Students</th>
<th>Graduate Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = Superior</td>
<td>A = Superior Achievement</td>
</tr>
<tr>
<td>B = Good</td>
<td>B = Satisfactorily demonstrates potential for professional achievement</td>
</tr>
<tr>
<td>C = Fair</td>
<td>C = Passed but work does not indicate potential for professional achievement</td>
</tr>
<tr>
<td>D = Poor</td>
<td>D = Failure</td>
</tr>
<tr>
<td>F = Failure</td>
<td>F = Failure</td>
</tr>
<tr>
<td>P = Passed (achievement at grade C level or better)</td>
<td>P = Passed (achievement at grade C level or better)</td>
</tr>
<tr>
<td>NP = Not Passed</td>
<td>NP = Not Passed</td>
</tr>
<tr>
<td>I = Incomplete</td>
<td>U = Unsatisfactory</td>
</tr>
<tr>
<td>IP = In Progress</td>
<td>I = Incomplete</td>
</tr>
<tr>
<td>DR = Deferred Report</td>
<td>IP = In Progress</td>
</tr>
</tbody>
</table>

For Undergraduates — The grade A may be modified by a minus (-) suffix, and the grades B, C, and D by a plus (+) or minus (-) suffix, to either raise or lower your grade-point average. The grades A, B, C, and P denote satisfactory progress toward the bachelor's degree, but a D grade must be offset by higher grades in the same quarter for you to remain in good academic standing. An F grade yields no unit or course credit.

For Graduate Students — 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 quarter for you to remain in good academic standing. Courses in which a C grade is received, however, may be applied toward graduate degrees.

(The Schools of Dentistry, Medicine, and Law maintain their own grading codes. If you are interested in programs in any of these schools, consult the appropriate school announcement.)

Grade Points

In computing scholarship standing, a course counts as four quarter units. Partial or multiple courses are counted proportionally (e.g., one-half course is equal to two units).

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D-</td>
<td>0.7</td>
</tr>
<tr>
<td>F, NP, U</td>
<td>0</td>
</tr>
</tbody>
</table>

Courses in which you receive a P or S grade may count toward satisfaction of degree requirements, but these grades, as well as DR, I, and IP, are disregarded in determining your grade-point average. (If an I grade is later removed and a letter grade assigned, units and grade points are included in subsequent grade-point averages.)

Computing Your Grade-Point Average

Your grade-point average, or GPA, is determined by dividing the number of grade points earned by the number of units attempted. For example, suppose you take three four-unit courses and receive grades of A-, B-, and C+.

\[ \text{Grade Points} \times \text{Course Units} = \text{Total Grade Points} \]

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

To determine your GPA for the quarter, divide the total grade points earned (34.8) by the total course units attempted (12). Your GPA is 2.9.

For satisfactory standing, undergraduate students must maintain a C average (2.0 GPA) and graduate students a B average (3.0 GPA) in all courses taken at any campus of the University (except University Extension). Individual departments may require higher standards of achievement.

Only grades earned in regular session or Summer Sessions at any UC campus are computed in your UCLA grade-point average. Grades earned at another institution or in UCLA Extension do not affect your GPA.

Other schools and agencies may calculate grade-point averages differently from the University when evaluating your records for admission to graduate and professional school programs. You should contact them about their policies in this regard.

Class Standing

Undergraduate classification is determined by the number of units completed:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Completed Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>0 - 44.9</td>
</tr>
<tr>
<td>Sophomore</td>
<td>45 - 89.9</td>
</tr>
<tr>
<td>Junior</td>
<td>90 - 134.9</td>
</tr>
<tr>
<td>Senior</td>
<td>135 or more</td>
</tr>
</tbody>
</table>
Graduate classification is based on your degree objective and whether or not you are advanced to candidacy for a doctorate.

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

By alleviating grading pressures, this option allows you to explore areas in which you have little or no previous experience. The grade P is assigned for a letter grade of C or better. Units earned this way count toward satisfaction of degree requirements but do not affect your GPA. You will receive neither units nor course credit for an NP grade. You may enroll in one course each quarter on a P/NP basis (two courses if you have not elected the P/NP option in the preceding quarter). You may not elect this option for Summer Sessions courses without an approved petition. Your department or school may require that you take some or all courses in your major for a letter grade. Certain other courses or programs may also be exempt from the P/NP option; consult your college or school for details.

You may make program changes to or from P/NP grading through the sixth week of instruction (see the Calendar at the beginning of this catalog for exact dates); changes after the first two weeks of class require an approval ($3), available from your college or school. Certain undergraduate courses are offered only on a Passed/Not Passed basis and are designated PN in the Schedule of Classes.

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

Courses taken on an S/U basis outside the major, and 500-series courses within the major, are applicable toward degree and/or academic residency requirements if so approved. Interdepartmental majors may not apply S/U courses to degree requirements, except for 500-series courses. Program changes to or from S/U grading may be made through the tenth week of instruction (see the Calendar at the beginning of this catalog); changes after the first two weeks of class require a petition ($3), available in the Graduate Division Office.

Certain graduate courses are offered only on a Satisfactory/Unsatisfactory basis and are designated SU in the Schedule of Classes.

Incomplete (I) Grades
Your instructor may assign the I grade when your work is of passing quality but is incomplete for a good cause (i.e., illness or other serious problems). It is your responsibility to discuss with the instructor the possibility of receiving an I grade as opposed to a nonpassing grade.

If an I grade is assigned, you may replace it with a passing grade and receive unit credit and grade points by satisfactorily completing the course as specified by the instructor. If the work is not completed by the end of the next full quarter in residence, the grade will lapse to an F, NP, or U as appropriate. Your college or school may extend this deadline in unusual cases.

Petitions for Removal of Incomplete Grade ($5) are available in your school or department office and should be filed no later than the first full quarter of registration. (Note: Once an I grade is assigned, it remains on your transcript along with the passing grade you may later receive for the course.)

In Progress (IP) Grades
For certain courses extending over more than one quarter (identified by T1, T2, T3, or T4 in the Schedule of Classes), evaluation of student performance is deferred until the end of the final quarter of the course. Provisional grades of IP are assigned in the intervening quarter(s) and are replaced with the final grade when you complete the full sequence. The school or college faculty or the Graduate Council will determine credit if you do not complete the full sequence and petition for partial credit.

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

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

(1) To improve your grade-point average, you may repeat only those courses in which you receive a grade of C or lower; NP or U grades may be repeated to gain unit credit. Courses in which you received a letter grade 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 either on the same basis or for a letter grade.

(2) Repetition of a course more than once requires the approval of your college or school or the Dean of the Graduate Division, and is granted only under extraordinary circumstances.

(3) Degree credit for a course will be given only once, but the grade assigned each time you take the course will be permanently recorded on your transcript.

(4) For undergraduates who repeat a total of 16 units or less, only the most recently earned letter grades and grade points will be computed in the grade-point average. After repeating 16 units, however, your GPA will be based on all letter grades assigned and total units attempted.

(5) For graduate students, all courses in which a letter grade was given, including repeated courses, will be used in computing the grade-point average.
Correction of Grades

All grades except I, IP, and DR are final when filed by the instructor in the end-of-term course report. Thereafter, a grade change may be made only in the 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. If you are dissatisfied with a grade, you should review your work with the instructor and receive an explanation of the grade assigned. See the Appendix for further details and procedures for appealing grades.

Credit by Examination

Students with high scholastic standing may earn credit for regular University 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 which may include oral and written work in addition to other requirements. To be eligible for this privilege, 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 your record in the same way as regular courses, and corresponding grade points are assigned. Graduate credit earned by examination may be applied toward minimum course requirements for master's degrees but cannot apply to academic residence requirements for master's or doctoral degrees.

You will need approval from the appropriate instructors, the department, and your college or school or the Dean of the Graduate Division, from whom petitions for credit by examination ($5 each) are available.

Other Academic Policies

Concurrent Enrollment and Transfer of Credit

Concurrent enrollment means taking courses for credit in UCLA regular session (Fall, Winter, or Spring Quarter) and at another college institution (including UCLA Extension) at the same time. Concurrent enrollment is not permitted except in extraordinary circumstances, and no credit will be given for courses taken concurrently elsewhere without the approval of your college or school. This does not apply to UCLA Summer Sessions (see "Summer Sessions" in Chapter 1).

Undergraduates

During the summer or during a quarter when you are not registered at UCLA, you may elect to take courses for credit at UCLA Extension, a community college, or another four-year institution (see limitations below). The Office of Undergraduate Admissions and Relations with Schools makes the final decision on credit transferability, but it is your responsibility to select courses with catalog descriptions similar to courses offered in regular session at UCLA. You should also avoid courses that are closely related to those you have already taken, as you cannot receive credit twice for the same or similar courses. If you wish to apply a specific course from another college toward satisfaction of degree requirements at UCLA, consult your college, school, or department counselor before taking the course.

Only grades earned in regular session or Summer Sessions at any UC campus will be computed into your UCLA grade-point average.
however, receive unit credit and satisfy course requirements with transferable work taken elsewhere. When you have completed the work, you must have the other college send a copy of your transcript to the UCLA Office of Undergraduate Admissions and Relations with Schools for evaluation.

**UCLA Extension**—If you wish to receive degree credit for work taken through UCLA Extension, you should take courses that correspond in number to the undergraduate courses offered in regular session. The designation XL or XLC before the number of the Extension course signifies that the course is equivalent to the regular session course bearing the same number. No degree credit is given for courses numbered X300 through X499. Remember that concurrent enrollment in Extension and regular session is not permitted.

**Community Colleges**—The maximum number of community college units allowed toward the bachelor's degree is 105 quarter units (70 semester units). The UCLA Office of Undergraduate Admissions and Relations with Schools will not count community college courses beyond 105 quarter units, but you may still receive subject credit to satisfy lower division requirements. Consult your college or school counselors for possible further limitations. (To convert semester units into quarter units, multiply the semester units by 1.5.)

**Graduates**

With approval of the Dean of the Graduate Division, certain courses completed outside of UCLA regular session may be applied toward the master's degree. For more details, see “Transfer of Credit” under The Master's Degree, Chapter 3.

**Transcript of Record**

The Registrar prepares and permanently retains a record of each student's academic work. Your transcript reflects all undergraduate and graduate work completed in UCLA regular session and Summer Sessions. It lists chronologically your courses, units, grades, cumulative grade-point average, transfer credits, and total units.

Unofficial copies of student transcripts are issued several weeks after the end of each quarter (to learn your grades more quickly, leave postcards with your instructors). You should pick up your transcript and inform the Registrar immediately of any omissions or other discrepancies. Student copies are available at no charge from the Registrar's Office, 1111 Murphy Hall (students in the College of Fine Arts, the Schools of Nursing, Public Health, and Architecture and Urban Planning, and undergraduates in the School of Engineering and Applied Science should pick up their transcripts in the respective college or school office). The Registrar verifies current quarter registration and full-time enrollment status for loan forms and other noncampus certifications, beginning on the twelfth day of classes.

To have official transcripts sent to other schools or institutions, fill out a Request for Transcript of Record form at the Registrar's Office (transcripts cannot be issued without your signed request). The fee is $3 for the first copy and $1 for each additional transcript requested at the same time. Rush transcript service is available for an additional $5 charge. Transcripts become available within 48 hours after your last date of attendance. Those required for intercampus transfer within the University are provided at no charge. Transcripts of work completed elsewhere must be requested directly from the campus or institution concerned.

**Certificate of Resident Study for Foreign Students**

In addition to a formal transcript, the Registrar may issue a Certificate of Resident Study to a registered foreign student. To obtain this certificate, you must have completed a program of at least nine courses with a minimum 2.0 grade-point average, or have satisfactorily completed a research project over a period of nine months or more. The chair of your major department recommends the award of this certificate, but you must request it from the Registrar (1105 Murphy Hall) at least a week before the final examination period opens.

**Registration Card**

Your valid Registration Card (Reg Card) is your official student identification and is required, along with your UCLA Student I.D. Card, for all University services. Carry it with you as you will be asked to show it for student health services, library privileges, athletic and cultural student ticket rates, recreation center, check cashing, and many other campus services.

If you lose or do not receive your Reg Card, a temporary verification card (good for five days) will be issued without fee at the Registrar's Office, 1134 Murphy Hall. After the quarter begins, you may replace lost, destroyed, or mutilated cards at the Registrar's Office for a $3 fee. You must show proof of identity for verification or replacement cards.

**UCLA Student I.D. Card**

This mandatory card with photo is issued in your first term of registration and is valid with the current Reg Card as long as you remain in the same standing (graduate or undergraduate). It is required for all University services and student activities.

You will need a current Reg Card and other valid identification (driver's license, passport, or DMV I.D. card) to get your Student I.D. Card. Distribution hours and location will be announced in the registration issue of the Daily Bruin. You may replace lost or destroyed cards at 140 Kerckhoff Hall for a $3 fee.

**Change of Name or Address**

If you wish to change your name on your official record, fill out a name change form at the Registrar's Office in 1111 Murphy Hall. If you change your address, notify the Registrar's Office in 1134 Murphy Hall as soon as possible. Veterans receiving benefits must also notify the Office of Special Services/Veterans Affairs, A255 Murphy Hall.
Leaving UCLA

Intercampus Transfer

Undergraduate students registered in a regular session (or those previously registered who have not since registered at any other school) may apply for transfer to another campus of the University. There is a $35 nonrefundable fee, and deadlines are the same as admission application deadlines (see "Undergraduate Admission" in Chapter 2). Intercampus Transfer Applications and further information on requirements and procedures are available from the Registrar's Office, 1111 Murphy Hall. Graduate students who wish to enroll as degree candidates at other UC campuses must apply for admission to those Graduate Divisions.

Absence During a Quarter

If you have to be absent from classes temporarily for reasons beyond your control, you should notify your instructors. Regardless of the reasons for absence, you will be required to complete all coursework. If you cannot complete the work on time because your absence is late in the quarter or prolonged, you may request that the instructors assign an Incomplete grade (see "Incomplete Grades" earlier in this chapter).

One Quarter Absence for Undergraduates

Undergraduate students who have completed at least one quarter at UCLA and fail to register for a quarter may return to the University the following quarter and preregister and preenroll as continuing students. If you plan to attend another institution (including University Extension) during your absence, you should consult your college or school counselor or before enrolling elsewhere. When you return to UCLA you must provide the Office of Undergraduate Admissions and Relations with Schools with a transcript of any courses taken (see "Concurrent Enrollment and Transfer of Credit" earlier in this chapter). If you are absent for two or more consecutive quarters, you are no longer considered a continuing student and must compete for readmission with all other applicants.

Leave of Absence for Graduate Students

Graduate students in good standing may be granted leaves of absence, normally for periods of one to three quarters, on approval from the appropriate department and the Graduate Division. Leaves, which may be extended up to five years at the discretion of your department, must be requested before the end of the second week of class. Request forms are available at the Graduate Division, Student and Academic Affairs Section, 1225 Murphy Hall. For details on leaves of absence, see Standards and Procedures for Graduate Study at UCLA, available in the Graduate Division offices or in individual departments. Students on leaves of absence are not eligible to use University facilities (except libraries) or faculty time. Leaves of absence as described here do not apply to undergraduates.

Graduate students who fail to register for a quarter and do not take an official leave of absence are considered to have withdrawn from the University and must compete for readmission with all other applicants.

Cancellation

Before the first day of classes, you may cancel registration by submitting a written notice, together with your current Registration Card and Student I.D. Card, to the Registrar’s Office, 1134 Murphy Hall. A $10 service charge will be deducted from your fee refund. Undergraduates who return to the University for the following quarter may preregister and preenroll as continuing students. If you are absent longer than one quarter, you must apply for readmission. If you cancel in your first quarter at UCLA, you must reapply for admission when you return.

Graduate students who cancel their registration and do not receive 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 you are enrolled. If you withdraw during a quarter, you need to file a Notice of Withdrawal, available from your college, school, or Graduate Division office. Submit your Registration Card and Student I.D. Card along with the form or a fee will be deducted from any refund. When you withdraw officially during the first five weeks of instruction, a percentage of your registration fee will be refunded as follows:

- First and second weeks of instruction: 80% refund
- Third week of instruction: 60% refund
- Fourth week of instruction: 40% refund
- Fifth week of instruction: 20% refund
- After fifth week of instruction: no refund

Claims for refund must be presented within the academic (fiscal) year to which the claim is applicable. See the current Schedule of Classes for further details.

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

If you register and subsequently discontinue coursework or stop payment on registration checks without an approved petition for withdrawal, leave of absence, or cancellation, you will receive F, NP, or U grades, as appropriate, for all courses in which you are enrolled for that quarter. No fees will be refunded, and future registration privileges may be curtailed or revoked. Transcripts will not be issued if you have outstanding financial obligations to the University.

Undergraduate Students — If you return to the University for the quarter following withdrawal, you may preregister and preenroll as a continuing student. If you return later than the following quarter, you must apply for readmission.

Graduate Students — If you do not complete a quarter, you are considered to have withdrawn from the University and must apply for readmission when you return.

Graduation from UCLA

Approximately eight out of every ten UCLA freshmen eventually receive a baccalaureate degree, either from UCLA or from another campus or institution. According to a recent survey of UCLA alumni, two thirds of all
UCLA baccalaureate recipients go on to graduate school. For information on academic requirements for graduation, see "Undergraduate Degree Requirements" in Chapter 2.

Undergraduate Students
The awarding of the bachelor's degree does not happen automatically but is the culmination of a multistep procedure which involves your participation.

1. The Degree Candidacy portion of your Registration Form must be completed and filed when you are a junior (minimum 90 quarter units earned) to let the Registrar's Office know when you intend to graduate. The "degree expected term" indicated on the form must be the same as the term in which you wish to graduate in order for your degree progress to be audited by the Registrar's Office. You cannot graduate without such an audit.

2. Degree Checks are conducted by your school or college and the Registrar's Office to inform you of degree requirements remaining to be satisfied. If you have filed the Degree Candidacy portion of your Registration Form, you should receive your first degree check ("Status in Reference to the BA/BS Degree") about three quarters before you graduate and an updated one each subsequent quarter. Consult your college or school, or the Registrar's Office, 1111 Murphy Hall, if you have any questions or problems.

3. Announcement of Candidacy is posted on the Registrar's bulletin board about four weeks into the quarter. Although this is not a guarantee of graduation, your name should appear on the list posted in your final quarter. If not, inform the degree clerk at 1111 Murphy Hall.

4. Important Degree Notice is mailed to you only if your records indicate you will not have satisfied all degree requirements by the end of your last quarter. If you receive such a notice, contact your degree clerk as soon as possible for further information and instructions.

5. Certificate of Completion is official proof that you have graduated. It is sent to you four to five weeks after your final quarter ends if you have successfully completed all courses that quarter and met all degree requirements.

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. A Certificate of Completion, certifying the award of the degree, is issued to all students four to five weeks after the end of the quarter in which all degree requirements are met. For full details on degree requirements and procedures for graduate students, see Chapter 3 on Graduate Study.

Degree Date
Degrees are awarded at the end of each quarter (Fall, Winter, Spring) and at the end of the second Summer Session. Refer to University calendars for the actual date of the final day in each quarter or Summer Session.

Diplomas
Diplomas for both undergraduates and graduate students are not distributed at Commencement but become available six to eight weeks after graduation. The Registrar's Office will notify you by mail when your diploma is ready. If you wish, the diploma can be sent to you by certified mail at a cost of $3 ($6 outside the U.S.). There is no diploma fee, although if the original is lost or stolen, there is a $25 charge for a duplicate diploma.

Commencement
Commencement exercises honoring candidates for undergraduate and graduate degrees are held in mid-June. Students who have earned degrees in Summer Sessions or any quarter during the academic year are welcome to participate.

On Commencement Day many departments, schools, and colleges hold informal gatherings at which prizes and honors are awarded and students and their families meet faculty members. At 3 p.m. all students, faculty, and guests gather in Drake Stadium for formal exercises and the conferring of degrees. This colorful pageant features an address by the Chancellor, student speakers, and recognition of candidates who have achieved high academic distinction.

Academic regalia (caps, gowns, and hoods) become available through ASUCLA two weeks prior to Commencement. The rental fee is $13 for bachelor's candidates; $22 for master's and doctoral candidates. For further information, consult the Commencement Handbook, which is mailed to each candidate by the end of May. You may purchase graduation announcements at the Campus Photo Studio in ASUCLA Graphic Services (150 Kerckhoff Hall).
Colleges and Schools

Organization

This catalog is organized into the 13 colleges and schools which are the University's component parts. Each of the following chapters is devoted to a single college or school. Each is introduced by general information on scope and emphasis, the academic departments it encompasses, admission standards, and requirements for undergraduate and graduate degrees.

The overall college or school description is followed, in alphabetical sequence, by its departmental listings. Here you will find faculty rosters, departmental degree requirements, requirements for the major, and descriptions of all courses (lower division, upper division, and graduate) offered by that department or interdepartmental degree program. (If you are not certain which college or school offers a particular program, see the organization chart on the inside front cover.)

Since the great majority of UCLA's students and degree programs are housed within the College of Letters and Science, that unit is presented first. It is followed by the other general campus units offering undergraduate programs: the College of Fine Arts and the School of Engineering and Applied Science. The graduate professional schools of Architecture and Urban Planning, Education, Law, Library and Information Science, Management, and Social Welfare follow in alphabetical sequence. The health science disciplines, which include the Schools of Dentistry, Medicine, Nursing, and Public Health, are the final chapters before the Appendix.

Courses of Instruction

Because the catalog must be prepared well in advance of the academic year it covers, it may not reflect recent changes in courses, curricula, and faculty listings. For more current information, consult the quarterly Schedule of Classes available in the Students' Store shortly before the beginning of each new quarter.

Courses listed in this catalog represent the total nonclinical offerings of each college, school, and department at UCLA. Certain courses listed may not be offered every quarter or every year. Where possible, the quarters in which a course is offered have been indicated in parentheses after the instructor's name (F=Fall, W=Winter, Sp=Spring, Sum=Summer).

Academic Credit

A course has a credit value of four quarter units unless otherwise specified in parentheses after the course title.

A listing such as History 1A-1B-1C, Introduction to Western Civilization, indicates three full four-unit courses, 1A, 1B, and 1C. The listing Music 11A-11F, Musicianship (2 units each), indicates six half-courses at two units each. A course may not be prerequisite to the next in the series unless so designated, but since policies vary among departments, you should check with the departmental counselor or adviser. Credit for a specific course may be dependent on completion of a subsequent course, as noted in the description.

Prerequisites

Education is a building process. It is difficult or impossible to learn advanced principles without first understanding elementary ones. Therefore, one or more lower division courses may be prerequisite to taking another lower division or an upper division course. Prerequisites should be noted carefully — it is your responsibility to meet these requirements in preparation for more advanced work. A course has no prerequisites if none is designated in departmental requirements or course descriptions.

Undergraduate Courses

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 do not apply toward graduate degrees.

Upper division courses (numbered 100-199) are open to all students who have met the prerequisites indicated in departmental requirements or the course description. Preparation generally includes at least one lower division course in the subject or two years of college work. With approval of the major department, graduate students may take 100-series courses toward satisfaction of master's degree requirements. Courses numbered 98 and 198 are group study courses set up on a one-time basis in subjects for which no regular courses have been established. Because they vary in content and are offered irregularly, they are not listed in the catalog.

Individual special studies courses (numbered 199, 199F, 199H, and 199I) involve supervised independent study and research requiring adequate background in the subject proposed for study. These courses are open to juniors (with a minimum 3.0 GPA in the major field), seniors, and graduate students. To enroll, you must complete the appropriate petition (available from the department) and have it approved by both the instructor in charge and the department chair.

Undergraduates may enroll in a maximum of eight units of 199, 199F, 199H, or 199I courses per quarter. After completing 16 units of 199 or 199H credit on a letter grade basis, you must take any additional 199 or 199H courses on a Passed/Not Passed basis. Independent field study courses (199F and 199H) must be taken on a Passed/Not Passed basis; a total of eight units is allowed. If you have an outstanding Incomplete grade in a 199, 199F, 199H, or 199I course, you may not register for another until the I grade is removed. See departmental listings and individual course descriptions for specific prerequisites and credit limitations.
Graduate Courses*

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 you take a graduate course as an undergraduate, you may not apply that same course later toward a higher degree.

Graduate courses numbered 300-399 are highly specialized teacher-training courses which 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 other institutions.) See individual departmental listings for specific limitations on 500-series courses.

*These definitions do not apply to the School of Law, which maintains its own course numbering system.

University Extension Courses

In general, you may not attend University of California Extension for degree credit if you are enrolled in UCLA regular session at the same time. However, certain Extension courses (numbered 1-199), prefixed by XL or XLC in the 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" earlier in this chapter.

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 University Extension.)

Multiple-listed courses (identified by a capital M before the course number) are courses of the same format and level offered jointly by more than one department. For example, Byzantine Civilization is offered by the Department of Classics (Classics M170A) and the Department of History (History M122A). You will find that particular course listed under both departments in Chapter 5 on the College of Letters and Science.

Faculty Rosters

Faculty rosters in each academic department are listed in the following order:

- Professors
- Associate Professors
- Assistant Professors
- Lecturers
- Adjunct and Visiting faculty in each of these four Academic Senate classifications

In the case of interdepartmental degree programs, all participating faculty members have appointments in regular academic departments. Participating faculty are listed in the above order, with the home department or specialty of each member indicated in parentheses.
""The idea of a Multiversity’ is a city of infinite variety. Some get lost in the city; some rise to the top within it; most fashion their lives within one of its subcultures. . . . It offers . . . a vast range of choices, enough literally to stagger the mind. In this range of choices . . . (one) encounters the opportunities and the dilemma of freedom."

Clark Kerr, *The Uses of the University*

With 22,000 students and 900 faculty, UCLA’s College of Letters and Science is the largest academic unit in the UC system. Underscoring the “multiversity” concept, its four academic divisions of humanities, physical sciences, social sciences, and life sciences provide the framework for more than 70 majors leading to the Bachelor of Arts or Bachelor of Science as well as to master’s and doctoral degrees.

The undergraduate programs in the college stress a “liberal arts education” which brings together perspectives from many fields in a unified approach to learning. Students learn some of the ways issues are analyzed, questions posed, and knowledge 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 will pose their own questions, analyze academic issues of their own making, and, through their research, participate in the creation of knowledge.
A316 Murphy Hall, 825-1965

The primary units of the College of Letters and Science are the academic departments which are grouped in four divisions: humanities, physical sciences, social sciences, and life sciences. Each division is headed by a dean who reports directly to the Provost.

In addition to departmental advising, the Division of Undergraduate Programs and Services, under the direction of an associate provost, provides a network of student assistance within its two components: College Counseling Service and Preparatory Programs.

### Undergraduate Study

The degree programs in the College of Letters and Science are designed to expose students to a variety of intellectual challenges by combining a wide distribution of courses and the opportunity to specialize in one particular field. To this end, you are required to select lower division courses that deal with the general foundations of human knowledge. In upper division courses you are relatively free to concentrate attention on one field of interest: your major.

You are expected to select a major by the beginning of your 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 your special need (individual major). The pursuit of such definite courses of study often requires knowledge of courses known as prerequisites.

### Counseling Services

The College Counseling Service is located in A316 Murphy Hall. The staff is specially trained to assist you with questions pertaining to academic regulations and procedures, selection of courses, and the many options and alternatives available to enhance your university education.

Some questions can be answered at the college information window or by calling 825-1965. If you would like to confer with a counselor or regarding overall degree requirements, academic difficulty, program planning, or assistance in selecting a major, you can arrange an appointment at the information window. Appointments with counseling assistants can be scheduled by calling 206-6681. Group counseling sessions on a variety of academic issues are offered throughout the year.

For information on the Learning Resource Center, ASK Counselors, and Preparatory Programs, see Chapter 2.

### Your Major

Many entering freshmen are unsure about specific academic goals and request to be admitted to the college as "undeclared." These students often 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 (see "Choosing Your Major" in Chapter 2 of this catalog).

All students with 90 or more units toward a degree are expected to declare a major. When you are ready to do so, obtain approval on a Petition for Declaration of Major from the department or interdepartmental degree committee which governs your intended major and file the form at the College Counseling Service Office.

There are a variety of sources that can help you with academic planning, including the College Counseling Service in A316 Murphy Hall (825-1687 or 825-1965) and the Placement and Career Planning Center (825-2981). In addition, faculty members and counselors in each college department are available to discuss in detail the courses and programs in their respective fields. For further suggestions, see "Advising and Academic Assistance" in Chapter 2.

### Assessing Progress Toward Your Degree

One of your responsibilities as a UCLA student includes a regular monitoring of all requirements necessary for the degree. It is imperative that you read this catalog carefully and consult with the Letters and Science counseling staff for confirmation of the requirements you need to fulfill. "Degree checks" are available by appointment. Departmental counselors can advise you regarding progress and completion of your major requirements. A final audit of degree requirements will be sent to you by the Registrar's Office toward the end of your studies. However, it is important that you maintain an accurate assessment of progress toward your degree by utilizing departmental and College Counseling Service resources.

### Minimum Progress

UCLA is a full-time institution, and it is expected that students will complete their undergraduate degree requirements promptly. The recommended study load for an undergraduate in the College of Letters and Science is 12 to 16 units per quarter.

According to Academic Senate regulations, Letters and Science undergraduates who do not pass at least 36 units during any three consecutive terms will be placed on probation, and students who do not pass at least 32 units during three consecutive terms will be subject to disqualification from registration at the University. Exceptions may be granted by the college due to poor health, family responsibilities, or regular employment requiring 50 percent time or more.

### Letters and Science Majors

A major in the College of Letters and Science consists of at least nine and no more than 15 upper division courses (between 36 and 60 units). All courses applied toward the major and preparation for the major must be taken for a letter grade unless otherwise stipulated by the department. If you have been away from the University for several terms, you should consult with your major department or curriculum adviser concerning the requirements under which you will graduate.

There are three categories of majors in the College of Letters and Science:

- **Departmental Majors**

A departmental major consists of a group of related upper division courses, of which at least six courses are in one department. These majors are supervised by established campus departments. There are 76 departmental majors currently offered by the college.
Majors and Degrees Offered

<table>
<thead>
<tr>
<th>African Area Studies (M.A.)</th>
<th>Germanic Languages (C.Phil., Ph.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Languages (B.A.)</td>
<td>Greek (B.A., M.A.)</td>
</tr>
<tr>
<td>Afro-American Studies (B.A., M.A.)</td>
<td>Hebrew (B.A.)</td>
</tr>
<tr>
<td>American Indian Studies (M.A.)</td>
<td>Hispanic Languages and Literatures (C.Phil., Ph.D.)</td>
</tr>
<tr>
<td>Anthropology (B.A., M.A., Ph.D.)</td>
<td>Indo-European Studies (C.Phil., Ph.D.)</td>
</tr>
<tr>
<td>Applied Linguistics (C.Phil., Ph.D.)</td>
<td>Islamic Studies (M.A., C.Phil., Ph.D.)</td>
</tr>
<tr>
<td>Applied Mathematics (B.S.)</td>
<td>Italian (B.A., M.A., C.Phil., Ph.D.)</td>
</tr>
<tr>
<td>Arabic (B.A.)</td>
<td>Italian and Special Fields (B.A.)</td>
</tr>
<tr>
<td>Archaeology (M.A., C.Phil., Ph.D.)</td>
<td>Japanese (B.A.)</td>
</tr>
<tr>
<td>Asian American Studies (B.A.)</td>
<td>Jewish Studies (B.A.)</td>
</tr>
<tr>
<td>Astronomy (B.S., M.S., M.A.T., Ph.D.)</td>
<td>Kinesiology (B.S., M.S., Ph.D.)</td>
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<tr>
<td>Atmospheric Sciences (B.S., M.S., C.Phil., Ph.D.)</td>
<td>Latin (B.A., M.A.)</td>
</tr>
<tr>
<td>Biochemistry (B.S., M.S., C.Phil., Ph.D.)</td>
<td>Latin American Studies (B.A., M.A.)</td>
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<tr>
<td>Chemistry (B.S., M.S., C.Phil., Ph.D.)</td>
<td>Linguistics and Computer Science (B.A.)</td>
</tr>
<tr>
<td>Chemistry/Materials Science (B.S.)</td>
<td>Linguistics and East Asian Languages and Cultures (B.A.)</td>
</tr>
<tr>
<td>Chicano Studies (B.A.)</td>
<td>Linguistics and English (B.A.)</td>
</tr>
<tr>
<td>Chinese (B.A.)</td>
<td>Linguistics and French (B.A.)</td>
</tr>
<tr>
<td>Classical Civilization (B.A.)</td>
<td>Linguistics and Italian (B.A.)</td>
</tr>
<tr>
<td>Classics (B.A., M.A., C.Phil., Ph.D.)</td>
<td>Linguistics and Philosophy (B.A.)</td>
</tr>
<tr>
<td>Cognitive Science (B.A.)</td>
<td>Linguistics and Psychology (B.A.)</td>
</tr>
<tr>
<td>Communication Studies (B.A.)</td>
<td>Linguistics and Scandinavian Languages (B.A.)</td>
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<tr>
<td>Comparative Literature (M.A., C.Phil., Ph.D.)</td>
<td>Linguistics and Spanish (B.A.)</td>
</tr>
<tr>
<td>East Asian Languages and Cultures (M.A., C.Phil., Ph.D.)</td>
<td>Mathematics/Applied Science (B.A.)</td>
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<tr>
<td>East Asian Studies (B.A.)</td>
<td>Mathematics/Computer Science (B.S.)</td>
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<tr>
<td>Economics/Business (B.A.)</td>
<td>Microbiology (B.S., M.A., Ph.D.)</td>
</tr>
<tr>
<td>Economics/International Area Studies (B.A.)</td>
<td>Molecular Biology (Ph.D.)</td>
</tr>
<tr>
<td>Economics/System Science (B.S.)</td>
<td>Near Eastern Languages and Cultures (M.A., C.Phil., Ph.D.)</td>
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<tr>
<td>English/Greek (B.A.)</td>
<td>Philosophy (B.A., M.A., C.Phil., Ph.D.)</td>
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<tr>
<td>English/Latin (B.A.)</td>
<td>Physics (B.S., M.S., M.A.T., Ph.D.)</td>
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<td>Folklore and Mythology (M.A., Ph.D.)</td>
<td>Political Science (B.A., M.A., C.Phil., Ph.D.)</td>
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<tr>
<td>French and Linguistics (B.A.)</td>
<td>Psychology (B.S.)</td>
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<tr>
<td>General Chemistry (B.S.)</td>
<td>Psychology (B.A., M.A., C.Phil., Ph.D.)</td>
</tr>
<tr>
<td>General Physics (B.A.)</td>
<td>Psychology/Developmental Disabilities Immersion Program (B.A.)</td>
</tr>
<tr>
<td>Geochemistry (M.S., C.Phil., Ph.D.)</td>
<td>Religion, Study of (B.A.)</td>
</tr>
<tr>
<td>Geography/Ecosystems (B.A.)</td>
<td>Russian Civilization (B.A.)</td>
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<tr>
<td>Geology (B.S., M.S., C.Phil., Ph.D.)</td>
<td>Russian Linguistics (B.A.)</td>
</tr>
<tr>
<td>Geology — Engineering Geology (B.S.)</td>
<td>Scandinavian Languages (B.A., M.A.)</td>
</tr>
<tr>
<td>Geology — Geochemistry (B.S.)</td>
<td>Slavic Languages and Literatures (B.A., M.A., C.Phil., Ph.D.)</td>
</tr>
<tr>
<td>Geology — Nonrenewable Natural Resources (B.S., M.S.)</td>
<td>Sociology (B.A., M.A., C.Phil., Ph.D.)</td>
</tr>
<tr>
<td>Geology — Paleobiology (B.S.)</td>
<td>Spanish (B.A., M.A.)</td>
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<tr>
<td>Geophysics — Applied Geophysics (B.S.)</td>
<td>Spanish and Linguistics (B.A.)</td>
</tr>
<tr>
<td>Geophysics and Applied Physics (B.S., M.S., Ph.D.)</td>
<td>Teaching English as a Second Language (M.A.)</td>
</tr>
<tr>
<td>German (B.A., M.A.)</td>
<td>World Arts and Cultures (B.A.)</td>
</tr>
</tbody>
</table>
Interdepartmental Majors

An interdepartmental major consists of at least 13 related upper division courses, of which no more than eight are in one department. These 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.

The College of Letters and Science currently offers 24 interdepartmental majors. Although most lead to bachelor's degrees, there are some which lead to graduate degrees only. Check the chart of majors and degrees for the programs which interest you.

- African Area Studies
- Afro-American Studies
- Applied Linguistics
- Archaeology
- Asian American Studies
- Chemistry/Materials Science
- Chicano Studies
- Communication Studies
- Comparative Literature
- Cybernetics
- East Asian Studies
- Economics/System Science
- Folklore and Mythology
- Indo-European Studies
- Islamic Studies
- Latin American Studies
- Mathematics/Computer Science
- Mathematics/System Science
- Molecular Biology
- Near Eastern Studies
- Religion, Study of
- Romance Linguistics and Literature
- World Arts and Cultures

You can find a detailed description of each of these majors under their respective headings later in this chapter.

Individual Majors

If you have some unusual but definite academic interest for which no suitable major is offered at the University and you have completed at least three quarters of work (nine courses) at the University with a grade-point average of 3.4 or higher, you may plan an individual major. The consent of the Dean of the Division of Honors and the assistance of a faculty adviser is required.

The major should consist of at least 12 and no more than 15 upper division courses, a majority of which are in departments offering a major in the college. A senior thesis is required. The title of the major will be entered in the memorandum column of your official transcript; your diploma will read “Individual Field of Concentration.” For further details about individual majors, contact the Division of Honors in A311 Murphy Hall (825-1553).

Supplemental Programs

The college offers no “minors”; instead, you may choose from nine different programs which are not degree-granting majors, but are sequences of supplemental courses designed to enhance your work in certain areas. Each of these programs must be taken jointly with an organized departmental or interdepartmental major:

- African Studies
- Asian American Studies
- Business and Administration
- Computing, Program in
- Diversified Liberal Arts
- International Relations
- Law and Society
- Urban Studies or Organizational Studies
- Women’s Studies

Detailed descriptions of each program are given under their respective headings later in this chapter.

Double Majors

If you are in good academic standing, you may be permitted to have a double major consisting of departmental majors from two departments within this college. They must both be completed within the maximum limit of 208 units, and you must obtain the approval of both departments.

With few exceptions, double majors in the same department are unacceptable. If the majors are not in the same division of the college, you must designate one of the two majors as the principal one for the purpose of satisfying breadth or general education requirements. No more than five upper division courses may be common to both majors.

Courses outside the division of the principal major which are required in preparation for that major may be used to satisfy breadth requirements. Courses required for the secondary major (including preparation for the major) may satisfy any set of breadth requirements.

Changing Your Major

If you are in good academic standing and wish to change your major, you may petition to do so provided you can complete the new major within the 208-unit limit. Petitions must be approved by the department or committee in charge of the new major and forwarded to the college for final approval. Admission to certain majors may be closed or restricted; changes are normally not permitted if you are on probation or have begun your last quarter.

If you fail to attain a grade-point average of 2.0 (C) in preparation for the major or major courses, you 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.

The Study List

The required study load for undergraduate students in the College of Letters and Science is 12 to 16 units (three to four courses) per quarter. For exceptions, see “Minimum Progress” earlier in this section. Three courses are recommended for students in the first quarter of the freshman year. All other students who have a C average or better may carry four and one-half courses without petition. After the first quarter, you may petition to enroll in as many as five courses if you attained at least a B average the preceding quarter in a program of at least three graded courses. First-quarter transfer students from any other campus of the University may carry excess Study Lists on the same basis as students who have completed one or more quarters at UCLA.

Requirements for the Bachelor’s Degrees

Each student must meet three levels of requirements for the Bachelor of Arts or Bachelor of Science degree: University requirements, college requirements, and department requirements (including preparation for the major and major requirements). For details on the latter level, see the department and major of your choice.

University Requirements

For information on the Subject A and American History and Institutions requirements, see “Undergraduate Degree Requirements” in Chapter 2.

College Requirements

The College of Letters and Science has six types of requirements which must be satisfied for the award of the degree: unit, major and scholarship, residence, foreign language (effective Fall Quarter 1988), English composition, and breadth or general education requirements.
Unit Requirements
You must satisfactorily complete for credit a minimum of 180 units (45 courses) for the bachelor's degree. A maximum of 208 units is allowed. After having credit for 208 units, you will not be permitted to continue except in rare cases which must be approved by the college. If you have credit for English 1 taken Fall Quarter 1979 through Summer Quarter 1984 at UCLA, you will be required to complete satisfactorily 182 units (45 1/2 courses); a maximum of 210 units is then allowed. If you have advanced placement (transfer) credit, you may exceed the 208/210-unit maximum by the amount of this credit.

Structure of a Degree
Three levels of degree requirements are included within the 180-unit minimum/208-unit maximum limits for the bachelor's degree:

University Requirements
(1) Subject A or English as a Second Language (ESL)
(2) American History and Institutions
Both requirements are common to all UCLA undergraduates.

College Requirements
(1) English Composition or ESL Composition
(2) General Education or Breadth (depending on eligibility)

Department Requirements
(1) Preparation for the Major
(2) Major Requirements
The remaining units, defined as electives, are courses which vary according to your interests and goals. When selecting your courses, keep the following degree criteria in mind:

Scholarship
You must attain an overall 2.0 minimum grade-point average in the 180/208 units required and must satisfy the scholarship requirements of your major department (usually a 2.0 average in the preparation and major courses, but it may be higher in the former, according to departmental requirements).

Residence Requirement
See "Residence Requirements" later in this section.

Upper Division Unit Requirement
For students entering Fall Quarter 1982 or later, at least 72 units (18 courses) must be upper division.

For students entering in Fall Quarter 1982 or later, at least 72 units (18 courses) of the above requirement must be upper division courses. Students entering prior to Fall Quarter 1982 must complete at least 52 units (13 courses) in upper division.

Scholarship and Major Requirements
You must attain at least a 2.0 (C) grade-point average in all courses undertaken at this University for receipt of the bachelor's degree. You must also attain a 2.0 grade-point average in a major and satisfy both the course and scholarship requirements of that major (including preparation for the major) in the College of Letters and Science.

Residence Requirements
For students entering the College of Letters and Science in Fall Quarter 1982 or later, 68 units of the last 80 units completed for the degree must be earned in residence in the college. No more than 16 of the 68 units may be completed in UCLA Summer Sessions. While enrolled in the college you must complete at least ten upper division courses (40 units), including six courses in the major. For students entering the college before Fall Quarter 1982, the residence requirements are as indicated in the 1981-82 UCLA Undergraduate Catalog. These residence requirements apply to all students, both continuing and transfer.

Foreign Language Requirements
The College of Letters and Science does not have a collegewide requirement for foreign language at this time, but one will become effective in Fall Quarer 1986 (see "General Education Requirements" below). Specific departments or majors within the college, however, may impose such requirements at present. Credit will not be allowed for a less advanced course in grammar and/or composition after you have completed a more advanced course. For other limitations, see "Credit Limitations" later in this section.

College credit for a foreign student's native language and literature is allowed for (1) courses taken in native colleges and universities or (2) upper division and graduate courses taken at the University of California or another English-speaking institution of approved standing.

English Composition Requirement
Note: You must complete the University's Subject A requirement prior to completing the college's English Composition requirement.
You must satisfy the English Composition requirement with one course from English 3, 4, Humanities 2A, 2B, 2C. The course must be taken for a letter grade, and you must receive at least a C; a grade of C− is not acceptable.

Courses in this group may be applied toward the humanities breadth requirement if they are not used to satisfy the English Composition requirement.
The composition requirement may also be satisfied by scoring 4 or 5 on the CEEB Advanced Placement Test in English or by passing the English 3 Proficiency Examination. Students scoring 660 or better on the CEEB English Achievement Test are eligible for this proficiency exam.
You should satisfy the composition requirement within the first three quarters of residence.

Transfer Students: If you have completed an English composition course graded Passed, you may take the English 3 Proficiency Examination by presenting a letter of authorization from the college to the Freshman Writing Program. If you have received a grade of C or better in a college composition course that has not satisfied the requirement, you may be eligible for the proficiency examination after a Freshman Writing Program interview. Eligible students must register for the examination in the Freshman Writing Program Office, 271 Kinsey Hall, before the first day of enrollment for the quarter.
If you have credit for 90 or more units and have not satisfied the requirement, you are expected to include an acceptable composition course on your Study List during your first quarter of residence in the college. If you are required to take English B to satisfy the Subject A requirement, you should, on completion of that requirement, take an acceptable composition course in your second quarter of residence.

English as a Second Language (ESL) Students: Students from abroad who have learned English as a foreign language and who were taught in a language other than English in secondary school may satisfy this requirement by (1) passing the English as a Second Language Placement Examination (ESLPE) or (2) completing English (ESL) 33C with a grade of C or better (C− or a Passed grade is not acceptable). If you do not meet the requirement by either of the above methods, you must take (in your first quarter of residence at UCLA) either English (ESL) 33A, 33B, or 33C, depending on your ESLPE results. You must proceed in the English (ESL) 33 series until you complete course 33C with a grade of C or better. All units apply toward graduation but cannot be applied toward breadth requirements.
Units which the Office of Undergraduate Admissions and Relations with Schools has evaluated as English composition, but which are not sufficiently advanced to satisfy the college requirement, may be applied on the Letters
and Science breadth requirement as humanities only if specifically approved by the college. Advanced Placement English with a grade of 3 has such approval and requires no petition. English (ESL) 33A, 33B, 33C, and advanced standing English for foreign students courses may not be applied toward the humanities breadth requirement.

General Education and Breadth Requirements

The college breadth requirements have been superseded by a new set of general education (GE) requirements effective Fall Quarter 1983. Students in the College of Letters and Science who completed fewer than 16 quarter units before Fall Quarter 1983 must meet the following general education requirements. Those who completed 16 or more units before Fall Quarter 1983 may meet either these requirements or any of the previous breadth plans for which they are eligible (see “Breadth Requirements” following this section). Effective Fall Quarter 1986, all entering students will be required to fulfill the general education requirements. For assistance in determining the set of requirements for which you will be held responsible, contact a college counselor.

I. General Education Requirements

The new general education requirements are intended to define, in a more structural way than the previous breadth requirements, a “core” of knowledge necessary to a liberal arts education. Although majors are classified in the same four divisions of the college as for breadth, GE requirements specify a limited number of courses within smaller subgroups. This arrangement is designed to provide a conceptual overview of core areas without a formal core curriculum.

The new requirements consist of two parts. You must (A) demonstrate basic proficiency in quantitative reasoning, foreign language, and English composition and (B) complete course requirements in each of the four divisions of the college: humanities, physical sciences, social sciences, and life sciences.

(A) Basic Proficiency Levels

Note: All courses taken to satisfy GE proficiency requirements must be completed with a grade of Passed or C or better.

(1) Quantitative Reasoning: May be satisfied by achieving an SAT mathematics score of 600 or above, a CEEB mathematics score of 550 or above, or by completing one of the following courses: Anthropology 186A; Computer Science 10C, 10F, or 10S; Economics 40; Mathematics 2 or any higher numbered course except 38A-38B and 104; Philosophy 31; Political Science 6; Program in Computing 10; Public Health 100A, 100B, 100C, 100D; or Sociology 18.

(2) Foreign Language: (This requirement becomes effective for students entering Fall Quarter 1986 and thereafter.) May be satisfied by passing college-level language instruction through level three or by achieving a score indicating competence equivalent to level three on the Educational Testing Service Advanced Placement English (AP) or UCLA departmental placement examination.

(3) English Composition: Same as the college English Composition requirement described above. Transfer students should consult the college concerning application of transfer courses toward these requirements and read individual course descriptions to avoid possible duplication. Local community college counselors have lists of courses applicable toward UCLA requirements.

(B) Course Requirements

As specified on the chart labeled “Courses to Fulfill GE Requirements” on the next page, you must pass four courses from the humanities (literature, philosophy, language and linguistics, culture and civilization, the arts), three courses in the physical sciences, four in the social sciences (two from historical analysis and two from social analysis), and three courses in the life sciences. In the humanities, at least one course must be from literature and no more than two may be from any single subgroup.

Courses required to satisfy the major or other courses taken in the major department may not be used to satisfy the general education requirements. However, courses outside the major which are required as preparation for a major may be used to satisfy these requirements.

Course Exemptions: Students majoring in the humanities are exempt from two courses, one of which is in their major subgroup. Students majoring in the physical sciences are exempt from two courses in the physical sciences group. Students in the social sciences are exempt from two courses in the subgroup of their major, and students in life sciences are exempt from two courses in the life sciences grouping. At least 14 courses (12, with exemptions) must be completed.

Advanced Placement Credit: For application of advanced placement (AP) credit on the general education requirements, see the chart later in this section or consult the College Counseling Service.

General Education Groupings by Major

For the purpose of these requirements, departmental and interdepartmental majors are classified in the divisions listed below. Not all courses within a department apply on GE requirements in the division of the major (e.g., psychology is listed as a life science; however, Psychology 10 appears as a social science under social analysis).

(A) Humanities

A1: Literature

African Languages

Arabic

Chinese

Classics

English

English/Greek

English/Latin

French

German

Greek

Hebrew

Italian (including Italian and Special Fields)

Japanese

Latin

Portuguese

Scandinavian Languages

Slavic Languages and Literatures

Spanish

World Arts and Cultures

A2: Philosophy

Philosophy

A3: Language and Linguistics

French and Linguistics

Linguistics (including all Linguistics and special fields majors)

Russian Linguistics

Spanish and Linguistics

A4: Culture and Civilization

Ancient Near Eastern Civilizations

Classical Civilization

Jewish Studies

Near Eastern Studies

Religion, Study of

Russian Civilization

(B) Physical Sciences

Applied Mathematics

Astronomy

Atmospheric Sciences

Biochemistry

Chemistry

Chemistry/Materials Science

Cybernetics

Economics/System Science

General Chemistry

General Physics

Geology (including all specialization options)

Geophysics (including all specialization options)

Mathematics

(continued on page 74)
Courses to Fulfill GE Requirements*

(A) Humanities
Four courses, with at least one from Group A1 and no more than two courses from any single group:

(1) Literature
- Classics 141, 142, 143, 144
- East Asian Languages and Cultures 140A, 140B, 140C, 141A, 141B
- English 10A, 10B, 10C, 70, 75, 85, 90, 100A, 100B, 100C, 100D, 102
- French 12, 114A, 114B, 114C, 144A, 144B, 144C
- German 101A, 101B, 101C
- Humanities 1A, 1B, 1C, 2A, 2B, 2C
- Italian 50A, 50B
- Portuguese 120A, 120B, 130A, 130B, 140A, 140B
- Russian 100, 119, 120, 125, 126

(2) Philosophy
- Philosophy 1, 2, 4, 5A, 6, 7, 8, 10, 21, 22

(3) Language and Linguistics
- Linguistics 1, 100

(4) Culture and Civilization
- Classics M70
- East Asian Languages and Cultures 40A, 40B, 42
- Folklore and Mythology 15, 101
- German 100A, 100B, 100C
- History M70
- Italian 42A, 42B
- Near Eastern Languages and Cultures: Berber 130, Iranian 169, 170, Jewish Studies 110, Turkic Languages 160
- Slavic Languages and Literatures: Slavic 99, Bulgarian 99, Russian 99, Romanian 99
- Spanish and Portuguese M42, M44

(B) Physical Sciences
Three courses from the following:
- Astronomy 3, 3H, 4, 81, 82
- Atmospheric Sciences 2, 3, 6
- Chemistry 2, 11A, 11B
- Earth and Space Sciences 1 or 100, 2, 3, 5, 9, 15
- Engineering 11
- Geography 1
- Mathematics 3A, 3B, 3C, 3E, 31A, 31B, 32A, 32B
- Physics 3A, 3B, 3C, 6A, 6B, 6C, 8A through 8E, 10, 11

(C) Social Sciences
Four courses, two from each group:

(1) Historical Analysis
- Classics 10, 20
- Economics 107
- History 1A, 1B, 1C, 2, 3A, 3B, 3C, 4, 6A, 6B, 6C, 7A, 7B, 8A, 8B, 8C, 9A, 9B, 9C, 9D, 10A, 10B
- Political Science 111A, 111B, 111C, 114A, 114B

(2) Social Analysis
- Anthropology 5 or 22, 6, 33
- Communication Studies 10
- Economics 1 and/or 2 or 100, 110
- Geography 3, 4
- Political Science 1, 20, 50
- Psychology 10
- Sociology 1

(D) Life Sciences
Three courses from the following:
- Anthropology 1 and/or 2 or 11, 126P
- Biology 2, 5, 6, 7, 8, 10, 13, 20, 25
- Earth and Space Sciences 115
- Geography 2, 5
- Kinesiology 12A, 12B, 13, 14
- Microbiology 6
- Psychology 15

Honors Collegium: Inquire at the Division of Honors (A311 Murphy Hall) for information on courses which satisfy any of the areas of the general education requirement.

*All students are required to fulfill either general education or breadth requirements, but not both. Refer to the box on page 72 to determine which of the sets of requirements you are required to fulfill.
Mathematics/Applied Science
Mathematics/Computer Science
Mathematics/System Science
Physics

(C) Social Sciences
C1: Historical Analysis
History
C2: Social Analysis
Afro-American Studies
Anthropology
Chicano Studies
Communication Studies
East Asian Studies
Economics (including all specialization options except Economics/System Science)
Geography
Geography/Ecosystems
Latin American Studies
Political Science
Sociology

(D) Life Sciences
Biology
Cognitive Science
Kinesiology
Microbiology
Psychobiology
Psychology
Psychology/Developmental Disabilities Immersion Program

II. Breadth Requirements
Under the Letters and Science breadth requirements, you must satisfactorily complete nine courses (36 units) distributed among the three divisions outside the division of your major, with at least two full courses (eight units) in each division. (See the chart labeled “Courses to Fulfill Breadth Requirements” on the next page.) Acceptability of courses to meet these requirements is subject to the following general conditions:

(1) All language courses level four or above (other than conversational courses) may be applied as humanities courses. Level one, two, and three courses may be applied provided you have completed the level four course in the same language. Breadth requirement credit for courses in languages not offered level four courses is contingent on the approval of the college. For other limitations, see “Credit Limitations” later in this section.

(2) The course used to satisfy the English Composition requirement may not be applied toward breadth requirements.

(3) Courses required to satisfy the major or other courses taken in the major department may not be applied toward breadth requirements. However, courses outside the division of the major which are required as preparation for that major may be applied. For information on satisfying breadth requirements if you are following a double major, see the section on “Double Majors” earlier in this chapter.

(4) Courses in other colleges and schools at UCLA may be used to satisfy breadth requirements if approved by the Letters and Science Executive Committee.

(5) Freshman and sophomore seminars taught in Letters and Science departments may be applicable. For students entering in Fall Quarter 1981 or later, a maximum of eight units of freshman and sophomore seminar credit may be applied toward breadth requirements according to quarterly determination by the college. Courses in the 300 and 400 series may not be applied; courses numbered 199 and in the 200 series may be applied only by petition approved by the college.

(6) Council on Educational Development (CED) courses are not applicable on breadth. Consult the college counselors regarding application of CED courses taken before Fall Quarter 1978.

Transfer students should consult the College Counseling Service concerning application of advanced standing courses on breadth requirements.

Breadth Requirement Groupings by Major

(A) Humanities
African Languages
Ancient Near Eastern Civilizations
Arabic
Chinese
Classical Civilization
Classics
English
English/Greek
English/Latin
French
French and Linguistics
German
Greek
Hebrew
Italian (including Italian and Special Fields)
Japanese
Jewish Studies
Latin
Linguistics (including all Linguistics and special fields majors)
Near Eastern Studies
Philosophy
Portuguese
Religion, Study of
Russian Civilization
Russian Linguistics
Scandinavian Languages
Slavic Languages and Literatures
Spanish
Spanish and Linguistics
World Arts and Cultures

(B) Physical Sciences
Applied Mathematics
Astronomy
Atmospheric Sciences
Biochemistry
Chemistry
Chemistry/Materials Science
Cybernetics
Economics/System Science
General Chemistry
General Physics
Geology (including all specialization options)
Geophysics (including all specialization options)
Mathematics
Mathematics/Applied Science
Mathematics/Computer Science
Mathematics/System Science
Physics

(C) Social Sciences
Afro-American Studies
Anthropology
Chicano Studies
Communication Studies
East Asian Studies
Economics (including all specialization options except Economics/System Science)
Geography
Geography/Ecosystems
Latin American Studies
History
Political Science
Sociology

(D) Life Sciences
Biology
Cognitive Science
Kinesiology
Microbiology
Psychobiology
Psychology
Psychology/Developmental Disabilities Immersion Program

Advanced Placement
You may fulfill a part of the college breadth requirements with credit allowed at the time of admission for College Entrance Examination Board (CEEB) Advanced Placement Tests with scores of 5, 4, or 3. You will receive Advanced Placement Test credit only if you have completed fewer than 36 quarter units at the time of the examination. See the chart on pages 76-77 for AP credit allowed.

Credit by Examination
Within the College of Letters and Science, 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 the Division of Honors.

You may petition for credit by examination for one course at a time. The examination for that course must be taken successfully before you may petition for credit by examination in another course. Petitions for credit by examination ($5 each) are available only through an appointment with a counselor in the Division of Honors. Approval is given or withheld by the dean of the Division of Honors who may limit the number of such petitions you present.
Courses to Fulfill Breadth Requirements*

(A) Humanities
Any of the following courses for which you are eligible:
- Classics
- Communication Studies 142, 175
- East Asian Languages and Cultures
- English (except 136A, 136B, 136C)
- Folklore and Mythology
- French
- Germanic Languages
- Humanities
- Indo-European Studies M150
- Italian
- Linguistics (except 100, 103, 170)
- Near Eastern Languages and Cultures
- Philosophy (except 128A, 128B, 134, 135)
- Slavic Languages and Literatures
- Spanish and Portuguese
- Speech
- Women's Studies M158

(Note: Foreign language conversation courses may be applied under the old requirements to Plan A breadth only.)

The following courses in the College of Fine Arts are also applicable:
- Dance 134A, 134B, 181A, 182A, 187A

(B) Physical Sciences
Any of the following courses for which you are eligible:
- Astronomy
- Atmospheric Sciences
- Computer Science 20
- Chemistry and Biochemistry
- Earth and Space Sciences (except 20 if used on life science, 115, M118)
- Economics 141, 144, 145, 146, 147A, 147B
- Engineering 11
- Geography 1, 100, 104, 105, 106
- History: either 3A or 3B if not applied on the social science breadth requirement (no more than one of History 3A, 3B, or Physics 10 may be applied toward the breadth requirement in the physical sciences)
- Mathematics (except A, 38A, 38B, 104)
- Philosophy 128A, 128B, 134, 135
- Physics

(C) Social Sciences
Any of the following courses for which you are eligible:
- Afro-American Studies 100B, 145, 197B
- Anthropology (except 1, 2, 11, 125A, 125B, 186A, 186B)
- Asian American Studies
- Communication Studies (except 142, 175)
- Economics (except 40, 141, 144, 145, 146, 147A, 147B)
- Geography (except 1, 2, 5, 6, 100, 104, 105, 106, 108, 109, 110, 112, 171)
- History (3A or 3B may be applied toward the social science or physical science breadth requirement, but not toward both; History 3C may be applied toward the social science or life science breadth requirement, but not toward both)
- Indo-European Studies 131, 132
- Linguistics 100, 103, 170
- Music 149
- Political Science
- Psychology (except 15, 41, 110, 111, 115, 116, 117, 118A through 118G, M119, 120, 121, M142
- Sociology (except 18)
- Women's Studies 100, M148

(D) Life Sciences
Any of the following courses for which you are eligible:
- Anthropology 1, 2, 11, 125A, 125B
- Biology (except 30)
- Earth and Space Sciences 15 and 20 (if not applied as physical science, 115, M118)
- Geography 2, 5, 108, 109, 110, 112
- History 3C (may be applied toward the social science or life science breadth requirement, but not toward both)
- Kinesiology (except physical education activities courses)
- Microbiology
- Psychology 15, 110, 111, 115, 116, 117, 118A through 118G, M119, 120, 121

*All students are required to fulfill either general education or breadth requirements, but not both. Refer to the box on page 72 to determine which of the sets of requirements you are required to fulfill.
Credit Limitations

Note: Transfer students with credit from other institutions (advanced standing credit) may obtain an evaluation from the Office of Undergraduate Admissions and Relations with Schools indicating the transferable units from their former institution(s); however, the following credit limitations may reduce the total number of transferred units which will apply toward the degree in the College of Letters and Science. Consult with a counselor in the College Counseling Service regarding these limitations.

The following credit limitations apply for all students enrolled in the college. In most cases units are not deducted until the final quarter before graduation. Consult a counselor in the College Counseling Service if you have questions.

Subject A

No degree credit will be granted for Subject A, whether completed at UCLA or another UC campus. Consult a college counselor regarding Subject A equivalent courses from other UC campuses.

Community College

After completing 105 quarter units (26⅔ courses) toward the degree in all institutions attended, you will be allowed no further unit credit for courses completed at a community college.

Physical Education

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

300- and 400-Level Courses

No more than two courses (eight 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 University Extension unless you have petitioned the college for approval before enrollment. Such petitions are rarely granted.

Performance Courses

No more than 12 units of music and/or dance performance courses (Dance 70 through 76B, 79A through 79Z, 171B through 176B, and Music 80 and 81) may be applied toward the bachelor's degree whether taken at UCLA or another institution. Letters and Science students electing these courses must enroll on a Passed/Not Passed basis only. The above music courses are limited to one per quarter. For further information on these limits, see "Passed/Not Passed Grades" in Chapter 4.

College Level Examination Program

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

Advanced Placement (AP) Tests

Advanced Placement (AP) Test credit will not be applied toward a degree unless you had less than 36 units of credit at the time of the examination(s).

ROTC Courses

No more than 24 units of credit in aerospace studies, military science, or naval science may be applied to the 180-unit minimum required for the degree.

Independent Study Courses

No more than two courses (eight units) of credit may be taken per quarter in special independent study courses. The total number of units allowed in such courses for a letter grade is 16; see specific restrictions under each departmental listing.

Chemistry 2

For students entering Fall Quarter 1978 or later, no unit credit will be granted toward the degree for Chemistry 2 if one year of high school chemistry was completed with a grade of C or better*. The maximum deduction will be four units.

Foreign Language

For students entering Fall Quarter 1978 or later, no unit credit will be granted toward the degree for foreign language courses equivalent to quarter level one and/or two if two years of the same language were completed in high school with grades of C or better*. The maximum deduction will be eight units.

*Note: Effective Fall Quarter 1984 and thereafter, units and grade points will be deducted at graduation for the duplicated chemistry and language courses specified above.

(continued on page 78)

Credit for Advanced Placement Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>UCLA Course Equivalents*</th>
<th>Credit Allowed on GE Requirements</th>
<th>Credit Allowed on Breadth Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>10 units</td>
<td>No application for art</td>
<td>10 units toward humanities</td>
</tr>
<tr>
<td>Art History</td>
<td></td>
<td></td>
<td>No application for art studio</td>
</tr>
<tr>
<td>Art Studio: General Portfolio or Drawing Portfolio</td>
<td>10 units for either general or drawing portfolio</td>
<td>Credit for Biology 2 (4 units)</td>
<td>Credit for Biology 2 (4 units) plus 6 units toward life science</td>
</tr>
<tr>
<td>Biology</td>
<td>Biology 2 (4 units) plus 6 unassigned units</td>
<td>No application for chemistry</td>
<td>10 units toward physical science</td>
</tr>
<tr>
<td>Chemistry</td>
<td>10 units</td>
<td>Satisfies quantitative reasoning requirement</td>
<td>No application for computer science</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Score 3, 4, or 5 — 5 units</td>
<td>Score 3 — Satisfies Subject A requirement</td>
<td>Score 3 — Satisfies Subject A requirement and 10 units toward humanities</td>
</tr>
<tr>
<td>English</td>
<td>Score 3 — Subject A, 10 unassigned units</td>
<td>Score 4 or 5 — Satisfies Subject A requirement</td>
<td>Score 4 — Satisfies Subject A requirement and English 3 plus 6 units toward humanities</td>
</tr>
<tr>
<td>Language and Composition or Composition and Literature**</td>
<td>Score 4 — Subject A, English 3 (10 units)</td>
<td>Score 4 or 5 — Satisfies Subject A requirement and English 3</td>
<td></td>
</tr>
</tbody>
</table>

Note: You may not repeat for units or grade points any AP test credit that has been given UCLA course number equivalency (e.g., History 7A-7B).

* All UCLA course equivalents consist of lower division advanced placement units.
** Students who take both tests will receive a maximum of ten units of credit.
<table>
<thead>
<tr>
<th>Test</th>
<th>UCLA Course Equivalents*</th>
<th>Credit Allowed on GE Requirements</th>
<th>Credit Allowed on Breadth Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (continued)</td>
<td>Score 5 — Subject A, English 3 and 4 (10 units)</td>
<td></td>
<td>Score 5 — Satisfies Subject A requirement and English 3 and 4 (6 units total toward humanities)</td>
</tr>
<tr>
<td>History, American</td>
<td>Score 3 — 10 units</td>
<td>Score 3 — No application</td>
<td>Score 3 — 10 units toward social science</td>
</tr>
<tr>
<td></td>
<td>Score 4 or 5 — History 7A-7B (10 units)</td>
<td>Score 4 or 5 — Credit for History 7A-7B</td>
<td>Score 4 or 5 — Credit for History 7A-7B (10 units total toward social science)</td>
</tr>
<tr>
<td></td>
<td>Score 3, 4, or 5 — Satisfies American History and Institutions requirement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History, European</td>
<td>History 1C (4 units) plus 6 units</td>
<td>Credit for History 1C (4 units)</td>
<td>Credit for History 1C (4 units) plus European history (6 units toward social science)</td>
</tr>
<tr>
<td>Language, French</td>
<td>Score 3 — French 4 (10 units total)</td>
<td>4 units toward language and linguistics requirement</td>
<td>10 units toward humanities</td>
</tr>
<tr>
<td>French Language</td>
<td>Score 4 — French 5 (10 units total)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Score 5 — French 6 (10 units total)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>French Literature</td>
<td>10 units</td>
<td>No application for French literature</td>
<td>10 units toward humanities</td>
</tr>
<tr>
<td>Language, German</td>
<td>Score 3 — German 3 (10 units)</td>
<td>Score 3 — No application</td>
<td>Score 3 — No application</td>
</tr>
<tr>
<td></td>
<td>Score 4 — German 4 (10 units)</td>
<td>Score 4 or 5 — 4 units toward language and linguistics requirement</td>
<td>Score 4 or 5 — 10 units toward humanities</td>
</tr>
<tr>
<td></td>
<td>Score 5 — German 5 (10 units)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language, Latin</td>
<td>Classics — Title (5 units)</td>
<td>No application for Latin</td>
<td>5 units toward humanities</td>
</tr>
<tr>
<td>Vergil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catullus/Horace</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language, Spanish</td>
<td>Score 3 — Spanish 4 (10 units)</td>
<td>4 units toward language and linguistics requirement</td>
<td>10 units toward humanities</td>
</tr>
<tr>
<td>Spanish Language</td>
<td>Score 4 or 5 — Spanish 5 (10 units total)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish Literature</td>
<td>10 units</td>
<td>No application for Spanish literature</td>
<td>10 units toward humanities</td>
</tr>
<tr>
<td>Mathematics (AB test)**</td>
<td>Mathematics 31A (5 units)</td>
<td>Credit for Mathematics 31A (5 units)</td>
<td>Credit for Mathematics 31A (5 units toward physical science)</td>
</tr>
<tr>
<td>Mathematics (BC test)**</td>
<td>Mathematics 31A, 31B (10 units)</td>
<td>Credit for Mathematics 31A, 31B (10 units total)</td>
<td>Credit for Mathematics 31A, 31B (10 units total toward physical science)</td>
</tr>
<tr>
<td>Music</td>
<td>10 units</td>
<td>No application for music</td>
<td>10 units toward humanities</td>
</tr>
<tr>
<td>Music Literature**</td>
<td>10 units</td>
<td>No application for music</td>
<td></td>
</tr>
<tr>
<td>Music Theory**</td>
<td>10 units</td>
<td>No application for music theory</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>No application for physics</td>
<td>No application for physics</td>
<td>10 units toward physical science</td>
</tr>
<tr>
<td>B Test **</td>
<td>10 units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C Test**</td>
<td>5 or 10 units</td>
<td></td>
<td>5 units for C1 and 5 units for C2 toward physical science</td>
</tr>
</tbody>
</table>

**Note:** You may not repeat for units or grade points any AP test credit that has been given UCLA course number equivalency (e.g., History 7A-7B).

* All UCLA course equivalents consist of lower division advanced placement units.

** Students who take both tests will receive a maximum of ten units of credit.
Honors Status
A student in the College of Letters and Science who has demonstrated superior academic achievement is eligible to apply for admission to Honors Status, which is recorded on the transcript. Admission may be granted by the Dean of the Division of Honors after completion of 12 or more graded units at UCLA with a cumulative grade-point average of no less than 3.5. Continued superior academic performance (a cumulative grade-point average of 3.5 or above) is required to remain in Honors Status. Apply at A311 Murphy Hall.

Students with Honors Status are usually eligible for admission to the honors programs offered by a number of the departments in the college, including honors sections of regular courses, honors seminars, honors thesis programs, and supplementary and advanced directed study. Honors Status students are also eligible for research funding through the Division of Honors. For details on these programs, consult the Division of Honors or your major department.

Honors with the Bachelor's Degree
Honors with the Bachelor's Degree are awarded according to your overall grade-point average at the beginning of the last quarter of academic work or, if not then eligible, at graduation. To be eligible, you must have completed 90 or more units for a letter grade at the University of California. Coursework taken on the Education Abroad Program may not be applied toward Honors with the Bachelor's Degree. The levels of honors and the requirements for each level are: Cum laude, an overall average of 3.5; Magna cum laude, 3.65; Summa cum laude, 3.85. Marginal cases will be decided by the Committee on Honors, which grants petitions for waiver of these requirements only in extraordinary cases.

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

Departmental Scholar Program
Departments may nominate exceptionally promising undergraduate students (juniors and seniors) as 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 for the honors program in the college. You must also have at least one quarter's coursework remaining at UCLA. To obtain both the bachelor's and master's degrees you 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. If you are interested in becoming a Departmental Scholar, consult your department well in advance of application dates for graduate admission (see the Calendar at the beginning of this catalog).

The Honors Collegium
The Honors Collegium is an unusual educational program designed primarily for students in their freshman and sophomore years. Entering freshmen with at least a 560 SAT verbal score who have satisfied the Subject A/English B requirement and continuing students with a UCLA grade-point average of 3.0 who have satisfied the Subject A/English B requirement may enroll in specially devised Honors Collegium courses with an interdisciplinary emphasis. The Collegium guarantees small classes and individual attention. It encourages animated discussion among students, as well as between students and professors. And it seeks to provoke scholarly exchange across the major disciplines in the University. Core courses are offered regularly to provide a foundation in the physical and life sciences, humanities, and social sciences. A wide selection of special courses, varied each year, completes the curriculum.

Each Collegium course is staffed by a director who is distinguished in teaching and scholarship, by a variable number of visiting lecturers, and by additional specialists in their fields. Collegium courses satisfy many general education or breadth requirements and serve as preparation for numerous majors in the College of Letters and Science. Counselors are available in the Division of Honors, A311 Murphy Hall, to advise and help you plan an integrated academic program.

In 1985-86 the Honors Collegium will offer the following one-quarter courses carrying from four to eight units of credit each. Those courses marked "CORE" are part of the core curriculum; students are encouraged to take core courses in sequence.

Fall Quarter
HC 40 — "Origin and Evolution of the Solar System and the Earth" (4 units), CORE, Mr. Ernst and Mr. Newman, Earth and Space Sciences
HC 48 — "The Evolution of Evolutionary Theory and the Rise of Scientific Creationism" (4 units), Mr. Russell, Anthropology

Honors
College Honors
The Certificate of College Honors is the highest academic recognition the College of Letters and Science confers on its undergraduates. The College Honors program, under the direction of the Dean of the Division of Honors, provides the exceptional UCLA undergraduate an opportunity to pursue a high quality, stimulating academic course of study.

College Honors will be awarded by the Provost of the College of Letters and Science to graduating seniors who have completed 44 units of honors-designated courses as approved by the Dean of the Division of Honors. Such courses include, among others, courses in the Honors Collegium, honors sections of regular courses, honors-contract courses, Professional Schools Seminars, Senior Seminars, Graduate Colloquia and Seminars, and research and thesis preparation courses.

Students in the College Honors program enjoy graduate library privileges at the University Research Library, preferential preregistration in classes, eligibility for honors research awards, and special counseling within the Division of Honors. College Honors will be recorded on the transcript and a Certificate of College Honors awarded at graduation.

Entering freshmen with both an exceptional grade-point average (3.5 or above) and SAT scores (a combined 1300 score) are invited by the Dean of the Division of Honors, with a cumulative grade-point average of no less than 3.5 or above are encouraged to apply. Once admitted, you must maintain a cumulative grade-point average of 3.5 or above and must meet College Honors minimum progress requirements.

You may apply for admission at A311 Murphy Hall. For further information, attend one of the group meetings offered regularly by the Division of Honors.

Education Abroad Program
Students participating in the Education Abroad Program may receive a maximum of 48 units of credit toward the degree in addition to the eight units maximum allowable for the Intensive Language Program.

Statistics
No credit will be allowed for more than one lower division course in statistics or for more than one sequence of such courses whether taken at UCLA or another institution.
HC 50 — “Greek Views of Humanity” (4 units), CORE, Ms. Bergren, Classics
HC 60* — “Freedom and Control: An Introduction to Social Science” (8 units), CORE, Mr. Parducci, Psychology
HC 62 — “Community and Self-Interest in the History of American Culture” (4 units), CORE, Ms. Appleby, History
HC 68 — “History of Social Thought” (4 units), Mr. Prager, Sociology
HC 190A — “Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences” (4 units), Mr. Intrittager, Economics
HC 190B — “Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences” (4 units), Mr. MacQueen, Management

Division of Honors Office
The Division of Honors, located in A311 Murphy Hall (825-1553, 825-3786), provides academic counseling and services for College Honors and Honors Status students, Departmental Scholars, students pursuing individual majors, and students participating in the High School Scholars program. The division also provides counseling for Regents Scholars, National Merit Scholars, and Alumni Scholars during their first year of attendance. Services offered include academic counseling, degree checks, assistance with petitions, and, for College Honors students only, letters of recommendation to graduate and professional schools.

A variety of scholarships and awards for qualified incoming freshmen, continuing students, and graduating seniors are also available.

In addition, the Division of Honors administers the UCLA Debate Union, the Student Volunteer Research Program, the Summer Research Stipend Program, and the Division of Honors Undergraduate Mini-Grant Program.

Preparation for a Professional School

The programs that follow are not degree programs in the College of Letters and Science. The purpose of each grouping of courses is to assist you if you plan to apply to a professional school at the end of your sophomore (90 units) or junior (135 units) year. If you are not accepted by a professional school, you must declare a major in the College of Letters and Science and complete the requirements for a degree without exceeding 208 units.

New students entering these curricula are listed as "undeclared" majors and are advised in the college unless an adviser is named below in the presentation of the curriculum.

Prehealth Care Advising Office
Information and counseling on preparing for health care professional schools and assistance in filing an application are available through the Prehealth Care Advising Office, College of Letters and Science. Open counseling sessions are held weekly for premeds, predentists, prenurses, and other prehealth students (time and place are announced in the "What's Bruin" section of the Daily Bruin and are posted outside A328 Murphy Hall, 825-1817). Application blanks for MCAS, MCAT, DAT, etc., may also be obtained from this office. Students in the Division of Honors can make counseling appointments in A311 Murphy Hall.

Predental Curriculum: Three Years
The College of Letters and Science offers a predental curriculum designed to fulfill the basic educational requirements for admission to several dental schools and the general educational requirements of the College of Letters and Science. You should determine and satisfy the specific requirements of the dental schools to which you wish to apply.

To be adequately prepared for the predental curriculum, you should take the following subjects in high school: English, history, mathematics (algebra, geometry, and trigonometry), chemistry, physics, and foreign language.

The 135 quarter units of work required for admission to the UCLA School of Dentistry in this curriculum include the following:

General University Requirements: (1) Subject A; (2) American History and Institutions.

Specific UCLA School of Dentistry Requirements: (1) English 3 and 4; (2) Chemistry 11A, 11B/11BL, 11C/11CL, 21, 23, 25, Physics 3A, 3B, and 3C, or 6A, 6B, and 6C, or 8A, 8B, and 8C, Biology 5, 7, 8, 8L, Psychology 10.

Social sciences and humanities courses such as anthropology, history, economics, psychology, political science, appreciation of art and/or music, and philosophy should also be included.

For further information, consult Admissions Requirements of U.S. and Canadian Dental Schools, AADS, 1625 Massachusetts Avenue NW, Washington, DC 20036. Sample copies of the Dental Admission Test (DAT) are available in the Prehealth Care Advising Office; open counseling sessions are held weekly (call 825-1817 for details).

Predental Hygiene Curriculum: Two Years*
The University offers a four-year program in dental hygiene leading to the degree of Bachelor of Science. The first two years may be taken at Los Angeles; the last two years must be taken at the UC School of Dentistry in San Francisco. Admission to UCSF is by competitive application.

The 90 quarter units of work required for admission to the School of Dentistry in San Francisco include specific requirements as follows (the courses referred to are UCLA courses which fulfill the requirements):

Curriculum Requirements: (1) Subject A; (2) American History and Institutions (the examination in American History and Institutions includes an English seminar and carry one-half credit toward satisfaction of the English Composition requirement.

*The UC School of Dentistry reserves the right to limit enrollment if applications exceed available facilities and to require interviews and aptitude tests if they are necessary in the selection of the class. For further information, see the Announcement of the School of Dentistry, UC San Francisco.
may be taken at the UC School of Dentistry, but it is preferable to satisfy the requirements in the preprofessional program; (3) one year of English which includes English 3; (4) Chemistry 11A, 11B/11BL, 21, 23, 25; (5) Biology 5, 5L, 7, 8, 8L; (6) Psychology 10 and one additional psychology course; (7) 16 units in social sciences and humanities, including foreign language (one course in speech and one in sociology are required). Courses in anatomy and physiology are strongly recommended.

Open counseling sessions are held weekly; call 825-1817 for details.

Premedical Studies: Four Years

If you intend to apply for admission to a medical school and wish to complete the requirements for a bachelor's degree before such admission, you should select a major within the College of Letters and Science. Medical schools have no preference as to major. You should choose the major in which you are most interested and can do best. In addition to fulfilling the requirements of the selected major, you should satisfy the specific requirements for medical schools to which you expect to apply.

High school preparation for premedical studies at the University should include English, three units; United States history, one unit; mathematics, three and one-half units; chemistry, one unit; physics, one unit; biology, one unit; foreign language (preferably French or German), two units. It is desirable that a course in freehand drawing be taken in high school.

The following courses are usually required for admission to the UCLA Medical School: (1) 12 quarter units of English, including at least one course in English composition; (2) Chemistry 11A, 11B/11BL, 11C/11CL, 21, 23, 25; (3) Physics 3A, 3B, and 3C, or 6A, 6B, and 6C, or 8A, 8B, and 8C; (4) two years of college biology to include the study of cellular, molecular, developmental, and genetic biology, including at least one year of upper division courses. Required lower division courses are Biology 5, 5L, 7, 8, 8L; suggested upper division courses are selected from Biology 110, 138, 144, CM156, 166. Courses in physical chemistry and calculus are strongly recommended. Course requirements for admission to other University of California medical schools vary slightly.

Because requirements for admission to medical schools outside the University of California also vary somewhat, you should consult the following publications: Medical School Admission Requirements, USA and Canada, Association of American Medical Colleges, 1 Dupont Circle NW, Washington, DC 20036; The Education of Osteopathic Physicians, AACOM, 4720 Montgomery Lane, Suite 609, Washington, DC 20014; and The New MCAT Student Manual (also an AAMC publication available at the above AAMC address). Open counseling sessions are held weekly; call 825-1817 for details.

Prenursing Curriculum: Two Years

The University offers a four-year course leading to the Bachelor of Science degree in Nursing. The prenursing curriculum in the College of Letters and Science is designed to prepare you for the program in the School of Nursing. You should apply to the School of Nursing when you have completed or have in progress 84 quarter credits of liberal arts courses with a grade-point average of at least 2.8. Since you must apply during the Fall Quarter of the year prior to the year in which you wish to be enrolled, you must present your proposed curriculum for the remaining quarters.

Because enrollment in the UCLA School of Nursing is limited, you should become familiar with the admission requirements of other nursing programs as early as possible. Contact schools of nursing directly and attend open counseling sessions in UCLA's School of Nursing (times are posted in the Office of Student Affairs, 2-200 Building) and those given by the Prehealth Care Advising Office (posted outside A328 Murphy Hall, 825-1817).

New students admitted to the college in this curriculum are counseled in the college as "undeclared" majors but may seek additional advisement during posted weekly open counseling sessions. Students in the college who do not transfer to the School of Nursing must declare a major and be able to complete all degree requirements within 208 units.

Prenursing Requirements for the UCLA School of Nursing:

(1) Anthropology 5; (2) Biology 5, 7; (3) Chemistry 11A, 15, 15L; (4) English 3; (5) Kinesiology 13; (6) Microbiology 10; (7) Physics 10 or one year of high school physics; (8) Psychology 10, 15; (9) Public Health 161; (10) Sociology 1; (11) recommended electives in the social and biological sciences. All required prenursing courses must be completed for a letter grade.

Preoptometry Curriculum: Three Years

A three-year program designed to prepare you for admission to optometric schools may be completed in the College of Letters and Science. If you are planning to transfer to the School of Optometry at Berkeley, you should contact Assistant Dean Carter of the College of Letters and Science. If taken elsewhere, the courses elected must be equivalent to those offered at the University. To complete preoptometric studies in the minimum time, you should take elementary chemistry, trigonometry, and a full year of intermediate algebra in high school.*

Curriculum Requirements (First Year): (1) Subject A; (2) English 3, 4; (3) Chemistry 11A, 11B/11BL, 11C/11CL; (4) trigonometry and intermediate algebra (if not completed in high school); (5) 26 quarter units of electives selected from courses in foreign language, social sciences, and humanities (within the two-year preparation).

Specific UCB School of Optometry Requirements:

(1) English 3, 4; (2) Chemistry 11A, 11B/11BL, 11C/11CL, 21; (3) Physics 6A, 6B, and 6C, or 8A, 8B, and 8C; (4) Biology 5, 5L, 7, 8, 8L; (5) Psychology 10; (6) Mathematics 3A, 3B, and 3C, or 31A, 31B, and 50; (7) Microbiology 10; (8) Kinesiology 12A, 12B, 13. Recommended: two upper division courses in the biological sciences, preferably in neuroanatomy and neurophysiology.

The balance of the 135 quarter units required for admission may be selected from the social sciences, foreign languages, and the humanities.

For further information, obtain the booklet Information for Applicants to Schools and Colleges of Optometry from the American Optometric Association, 243 Lindbergh Boulevard, St. Louis, MO 63141. Open counseling sessions are held weekly; call 825-1817 for details.

Prepharmacy Curriculum: Two Years

The School of Pharmacy on the San Francisco campus of the University offers a four-year curriculum leading to the degree of Doctor of Pharmacy. To be admitted to this curriculum you must have met all requirements for admission to the University and have completed, with an average grade of C (2.0) or better, at least 90 quarter units of the program below. Students taking prepharmacy work at the University of California are normally enrolled in the College of Letters and Science. If taken elsewhere, the courses elected must be equivalent to those offered at the University. To complete prepharmacy studies in the minimum time, you should take elementary chemistry, trigonometry, and a full year of intermediate algebra in high school.*

Curriculum Requirements (First Year): (1) Subject A; (2) English 3, 4; (3) Chemistry 11A, 11B/11BL, 11C/11CL; (4) trigonometry and intermediate algebra (if not completed in high school); (5) 26 quarter units of electives selected from courses in foreign language, social sciences, and humanities (within the two-year preparation).

Curriculum Requirements (Second Year): (1) Biology 5, 7, 8, 8L; (2) Physics 3A, 3B, and 3C, or 6A, 6B, and 6C, or 8A, 8B, and 8C; (3) Mathematics 3A and 3B, or 31A and 31B; (4) Chemistry 21, 23; (5) American History and Institutions.

*Students who have completed the two-year prepharmacy curriculum at Los Angeles cannot be assured of admission to the School of Pharmacy on the San Francisco campus. A personal interview may be required. Applicants should contact the school in early fall of the year preceding the September of proposed admission. Contact the Office of Student Affairs, School of Pharmacy. Applications may be obtained from the Office of the Director of Admissions, University of California Medical Center, San Francisco, CA 94122, (415) 666-2730. For further information, see the announcement of the School of Pharmacy, San Francisco, which may be obtained from the Dean, School of Pharmacy, University of California Medical Center, San Francisco, CA 94122.
Prephysical Therapy Curriculum: Three or Four Years
Students who intend to apply for admission to a physical therapy school should select a major (kinesiology and psychology are commonly selected) and complete the following prerequisite courses: Kinesiology 12A, 12B, and 13 or 14; Biology 5, 7; Chemistry 11A, 11B/11BL, 15, 15L; Physics 3A, 3B, 3C; Psychology 10, 115, 127, 130. Recommended: one course in statistics and one in computing. The prerequisite courses should be taken for a letter grade; GPAs for these courses should not be lower than 3.0, with no grade lower than a C.

Information on physical therapy programs in California may be obtained from the Student Affairs Office in the Department of Kinesiology, 2834 Slichter Hall (825-3891). You should write each school early in your sophomore year for specific admission requirements and application deadlines. Information concerning out-of-state programs may be obtained from the American Physical Therapy Association, 1156 15th St. NW, Washington, DC 20005.

Prepublic Health Studies
The professional and academic fields of public health need individuals from many disciplines. Candidates for graduate study may come from a wide variety of academic backgrounds and training, including mathematics and the physical, biological, and social sciences. Preparation typically includes a minimum of two courses each in mathematics, biological sciences, and social sciences, and one course in physical sciences.

Interested students and those who wish to apply to the UCLA School of Public Health should review the school's announcement booklet for additional requirements or recommendations for entry into the various programs of study.

Prelaw Studies
Law schools have no preference with regard to specific majors or particular courses. Admission to law school is based on the quality of your academic work, LSAT scores, and other qualities as reflected in letters of recommendation, in the written application, and in interviews. The College of Letters and Science offers advising on preparing for and applying to law schools through weekly drop-in counseling sessions. For the time and place of the drop-in sessions, see the "What's Bruin" section of the Daily Bruin or call 825-1965. Students in the Division of Honors can make counseling appointments in A311 Murphy Hall.

Graduate Study
The College of Letters and Science provides graduate students virtually unlimited opportunities for academic pursuit, faculty-sponsored research, and fieldwork relative to specific programs and career goals.

With Graduate Division approval and subject to University minimum requirements, each department sets its own standards for admission and other requirements for the award of the master's and doctoral degrees. See the departmental listings which follow for specific requirements and procedures.

African Area Studies (Interdepartmental)
10244 Bunche Hall, 825-3686

Professors
Richard L. Abel, LL.B., Ph.D. (Law)
Edward A. Alpers, Ph.D. (History)
Robert B. Edgerton, Ph.D. (Anthropology)
Christopher Ehrat, Ph.D. (History)
Hassan el Nouty, Docteur es Lettres (French)
John Friedmann, Ph.D. (Architecture and Urban Planning)
Victoria A. Fromkin, Ph.D. (Linguistics)
Edward Gonzalez, Ph.D. (Political Science)
Peter B. Hammond, Ph.D. (Anthropology)
John N. Hawkins, Ph.D. (Education)
Richard C. Hawkins, M.A. (Theater Arts)
Derrick B. Jelliffe, M.D., in Residence (Public Health)
Frederick C. Kintzer, Ed.D. (Education)
Mazizi R. Kunane, M.A. (Linguistics)
Peter Ladefoged, Ph.D. (Linguistics)
Michael F. Lotchie, Ph.D. (Political Science)
Jacques Maquet, Ph.D. (Anthropology)
Peter Marris, B.A. (Architecture and Urban Planning)
Henry W. McGee, Jr., J.D., LL.M. (Law)
Claudia Mitchell-Kernan, Ph.D. (Anthropology)
Alfred K. Neumann, M.D. (Public Health)
Charlotte G. Neumann, M.D. (Public Health)
Boniface I. Obiche, D.Phil. (History)
Antony R. Orme, Ph.D. (Geography)
Merrick Posansky, Ph.D. (History and Anthropology)
John F. Povey, Ph.D. (English as a Second Language)
Georges Sabagh, Ph.D. (Sociology)
Russell G. Schuh, Ph.D. (Linguistics and African Languages)
Richard L. Sklar, Ph.D. (Political Science)
Allegre Snyder, M.A. (Dance)

For additional information, see the Law School Admission Bulletin within the "Law School Admission Service Packet" (available at the Admissions Office, UCLA Law School) and The Prelaw Handbook (available at local bookstores).

Edward W. Soja, Ph.D. (Architecture and Urban Planning)
Harimut Walter, Ph.D. (Geography)
Walter R. Goldschmidt, Ph.D., Emeritus (Anthropology)
Hilda Kuper, Ph.D., Emeritus (Anthropology)
Leo J. Kuper, Ph.D., Emeritus (Sociology)
Wolf Leslau, Docteur es Lettres, Emeritus (Hebrew and Semitic Languages)
Benjamin E. Thomas, Ph.D., Emeritus (Geography)

Associate Professors
Teshome H. Gabriel, Ph.D. (Theater Arts), Chair
Gerry A. Hale, Ph.D. (Geography)
Thomas J. Hinnebusch, Ph.D. (Linguistics and African Languages)
Cal E. Kennedy, Ph.D. (Anthropology)
Robert S. Kiramer, Ph.D. (Germanic Languages)
Dwight Read, Ph.D. (Anthropology)
Arnold Rubin, Ph.D. (Art History)
Hans Schönhammer, D.B.A. (Management)
Nathan Shapiro, Dottore in Architettura (Design)

Adjunct Professor
Joseph J. Lauer, Ph.D. (Library Science)

Adjunct and Visiting Lecturers
Donald J. Cosentino, Ph.D., Adjunct (Polfkore and Mythology)
John A. Distelano, Ph.D., Adjunct (History)
Patrice Jelliffe, R.N., M.P.H., Adjunct (Public Health)
Kobla Ladzekpo, B.F.A., Visting (Music)

Scope and Objectives
The basic objective of the African Area 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 not only the social sciences and humanities, but increasingly in the professional fields as well. The Master of Arts is not a professional degree, but students are encouraged to enroll in courses in the several professional schools on campus. Articulated degree programs are also offered.

Academic flexibility draws many students to the program. Because there are more than 65 faculty members on campus with African interest and experience in approximately 20 different disciplines, students have multiple options to design individual programs.

According to a recent survey, 37 percent of the program's graduates are continuing study at the postgraduate level, 25 percent are employed in higher education, and 24 percent work with international or foreign organizations in 20 countries.
Master of Arts Degree

Admission
In addition to the University minimum requirements, applicants are required to (1) take the Graduate Record Examination (GRE), (2) submit three letters of recommendation from academic referees, one of which may be from an employer if the applicant has been away from school for some time, (3) submit a sample research project as evidence of serious scholarly potential, and (4) present a resume describing both academic and professional experience.

In addition to meeting the requirements of the Graduate Division, you must have adequate preparation in undergraduate fields related to the program. Required preparation for the M.A. degree in African Area Studies is a Bachelor of Arts in the social sciences or arts and humanities.

Major Fields or Subdisciplines
Studies are concentrated in a major and minor discipline in the social sciences, arts and humanities, or professional schools. For more information and a brochure describing the program, contact the Assistant Graduate Adviser, African Studies Center, 10244 Bunche Hall, UCLA, Los Angeles, CA 90024.

Foreign Language Requirement
You are required to satisfy the language requirement in one of the following ways: (1) take three courses (12 units) in an African language with an average grade of B or better (these courses may not be applied toward the nine courses required for the degree); (2) pass a Linguistics Department examination in an African language not regularly offered; (3) prove that you are a native speaker of an African language; (4) prove that you have a Foreign Service Institute rating of 3 or above in an African language.

Course Requirements
A minimum of nine courses are required for the M.A., at least five of which must be at the graduate level. The courses must be distributed between disciplines as follows: (1) major discipline — a minimum of five courses, of which three must be at the graduate level. Sociology and anthropology may be taken as a combined major. Other combined majors must be approved by the graduate adviser; (2) minor discipline — a minimum of three courses, of which two must be at the graduate level; (3) third discipline — a course on Africa, preferably of the survey or methodology type, or the yearly colloquium sponsored by the African Studies Center. In addition, African Area Studies M229B is strongly recommended for all students in the program.

No more than one course graded on an S/U basis may be applied toward the minimum of nine courses required for the degree, except by consent of the graduate adviser. One course in the 500 series may be applied toward the total course requirement and toward the minimum graduate course requirement. By consent of the graduate adviser, another 500-level course may be allowed but may not be applied toward the minimum graduate course requirement.

Thesis Plan
The program normally requires a written comprehensive examination for the M.A. degree. In exceptional cases, and with the consent of the graduate adviser, a thesis may be substituted for the comprehensive examination. If you wish to follow the thesis plan, you should select, in consultation with the graduate adviser, a faculty committee to supervise your thesis. The thesis must reflect both the major and minor areas of emphasis. Normally the thesis should be submitted to the committee at the beginning of your fourth quarter in residence and should be approved before the end of that quarter. If the committee does not approve the thesis, you will have failed the requirement and will not be allowed to resubmit the thesis.

Comprehensive Examination Plan
If you select the comprehensive examination plan, you will be required to take a written examination administered by a three-person committee. It is your responsibility to make arrangements for this examination with faculty members in appropriate departments. Exceptions will be granted only by consent of the graduate adviser. The examination will normally be three hours in length.

An oral examination may be held at the discretion of the examining committee after it has read the written examination. If you fail the comprehensive examination, you may retake it only once with the consent of the graduate adviser.

Minor Field Certification: To effectively demonstrate competence in your minor field, you must successfully complete the three required courses with grades of B or better. In individual cases, if competence is not demonstrated by the coursework, a question on the minor field will be included in the comprehensive examination.

African Development Studies within the M.A. in African Area Studies
Students interested in an interdisciplinary program in African development studies within the existing master’s program should consult the graduate adviser. Coursework focuses on planning and development.

Cooperative Degree Programs
In the articulated degree programs described below, no course may be used for credit toward more than one degree. Thus, courses that have been applied toward the completion of the M.A. degree in African Area Studies may not also be applied toward any other degree.

For more information on any of the cooperative degree programs, contact the Graduate Adviser or Assistant Graduate Adviser, M.A. Program in African Area Studies.

M.F.A./M.A.-African Area Studies
The African Area Studies Program and the Motion Picture/Television Division of the Department of Theater Arts have an articulated degree program which allows students to combine study for the M.A. in African Area Studies and the M.F.A., with a specialization in motion picture/television. Additional information is available from Teshome Gabriel, Graduate Adviser, African Area Studies Program, and the Graduate Adviser, Graduate Student Affairs Office, Motion Picture/Television Division, UCLA Theater Arts Department.

M.P.H./M.A.-African Area Studies
The African Area Studies Program and the School of Public Health have an articulated degree program whereby you can work sequentially for the master’s degree in African area studies and a master’s degree in public health. By planning the major field emphasis in public health while working toward the M.A. in African Area Studies, it may be possible to shorten the amount of time it would normally take to complete both degrees. Potential applicants may also contact the Office of Student Affairs, UCLA School of Public Health.

English Language Teaching and Research
If you wish to prepare for English language teaching and research, you have two options: (1) selected Africa-related courses in English as a Second Language may be selected as a major or minor field for the M.A. degree or (2) for more extensive study, the M.A. degree can be combined with the postgraduate certificate in TESL by taking additional specified courses.

Graduate Courses
M229B. Africana Bibliography and Research Methods. (Same as Library and Information Science M229B.) Problems and techniques of research methodologies related to Africana studies. Emphasis on relevant basic and specialized reference materials, using the full range of available information resources, including library collections of books, serials, and computerized data bases. Mr. Lauer 375. Teaching Apprenticeship Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.
African Area Studies Course List

All courses are not offered every academic year. You should verify courses with the respective departments.

African Languages (Linguistics) 1A-1B-1C. Elementary Swahili
2A-2B-2C. Intermediate Swahili
7A-7B-7C. Elementary Zulu
8A-8B-8C. Intermediate Zulu
11A-11B-11C. Elementary Yoruba
31A-31B-31C. Elementary Bambara
41A-41B-41C. Elementary Hausa
42A-42B-42C. Intermediate Hausa
103A-103B-103C. Advanced Swahili
143A-143B-143C. Advanced Hausa
150A-150B. African Literature in English Translation
190. Survey of African Languages
199. Special Studies in African Languages
270. Seminar in African Literature

Anthropology 112. Old Stone Age Archaeology
M115S. Historical Archaeology
116A. 116B. Museum Studies
121A. Fossil Man and His Culture
121B. The Australopithecines
121C. Evolution of the Genus Homo
130P. Social and Psychological Aspects of Myth and Ritual
133R. Aesthetic Anthropology
135Q. The Individual in Culture
137. Ethnography on Film
152P. Comparative Systems of Social Inequality
155. Illnesses in Non-Western Societies
156. Comparative Religion
158. Hunting and Gathering Societies
160. Introduction to Social Action Anthropology
161. Development Anthropology
165. Demographic Problems in Nonindustrial Societies
M116. Health in Culture and Society
171. Civilization of Sub-Saharan Africa
212P. Selected Topics in Hunter-Gatherer Archaeology
221A-221B. Fossil Evidence for Human Evolution
230Q. Cultural Anthropology
233P. Symbolic Anthropology
233Q. Aesthetic Anthropology
239P. Selected Topics in Field Training in Ethnography
M247A. Ethnographic Film
250. Social Anthropology
252P. Social Inequality
254. Kinship
255. Comparative Political Institutions
M262P. Culture and Human Reproduction
M263. Medical Anthropology
M266. Medical Anthropology in Public Health
M267B-M267C. Ethnographic Film Direction
271. African Cultures
290. Anthropology Theory

Architecture and Urban Planning 210A. A History of Planning Thought since 1800
210B. Colloquium in Planning Theory
217A-217B. Comprehensive Planning Project
232A. Introduction to Regional Planning: The Evolution of Regional Planning Doctrines
232B. Spatial Planning: Regional and International Development
233. The Political Economy of Urbanization
235A-235B. Urbanization and Rural Development in Third World Countries
236A. Urban and Regional Economic Development I
253. Social Theory for Planners
268. Advanced Seminar in Natural Environment and Resources
269. Special Topics in Natural Environment and Resources
279A. Housing for Developing Countries

Art History (Art, Design, and Art History) 55. Africa, Oceania, and Native America
101A, 101B, 101C. Egyptian Art and Archaeology
118C. The Arts of Sub-Saharan Africa
C119A. Advanced Studies in African Art: Western Africa
C119B. Advanced Studies in African Art: Central Africa
210. Historiography of Art History
213A-213B. Selected Problems of Underdeveloped History
216A. Advanced Studies in African Art: Western Africa
216B. Advanced Studies in African Art: Central Africa
219C. African Art
220. Oceanic, Pre-Columbian, African, and Native North American Art

Berber (Near Eastern Languages) 101A-101B-101C. Elementary Berber
102A-102B-102C. Advanced Berber
130. The Berbers

Dance 172B. Dance of Ghana
182A. Dance Cultures of Africa

Dutch and Afrikaans (Germanic Languages) 105A. Elementary Afrikaans
105B. Intermediate Afrikaans
112. Dutch, Flemish, Afrikaans Literature in Translation

Education 204C. Education and National Development
238. Cross-National Analysis of Higher Education
253B. Seminar: African Education
253F. Seminar: Education in Revolutionary Societies
261D. Seminar: The Community College

English 114. World Literatures in English
M261. Studies in African Literature in English

English (ESL) 109J. Introduction to Literature for ESL Students
109K. Literature in the ESL Context
220K. Materials Development for Language Teaching
221K. Media for Language Teaching
223K. Role of English as a Second Language in Bilingual Education
245K. Language Policy in Developing Countries
M295K. Studies in African Literature in English

Folklore and Mythology M154A-M154B. The Afro-American Musical Heritage
M155. Oral Traditions in Africa
M235. African Myth and Mythology

French 221A. Introduction to the Study of the French-African Literatures
221B. French-African Literature of Madagascar and Bantu Africa

Geography 101. Coastal Geomorphology
108. World Vegetation
109. Ecology of Vegetation
112. Animal Geography: Biophysical Aspects
117. Animal Geography: Cultural Aspects
118. Medical Geography
122. Man and Environment in Africa
126. The World’s Ecosystems: Problems and Issues
132. Cultural Geography of the Premodern World
133. Cultural Geography of the Modern World
169. The Earth from Above

188. Northern Africa
189. Middle and Southern Africa
202. Fluvial Geomorphology Seminar
203. Glacial Geomorphology Seminar
212. Advanced Biogeography: Animals
229. Seminar: Man and Environment
232. Advanced Cultural Geography
233. Seminar: Cultural Geography
242. Advanced Population Geography
268. Remote Sensing of Environment

Geography 232B. Fossil Evidence for Human Evolution
213A-213B. Selected Problems of Underdeveloped History
216A. Advanced Studies in African Art: Western Africa
216B. Advanced Studies in African Art: Central Africa
219C. African Art
220. Oceanic, Pre-Columbian, African, and Native North American Art

Economics 110. Economic Problems of Underdeveloped Countries
111. Theories of Economic Growth and Development
112. Policies for Economic Development
211. Economic Development
213A-213B. Selected Problems of Underdeveloped Areas

Education 204C. Education and National Development
238. Cross-National Analysis of Higher Education
253B. Seminar: African Education

Music 81E. Music and Dance of Ghana
91E. Music and Dance of Ghana
140B. Musical Cultures of the World
143A-143B. Music of Africa
M154A-M154B. The Afro-American Musical Heritage
157. Music of Brazil

Public Health 112. Principles of Epidemiology
114. Epidemiology I
African Studies
(Interdepartmental)

10244 Bunche Hall, 825-2944

Professors
Christopher Ehret, Ph.D. (History), Chair
Richard L. Sklar, Ph.D. (Political Science)

Associate Professor
Thomas J. Hinnebusch, Ph.D. (Linguistics)

Scope and Objectives

This special undergraduate program is designed primarily for (1) students who plan to live and work in Africa or who are interested in government and public service careers involving African affairs and (2) students who plan to pursue graduate work in one of the social sciences or Near Eastern and African languages, with primary concentration on the African field. The philosophy of the program is that people with a solid background in one of the established disciplines can make the best contribution to an understanding of Africa and its problems. Thus, the program can be taken only jointly with work toward a bachelor's degree, normally in one of the following fields: anthropology, economics, geography, history, linguistics, political science, or sociology. Students completing this special program will receive a degree with a major in a selected discipline and specialization in African studies. The chair of the committee in charge will certify completion of the Special Program in African Studies.

Special Undergraduate Program

Preparation for the Program

Required: Two courses from History 10A, 10B, and Linguistics 5 or 190. Training in Arabic, French, Portuguese, or an African language is highly recommended.

Upper Division

Students are required to take a departmental major in the social sciences or, by special arrangement with the committee chair, in the humanities or arts. In addition, they are required to take a course related to Africa in each of four departments. One required upper division course related to Africa may, however, be replaced by a three-quarter sequence of any African language.

For more information, contact the Assistant Graduate Adviser, African Studies Center, 10244 Bunche Hall (825-2944) or Professor Christopher Ehret, History, 6265 Bunche Hall (825-4093).

Afro-American Studies
(Interdepartmental)

3111 Campbell Hall, 825-7403

Professors
Alden A. Goldthorpe, Ph.D. (Music)
Gordon L. Berry, Ed.D. (Education)
Stanley Cohen, Ph.D. (History)
Mazisi R. Kunene, M.A. (Linguistics)
Claudia Mitchell-Kernan, Ph.D. (Anthropology)
Boniface I. Obiheke, D.Phil. (History)

Associate Professors
J. Eugene Grigsby, II, Ph.D. (Architecture and Urban Planning)
Hector F. Myers, Ph.D. (Psychology)
Alfred E. Osborne, Jr., Ph.D. (Management)
Gloria J. Powell, M.D., in Residence (Psychiatry)
Romeria Tidwell, Ph.D. (Education)
Gail E. Wyatt, Ph.D., in Residence (Psychiatry)

Assistant Professors
Margaret W. Creel, Ph.D. (History)
Jacqueline C. Dee, Ph.D. (Music)
Halford H. Fairchild, Ph.D. (Psychology), Chair
Robert A. Hill, M.Sc. (History)
James H. Johnson, Ph.D. (Geography)
Vicino Mays, Ph.D. (Psychology)
Melvin Oliver, Ph.D. (Sociology)
Warren Pinckney, Ph.D. (Music)
Beverly J. Robinson, Ph.D. (Theater Arts)
Richard A. Yarborough, Ph.D. (English)

Adjunct Associate Professor

Adjunct and Visiting Lecturers
Barbara A. Bass, M.S.W., Adjunct (Social Work)
Kenny Burrell, B.A., Visiting

Scope and Objectives

The Afro-American studies major is a relatively new major at UCLA. Originally born during the late 1960s and early 1970s, the program was designed to fill a void that existed at UCLA in terms of social science material relevant to the black experience. Students and faculty currently associated with the program see the Afro-American studies major as meeting a number of academic, personal, and social needs.

The program offers both a Bachelor of Arts and a Master of Arts degree. While it is important that students become expert within a traditional discipline, it is even more important that students examine both the truth and the fiction regarding the Afro-American experience in the United States. For Afro-American students, this leads to a heightening of self-awareness and self-pride. For non-Afro-American students, such a major provides a broadening of perspectives to take into account more than a singular cultural view.

The fundamental goal of the curriculum is to provide students with a comprehensive and
multidisciplinary introduction to the crucial life experiences of Afro-Americans. This goal is achieved in two primary ways. First, it provides an interdisciplinary exposure to particular features of the Afro-American experience. Majors gain an in-depth understanding of the historical, anthropological, sociological, psychological, economic, and political aspects of Afro-America. The curriculum also provides opportunities to study the literary, musical, and artistic heritage of peoples of African descent. Second, students gain expertise in the concepts, theories, and methods of a traditional academic discipline. Majors are required to select an area of concentration in one of the following fields: anthropology, economics, English, history, philosophy, political science, psychology, or sociology (concentrations in departments not listed must be approved by the program adviser).

Bachelor of Arts Degree

The B.A. program in Afro-American Studies made a number of changes in the degree requirements for the 1983-84 academic year. Students declaring an Afro-American studies major after Spring Quarter 1983 must satisfy the requirements that follow. Students who declared the major prior to Spring Quarter 1983 may satisfy either the new requirements or those described in the 1982-83 UCLA Undergraduate Catalog. Because of the evolving nature of the program, you should periodically check with the program office for additional changes and/or updates. Majors should also closely consult the 1985-86 Afro-American Studies Catalog and Directory, available from the program office.

Preparation for the Major

Required: History 10A and the lower division courses listed in one of the following concentrations, plus three courses from at least two additional concentrations (prerequisites 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 1 (or 11), 2, 5, 6; economics: Economics 1, 2, 40, Mathematics 3A, 3E (or 3A and 3B, or 31A and 31B); English: English 3, 4, 10A, 10B, 10C (all must be taken in sequence); history: History 1A-1B-1C, 6A-6B-6C, 10B, and 99 (or 100 or 101); philosophy: Philosophy 4, 21, 22, 31; political science: Political Science 1, 6, 20, Sociology 1, Economics 1; psychology: Mathematics 2, Psychology 10, 41, 42, Biology 2, Anthropology 11, Physics 10 (or 3A or 6A or 8A), one year of high school chemistry (or Chemistry 2 or 11A); sociology: Mathematics 2, Sociology 1, 18, Linguistics 1, Anthropology 22. You are strongly urged to complete the required lower division courses within the first two years of the major.

The Major

Required: (1) Afro-American Studies M164, English M104A, M104B, History 158B-158C; (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 following list of approved courses; (4) two upper division electives outside the department of concentration selected from the approved courses list.

Note: You may petition the committee which administers the degree program to have a course not on the approved list accepted for the major. In arranging a course of study, you should select a combination of courses that will best meet your current and future educational and career goals.

Approved courses (recommended courses are in bold):

Afro-American Studies 100B, 145, M164, M172, M197, 197B


Economics 101A, 101B, 102, 103A-103Z, 107, 110, 111, 120, 121, 130, 133, M135, M136, 141, 144, 147A, 147B, 150, 151, 160, 161, 180, 183, 190, 191, 192, 199


Honors Option

Students participating in the honors option are required to complete an independent research paper or project undertaken with the guidance of a faculty member. If you are an Afro-American studies major with a grade-point average of 3.5 or better, you complete the honors option by writing an undergraduate thesis. For more information, contact the curriculum coordinator of the Afro-American Studies Program.

Double Major Option

Some students elect to complete the requirements of two majors (Afro-American studies and another). If you are interested in this option, you must maintain good academic standing and complete both majors within the 208-unit maximum imposed by the college. Courses used to satisfy the requirements for the principal major may also be used to satisfy the requirements for the secondary one, but no more than five courses may be common to both majors. Because of the complexity of the double major, you are encouraged to plan your curriculum early and to do so in consultation with the college counselors and/or the Afro-American Studies Program adviser or curriculum coordinator.

Master of Arts Degree

The Master of Arts program in Afro-American Studies is international in scope, focusing on Afro-American cultures in the United States, the Caribbean, and South America. The program prepares students for positions in the job market, as well as further graduate study (i.e., Ph.D. level) in their traditional disciplines.

Admission

Applicants for admission must possess a bachelor's degree in the social sciences or humanities and demonstrate an interest in Afro-American studies either through their previous course of study or in their future plans. Students are selected on the basis of the following criteria: (1) an official transcript; (2) three academic letters of recommendation; (3) a minimum 3.0 (B) average in the junior/senior years of college; (4) a statement of purpose describing the applicant's background in Afro-American studies, proposed program of study, and future career goals; (5) scores on the verbal and quantitative sections of the Graduate Record Examination (GRE); (6) an original
term paper or research paper which best ex-
presses the applicant's interests and abilities; (7) other evidence of promise deemed relevant such as work experience, accomplishments, or community and public service.

Admission to the program is limited to the Fall Quarter. The application deadline for the 1986-87 academic year is January 31, 1986 (earlier for foreign students). Prospective students may request applications from the M.A. Degree Program in Afro-American Studies, Center for Afro-American Studies, 3111 Campbell Hall, UCLA, Los Angeles, CA 90024.

Major Fields

The M.A. in Afro-American Studies is interde-
partmental, with formal support linkages to nine disciplinary departments: Anthropology, English, History, Linguistics, Music, Philoso-
phy, Political Science, Psychology, and Soci-
ology. Related courses are also offered in Art, Dance, Economics, Geography, Psychiatry and Biobehavioral Sciences, Theater Arts, Folklore and Mythology, Latin American Stud-
ies, African Studies, Education, Library and In-

Foreign Language Requirement

You are required to satisfy the language re-
quirement in one of the following ways: (1) suc-
cessfully completing two years of coursework in a foreign language at the college level; (2) passing a foreign language proficiency exami-
nation approved by your guidance committee and deemed appropriate by the program com-
mittee; or (3) demonstrating competence in the use of the computer as an aid in social research.

Course Requirements

A total of 14 upper division and graduate courses are required for the degree. Of that number, only four may be selected from upper division listings. The program has a structured core of seven required courses. You are re-
quired to take Afro-American Studies M200A and M200B from the 200B through 200F series. These courses should normally be taken in the first year of study. The second year is devoted to acquiring disciplinary competence in your cognate area, and six courses must be selected from that discipline. Finally, course 270A is required, and courses 270B-270C are to be taken in conjunction with work in the dis-
cipline of your choice. These seminars are ex-
pected to facilitate completion of your thesis.

Thesis Plan

The thesis is the final report on the results of your original investigation. Before beginning work on the thesis, you should consult closely with your academic adviser and the thesis committee. See the 1985-86 Afro-American Studies Catalog for details concerning thesis requirements.

Comprehensive Examination Option

If you do not intend to continue your graduate career at the Ph.D. level, you may elect to com-
plete the M.A. degree through the comprehen-
sive examination option. The examination is administered by a committee consisting of at least three faculty members appointed by the program and is conducted in two phases. First, you meet with the committee members to re-
view, revise, and approve the proposed exami-
nation. After completion of the written portion, a final oral examination is required.

Upper Division Courses

100B. Psychology from an Afro-American Per-
spective. A survey of psychological literature relevant to Afro-Americans. Contributions of Afro-American psychologists are emphasized. Topics in-
clude the history of psychology, testing and intel-
ligence, the family, personality and motivation, racism and race relations, education, community psycholo-
gy, and the future of Afro-American psychology.

Mr. Fairchild (Sp)

M104A. Early Afro-American Literature. (Formerly numbered M104.) (Same as English M104A.) Prerequisite: satisfaction of Subject A requirement. An intro-
ductory survey of the Afro-American literary tra-
dition from the 18th century to World War I, including oral and written forms (folktales, spirituals, sermons, prose, poetry). Emphasis on the use of literature in the social and economic movements at the turn of the century. Writers studied include Phillis Wheatley, David Walker, Frances Harper, Fred-

Mr. Yarborough

M104B. Afro-American Literature since the 1920s. (Formerly numbered M104.) (Same as English M104B.) Prerequisite: satisfaction of Subject A re-
quirement. An introductory survey of the Afro-
American literary tradition from the 1920s to the present, including oral and written forms (ballads, blues, speeches, prose, poetry, drama). Emphasis on the Harlem Renaissance and black writing in the 1960s. Writers studied include Jean Toomer, Claude McKay, Langston Hughes, Sterling Brown, Richard Wright, James Baldwin, Gwendolyn Brooks, Ralph Ellison, Toni Morrison, Amiri Baraka (LeRoi Jones), and Alice Walker.

Mr. Yarborough

145. Ellingtonia. The course explores the music of Duke Ellington, his life, and the far-reaching influence of his efforts. Ellington's music, known as "Ellington-
ia," is one of the largest and perhaps most important bodies of music ever produced by the United States. The course also covers the many contributions of other artists who worked with Ellington, such as com-
poser Billy Strayhorn and musicians Johnny Hodges, Coolie Williams, and Mercer Ellington.

Mr. Burrell (W)

M164. The Afro-American Experience in the United States. (Same as Anthropology M164.) The course aims to promote understanding of contempo-
rary sociocultural forms among Afro-Americans in the United States by presenting a comparative and dia-
chronic perspective on the Afro-American ex-
perience in the New World. It is concerned with the utilization of anthropological concepts and methods in understanding the origins and maintenance of par-
ticular patterns of adaptation among black Ameri-
cans.

Ms. Mitchell-Kernan (F)

M172. The Afro-American Woman in the U.S. (Same as Psychology M172 and Women's Studies M172.) Prereq: requisite: upper division standing. The course focuses on the impact of the social, psycho-
logical, political, and economic forces which impact on the interpersonal relationships of Afro-American women as members of a large society and as mem-
bers of their biological and ethnic group.

Ms. Mays

M197. Topics in Afro-American Literature. (For-
merly numbered M197A.) (Same as English M197.) A variably scheduled survey of Afro-American literature. Topics include the Harlem Renaissance; Afro-American Literature in the Nadir, 1890-1914; Contemporary Afro-American Fiction. May be repeat-
ed for credit.

Ms. Yarborough

1978. Special Studies in Comparative Literature: Caribbean Literature. A general introduction to the literature of the English-speaking Caribbean by re-
viewing its historical and geographical background. To analyze the historical process toward self-determi-
nation in the literature, the following topics are includ-
ed: (1) alienation and the search for community, (2) "external" relationships (the ancestor, the kins-
man, the other), and (3) form and language.

Graduate Courses

M200A. Advanced Historiography — Afro-Ameri-
can. (Same as History M200A) May be repeated for credit.

Ms. Croxton

M200B. Seminar in the Political Economy of Race. Prerequisite: consent of instructor. A seminar on po-
etical economy, with special reference to black politi-
cal economy and with focus on the dynamics of allo-
cation of wealth and power resources among social classes and racial and ethnic groups in the United States. Presented in a context that is at once com-
parative and international, the seminar emphasizes internationalism and transnationalism as well as the uniqueness of the Afro-American condition. It at-
tempts to relate the black condition in the United States to the socioeconomic system of this country and to compare it to the political, social, and economi-
c conditions of African peoples elsewhere.

M200C. Selected Problems in Urban Sociology. (Same as Sociology M202.) Seminar. Prerequisite: consent of instructor.

Mr. Light, Mr. Oliver

M200D. Afro-American Sociolinguistics: Black En-
lish. (Same as Anthropology CM242G.) Lecture, three hours of discussion per term. Prerequisite: consent of instructor. The seminar aims to provide basic information on Black English, an important minority dialect in the United States. The social implications of minority dia-
lects are examined from the perspectives of their gener-
esis, maintenance, and social functions. General problems and issues in the fields of sociolinguistics are examined through a case study approach. Stu-
dents are required to conduct research consul-
tion with the instructor, as well as participate in group discussion.

Ms. Mitchell-Kernan (W)

M200E. Studies in Afro-American Literature. (Same as English M262.) Prerequisite: consent of instructor. Intensive research and study of major themes, issues, and writers in Afro-American litera-
ture. Discussions and research on the aesthetic, cul-
tural, and social backgrounds of Afro-American writ-
ing.

Mr. Yarborough

M200F. African-American Psychology. (Formerly numbered 220B.) Seminar. Prerequisite: consent of instructor. Survey of the psychological literature as it per-
tains to persons of African-American descent. The course provides a critical review of the implications of "mainstream" research on African-Americans. This approach includes a discussion of research on the family, academic achievement, and psychological as-
sessment (testing). A second focus is concerned with theoretical approaches advanced by African-Ameri-
can scholars: African philosophy, perspectives on racism in psychology, and research in the black com-
unity.

Mr. Fairchild (Sp)
American Indian Studies
(Interdepartmental)

3220 Campbell Hall, 825-7315

Professors
William O. Bright, Ph.D. (Linguistics)
Robert A. Georges, Ph.D. (English)
Carole E. Goldberg-Ambrose, J.D. (Law)
Thomas J. La Belle, Ph.D. (Education)
Pamela L. Munro, Ph.D. (Linguistics)
Gary B. Nash, Ph.D. (History)
Melvin Seeman, Ph.D. (Sociology)

Associate Professors
Charlotte A. Heth, Ph.D. (Music)
Kenneth R. Lincoln, Ph.D. (English), Chair
Arnold Rubin, Ph.D. (Art History)

Assistant Professors
Duane Champagne, Ph.D. (Sociology)
Jennie Joe, Ph.D. (Anthropology)
Paul V. Kroskrity, Ph.D. (Anthropology)

Scope and Objectives
Because UCLA possesses a substantial number of faculty in the humanities and social sciences engaged in teaching and conducting research on American Indians, the nation's first interdepartmental M.A. in American Indian Studies was established here.

The M.A. 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. They will graduate with the training they need to teach Native American studies or to serve in an administrative capacity in Indian programs. The M.A. program is coordinated by the American Indian Studies Center and ranks among the top Indian studies programs in the country.

Master of Arts Degree

Admission
A bachelor's degree from an accredited undergraduate institution is required for admission to the M.A. program in American Indian Studies. You must demonstrate interest in American Indian studies either by formal coursework, independent study, or practical experience. As part of the application, you must submit a detailed account of your background, potential career plan, and interest in American Indian studies. Preference will be given to individuals with undergraduate majors relevant to the proposed areas of concentration within the M.A. degree: anthropology, English, history, linguistics, literature, sociology, fine arts, or American Indian studies.

Entering students must meet the University's minimum admission requirement of a 3.0 grade-point average in all work completed during the last two undergraduate years and in all prior graduate work. The Graduate Record Examination (GRE) is not required, but you are encouraged to take the examination and submit test results as part of the documents supporting your enrollment application. At least three faculty letters of recommendation must be submitted. Admission to the program is limited to the Fall Quarter. You may obtain application forms and further information from the Committee to Administer the M.A. Degree in American Indian Studies, American Indian Studies Center, 3220 Campbell Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines
The American Indian Studies M.A. is an interdepartmental program with ten participating academic schools and departments: Anthropology, Art, Dance, English, History, Law, Library and Information Science, Linguistics, Music, and Sociology. The ten disciplines are grouped into four areas of concentration: history and law; expressive arts; social relations; and language, literature, and folklore. Courses related to the American Indian Studies M.A. are also offered in the following schools and departments: Architecture and Urban Planning, Education, Political Science, Social Welfare, and Psychology.

Foreign Language Requirement
Students in the M.A. program must successfully complete Linguistics 114A or 114B. Both courses, to be offered in alternate years, have been designed to show how languages are primary vehicles for understanding American Indian culture.

Course Requirements
(1) A minimum of ten courses is required, at least seven of which must be graduate courses. Four courses are required: American Indian Studies M200A, M200B, M200C (which must be taken in the first year), and Linguistics 114A or 114B, which must be taken by the end of the second year. In addition, one of the remaining six courses must be a graduate course concerned with research methodology.

(2) All M.A. candidates will select one of the following areas of concentration: (a) history and law, (b) expressive arts, (c) social relations, (d) language, literature, and folklore. In addition to the four required courses, you must complete a minimum of four courses in your area of concentration. Three of these must be graduate-level courses. Two additional courses are to be chosen from other areas of concentration. Courses must be selected from an approved list maintained by the program.

(3) Two courses in the 500 series may be applied toward the total course requirement; however, only one 596 course may be applied toward the minimum graduate course requirement.

Thesis or Comprehensive Examination Plan
You may choose either (1) a thesis plan or (2) a comprehensive examination plan to complete the degree program. The committee members supervising the thesis or administering the comprehensive examination will be selected by you with the consent of the program committee. Copies of the thesis must be submitted to each member of the committee by the fifth week of the quarter in which you expect to graduate. If you choose the comprehensive examination plan, you must demonstrate in written or oral examination your competency in the major and minor areas of study.

Upper Division Course
197. Special Topics in American Indian Studies. Variable topics selected from the following: Myth and Folklore of Indian Societies; Contemporary American Indian Literature; Social Science Perspectives of American Indian Life; Law and the American Indian; History of the American Indians (cultural area); Dance and Music of the American Indians (cultural area); American Indian Policy. Topics are announced in the Schedule of Classes. May be repeated twice for credit.

Graduate Courses
M200A. Advanced Historiography—American Indian Peoples. (Same as History M200W)
M200B. Cultural World Views of Native America. (Formerly numbered 200E.) (Same as Anthropology M200EP) Seminar, three hours. The course explores written literary texts drawn from oral cultures and expressive cultural forms—dance, art, song, religious and medicinal ritual—in selected Native American societies. The instructors introduce and review methodological approaches to the study of native cultures, from structural anthropological, ethnomusicology, and folklore to modern literary analyses and direct fieldwork. Ms. Heth, Mr. Lincoln.
Scope and Objectives

Anthropology is today classed as a social science, but its roots are in both the biological sciences and humanistic studies. It still constitutes a bridge linking these three areas of knowledge, and the department has strong ties with other disciplines ranging from anatomy and genetics to linguistics, classics, and fine arts.

The department recognizes the following five fields in anthropology:

Archaeology is the study of cultures of the past, where knowledge of their characteristics is obtained primarily from material evidence left in the ground, supplemented in some cases by historical and inscriptive records.

Biological anthropology studies the diversity of the human physical characteristics and the biological characteristics underlying human behavior. The faculty in this field specializes in one of four subfields: (1) primatology or the study of the characteristics of monkeys and apes; (2) paleoanthropology, the study of fossil hominids and the evolution of man; (3) human genetics; and (4) evolutionary ecology of human and nonhuman primates.

Cultural anthropology is the investigation of ideational systems, including religious beliefs and mythologies, philosophical and other cognitive conceptions, world views and aesthetic configurations, and technologies transmitted from generation to generation.

Linguistic anthropology examines the diversity of natural languages and other communicative systems, the sociocultural patterning of their use, and their relationship to the cultural knowledges of their speakers.

Social anthropology, closely tied to sociology, studies the structure of human communities and the institutionalized social interaction systems. It examines the diversity of family forms and kinship, governance and political systems, law and the resolution of conflict, economic collaboration, social status and role, and certain aspects of religion.

Cutting across the five fields are three other categories of course offerings: the anthropology of social action, regional cultures, and history and theory.

Bachelor of Arts Degree

Preparation for the Majors

Required: Anthropology 1, 2, 5, 6. All courses must be taken for a letter grade.

All undergraduate anthropology majors must earn a minimum grade of C in all anthropology courses required for the major and must maintain a minimum 2.0 GPA in the major overall.

The Majors

The Department of Anthropology offers a choice between two undergraduate majors:

(1) General major
(2) Preprofessional major

To provide a comprehensive understanding of the disciplines as a whole, you must take at least one course in each of the five fields (see "Scope and Objectives" above). One core course is offered in each field (anthropology offers a choice of two), but you may take any course to fulfill this requirement if the prerequisites have been met.

The general major is designed for students interested in an anthropological understanding of human behavior who plan to pursue personal or professional goals other than those of anthropologists. Students taking the general major must complete 14 (four-unit) upper division courses for a letter grade as follows:

(1) One upper division course in each of the five fields: archaeology, biological anthropology, cultural anthropology, linguistic anthropology, and social anthropology.

(2) One upper division course in the category of regional cultures.

(3) Four additional upper division courses in anthropology.

(4) Four upper division courses (unless otherwise designated) in related fields drawn from a list maintained in the department.

The preprofessional major is designed primarily for students planning to make a career in anthropology and is expected of students entering the graduate program in anthropology at UCLA. Students taking the preprofessional major must complete 16 (four-unit) upper division courses for a letter grade as follows:

(1) One upper division course in each of the five fields: archaeology, biological anthropology, cultural anthropology, linguistic anthropology, and social anthropology.

(2) One upper division course in the category of regional cultures.

(3) Two upper division courses in the category of history and theory.

(4) One course in statistics (this requirement will normally be met by taking Anthropology 186A but may also be met by courses drawn from a list maintained in the department).
Three or four additional upper division courses in anthropology.

Three or four upper division courses (unless otherwise designated) in related fields drawn from a list maintained in the department.

Competence in a foreign language (see below).

### Foreign Language

For the preprofessional major the department requires proficiency in one foreign language to insure that you have the communication skills and cultural insights offered by such proficiency. Any spoken language or any extinct language with a substantial body of literature is acceptable. This requirement may be met by (1) completing the fifth quarter of one foreign language or (2) demonstrating foreign language proficiency at level five. Courses taken to satisfy the foreign language requirements may be taken on a Passed/Not Passed basis and may be applied toward satisfaction of the Humanities.

### Honors Program

The honors program is designed for majors who are interested in carrying out an independent research project that will culminate in an honors paper. A special honors seminar is also offered during the junior year. A 3.5 departmental grade-point average is normally required for admission, but students with a lower GPA may apply to the honors committee for admission. Application should be made at the beginning of the junior year. Anthropology 198A, 199HA, 199HB, 199HC are required. Course 199HA should be taken in the Spring Quarter of the junior year; honors students will then take courses 199HB and 199HC in the Fall and Winter Quarters of their senior year (to write the honors paper).

### Graduate Study

#### Admission

Admission to the graduate program in anthropology is ordinarily restricted to the Fall Quarter. For admission in the Winter or Spring Quarters, you must make a formal written request to the departmental admissions committee. The department does not require an undergraduate major in anthropology though this is desirable. Promising students with a B.A. or M.A. in another field may be admitted, in which case a program of background studies based on previous training and current objectives will be formulated. Knowledge of a foreign language is not required for admission, but completion of the language requirement before beginning work is highly recommended, and such students are at an advantage in the selection process.

Applications and all supporting material must be submitted by the following dates to be considered for admission for:

- Winter Quarter 1986 — October 1, 1985
- Spring Quarter 1986 — December 30, 1985
- Fall Quarter 1986 — December 30, 1985

The Graduate Admissions Office (Graduate Division, 1247 Murphy Hall, UCLA, Los Angeles, CA 90024) requires submission of an official application; official transcripts of record, in duplicate, from each college or university at which work has been completed; and a statement of purpose.

In addition, you must submit directly to the Graduate Counselor (Department of Anthropology, 341 Haines Hall, UCLA, Los Angeles, CA 90024) three letters of recommendation (preferably from anthropologists), Graduate Record Examination (GRE) scores, and a research or term paper. The department requires two faculty members to sponsor an applicant before admission is recommended.

For further information on the departmental program, a graduate syllabus may be obtained without charge by writing to the above departmental address.

### Master of Arts Degree

#### Foreign Language Requirement

M.A. language requirements may be met by:

1. Passing the Educational Testing Service (ETS) examination in a foreign language with a score of 500 or better.
2. Passing a departmental examination or other demonstrations of proficiency in a foreign language by petition to the department Chair and the Dean of the Graduate Division.

Students whose native language is not English may petition to have the requirement waived. Formal written petition for such waiver should be submitted to the guidance committee, department Chair, and the Graduate Division.

#### Core Course Requirements

You may demonstrate basic knowledge in the five fields by one of the following: (1) passing the core course with a grade of B or better, (2) petitioning that work taken elsewhere constitutes the equivalent of such courses, or (3) passing a special examination in each of the five fields. Courses taken while in graduate standing to meet these field requirements may also serve to meet course unit demands for the M.A. degree.

#### Course Requirements

The minimum course load is three courses (12 units) per quarter, but this requirement may be waived by petition to the department Chair. An M.A. degree requires nine courses (36 units) taken for a letter grade with a minimum 3.0 grade-point average.

### Ph.D. Degree

#### Admission

If you are entering the department with an M.A. in Anthropology from another university or in a field other than anthropology, you will have to satisfy all master's degree requirements with the exception of the master's paper. To fulfill this requirement, you may submit your prior master's thesis or a research paper written as a graduate student (whether or not in anthropology). Only after satisfying these requirements will a student be admitted into the Ph.D. program.

#### Foreign Language Requirement

You must satisfy the Ph.D. language requirement before formally nominating the five-member doctoral committee and before taking the qualifying examinations. Any language useful for field study and/or library research is acceptable. You must submit to your departmental committee a comprehensive annotated
bibiography and demonstrate familiarity with its contents by taking a written or oral examination. The format of the examination is determined by your doctoral committee. Students who speak English as a second language may waive the language requirement by petition to their committee, the department Chair, and the Graduate Division. Under unusual circumstances, the department will consider alternate means of fulfilling the requirement.

Course Requirements
You must be in residence for one year between receipt of the M.A. degree and advancement to doctoral candidacy. During this time, coursework must be done with at least three members of the faculty. You must be enrolled in a minimum of 12 units (this requirement may be waived by petition to the Department Chair) or be on an official leave of absence.

Qualifying Examinations
The timing of the qualifying examinations will be set in consultation with members of the doctoral committee, but they may not take place earlier than the third quarter after receiving the M.A. degree. The written qualifying examination is conducted by the departmental committee which will examine you in three subfields of your choice. Two of these three subfields will be drawn from a list available in the department; the third will be specific to your needs and interests and dissertation plans. The format of the examination is to be determined by the committee. Written examinations must be taken in one quarter and completed no later than two weeks before the end of instruction. There must be a minimum of two weeks between the written examination and the University Oral Qualifying Examination. After you successfully complete the written examination, the doctoral committee administers the University Oral Qualifying Examination, which is expected to be completed in the same quarter as the written examination, but no later than the following quarter. The committee determines the conditions for reexamination should you fail either examination.

Final Oral Examination
This examination, focusing on your dissertation, is required of all candidates and is administered by the doctoral committee. It may be waived by petition to the Graduate Division with the consent of the doctoral committee.

Lower Division Courses
1. The Principles of Human Evolution: Genetic Basis. Lecture, three hours; discussion, one hour. Required as preparation for the major. Students with credit for courses 1 and 2 will not receive credit for course 11. Human population biology in the conceptual framework of evolutionary processes. Emphasizes the genetic basis of evolution, population biology, and diversity among living populations.

2. The Principles of Human Evolution: Comparative Analysis. Lecture, three hours; discussion, one hour. Required as preparation for the major. Students with credit for courses 1 and 2 will not receive credit for course 11. Human population biology in the conceptual framework of evolutionary processes. Emphasizes comparative primate behavior, structural anatomy, and the fossil record.

5. Principles of Cultural Anthropology. Lecture, three hours; discussion, one hour. Required as preparation for the major. Students with credit for course 2 will not receive credit for this course. The charac-

ter of culture and nature of social behavior as de-
veloped through anthropological study of contemporary peoples.

6. Culture History. Lecture, three hours; discussion, one hour. Required as preparation for the major. Students with credit for courses 1 and 2 will not receive credit for this course. Emphasis on evolution-

ary processes and the evolutionary past of the human species.

22. Introductory Anthropological Archaeology. Lecture, three hours; discussion, one hour. Students with credit for course 5 will not receive credit for this course. An introduction to the cultural understanding of human behavior designed for students who do not plan fur-
ther work in anthropology. Emphasis on those con-
cepts and theories that are applicable to everyday life and professional activities in the modern world. Ex-
amples of institutions and individual behavior of mod-
ern America are contrasted against studies of primitive life.

33. Culture and Communication. Lecture, three hours. The course examines the role of culture in structuring how people communicate with one another. Required as preparation for the major. The development of culture from its first beginnings to the advent of writing, as developed through archaeologi-

cal investigation.

11. The Evolution of Man. Lecture, three hours; dis-
cussion, one hour. Does not satisfy major require-
ments. Students with credit for courses 1 and 2 will not receive credit for this course. Emphasis on evolu-

tionary processes and the evolutionary past of the human species.

Upper Division Courses
Courses 1 and 2, 5, 6, or upper division standing are prerequisite to all upper division courses, unless otherwise stated. All upper division courses with letter designations (A, B, P, Q, etc.) may be taken independently unless otherwise stated.

Archaeology
110. World Archaeology. Prerequisite: upper division standing or consent of instructor. A broad survey of human culture history from its Stone Age begin-

cings to the establishment of the primary civilizations of the Old and New Worlds. Intended for students with a general interest in archaeology and in an anthropo-

logical approach to the study of the past. (Alternate core course for archaeology field.)

111. The Study of Archaeology. A survey of con-
temporary prehistoric archaeology. Emphasis on what archaeologists do, and how and why they do it. Contributions of archaeology to the modern world are also examined. Intended for students with a desire to explore the nature of anthropological archaeology. (Alternate core course for archaeology field.)

112. Old Stone Age Archaeology. Prerequisite: course 6 or consent of instructor. The development of Paleolithic cultural traditions in Europe, Africa, Asia, and the New World. Emphasizes the ordering and interpretation of archaeological data, Pleistocene ge-

ology and chronology, and the relationship between human cultural and biological evolution.

113P. Archaeology of North America. Prerequisite: course 5, 6, or 22, or consent of instructor. Prehistory of the North American Indians; the evolution of Indian societies from earliest times to (and including) con-
temporary Indians; approaches and methods of American archaeology.

113Q. The Prehistory of California Indian Cul-

tures. Examination of the California archaeological record from earliest human evidence to historic times, with emphasis on the development of cultural di-

versity.

113R. Southwestern Archaeology. An examination of the prehistory of the American Southwest from Early Man to historic times. Emphasis on describing and explaining cultural variation and change, employing an ecological approach antecedents. The "Great Events" (agriculture, town living, and the Great Abandonment) are given special attention. Evolutionary processes are generalized and related to contemporary world problems.

114P. Ancient Civilizations of Western Middle America (Nahuatl Sphere). Pre-Hispanic and Con-

quest period native cultures of Western Middle Amer-

ica, as revealed by archaeology and early colonial writings in Spanish and Indian languages. Toltec-Az-

tec and Mixtec civilizations and their predecessors, with emphasis on sociopolitical systems, economic patterns, religion, and aesthetic and intellectual achievements.

114Q. Ancient Civilizations of Eastern Middle America (Maya Sphere). Pre-Hispanic and Con-

quest period native cultures of Eastern Middle Amer-

ica, as revealed by archaeology and early colonial writings in Spanish and Indian languages. Lowland and Highland Maya civilizations and their predecessors, with emphasis on sociopolitical systems, eco-

nomic patterns, religion, and aesthetic and intellectu-

al achievements.

114R. Ancient Civilizations of Andean South America. Prerequisite: course 5, 6, or 22. Pre-His-

panic and Conquest period native cultures of Andean South America, as revealed by archaeology and early Spanish writing. The Inca and their predecessors in Peru, with emphasis on sociopolitical systems, eco-

nomic patterns, religion, and aesthetic and intellectu-

al achievements.

115P. Archaeological Field Training. Prerequisite: consent of instructor. Procedures of archaeological excavation, site recording, mapping, sampling, and core of archaeological data (field class conducted off campus).

115Q. Archaeological Research Techniques. Pre-

quisite: course 6 or consent of instructor. An intro-
duction to the techniques of discovery and analysis that archaeologists have found useful in research. Special attention to sampling, typology, and location-
al analysis. Techniques for the measurement of such important variables as population size, diet, and economic patterns, religion, and aesthetic and intellectu-

al achievements.

115R. Strategy of Archaeology. Prerequisite: course 6 or consent of instructor. An introduction to problem formulation, theory, and method in archae-

ology, with emphasis on the development of research designs. The focus is on how archaeological research is conceived and planned, with consideration of dif-

dering viewpoints and their usefulness.
COLLEGE OF LETTERS AND SCIENCE / Anthropology / 91

M115S. Historical Archaeology. (Same as History M103S) A survey of the aims and methods of historical archaeology as practiced on both sides of the Atlantic, with case studies drawn from North America, the Caribbean, Africa, and Europe. Mr. Posnansky

116P. Laboratory Analysis in Archaeology. Prerequisite: consent of instructor. Description and classifications of archaeological collections; cataloguing, typology, documentation. Preparation of archaeological reports for publication. Mr. Meighan

M116Q. Dating Techniques in Environmental Sciences and Archaeology. (Same as Geography M178) Lecture, three hours; reading, one hour. Preparation and analysis of scientific dating methods such as radiocarbon dating, radiocarbon damage methods, biological dating techniques, and magnetic dating, and applications in environmental sciences, archaeology, and physical anthropology.

118A. Museum Studies. Prerequisite: consent of instructor. Method and theory of museum operation. Acquisition access, storage, photography, conservation, and exhibition are discussed and demonstrated. Museum research, publication, and teaching, as well as museum administration and funding, are analyzed. Lectures and demonstrations are structured to illustrate how the various aspects of museum operation are interrelated.

Mr. Donnan and the Museum Staff

118B. Museum Studies. Prerequisites: course 118A, consent of instructor. Two areas of museum operation are selected by the student from those discussed and demonstrated in course 118A. Students are then required to develop expertise in these areas through a combination of library research and a series of assignments carried out in the museum.

Mr. Donnan and the Museum Staff

119. Archaeology of Southern California. Field Studies. Saturday field class, 8-5. The course is designed primarily for nonmajors and is a survey of Southern California archaeology from the Historical or Mission period back to the holy disputed time of Early Man. Classroom lectures are combined with weekly field trips to archaeological sites in the greater Los Angeles area, with the aim of exposing students to primary archaeological evidence in a variety of contexts. P/NP or letter grading.

Mr. Williams

121A. Fossil Man and His Culture. Recommended prerequisite: course 1, 2, or equivalent. Limited to majors and graduate students in anthropology. A survey of biological anthropology including all major subareas. A lecture-seminar format requires attendance at a recitation section in addition to lectures. (Core course for biological field.) Mr. Williams

121B. The Australopithecines. Prerequisite: consent of instructor. Recommended: courses 1, 2, 121A. The morphology, ecology, and behavior of the genus Australopithecus. The history of their discoveries and their place in human evolution are also discussed.

Ms. Kennedy

122. Evolution of the Genus Homo. Prerequisite: consent of instructor. Recommended: courses 1, 2, 121A, 121B. The origin and evolution of the genus Homo, including archaic sapiens and the Neandertals. The morphology, ecology, and behavior of these groups are included. The course concludes with the appearance of modern man.

Ms. Kennedy

123. Human Genetics. Recommended prerequisite: course 1. The course includes discussion of the nature and causes of human biological variation. Evolutionary models of genetic and phenotypic change are developed and compared. Geographical and cultural contributions to the development of observed patterns of human biological variation are emphasized.

123P. Aging: An Anthropological Perspective. Lecture, three hours. An exploration of aging from an evolutionary and cross-cultural perspective. A survey of the mechanisms of mammalian aging, population demography, and lifespan, age-group systems, and the effects of modernization on these systems in non-Western societies. Mr. Mai

124. Evolution and Biology of Human Behavior. A comparative survey of the behavior patterns of preliterate and Paleolithic peoples and those of nonhuman primates. The biological variables fundamental to human and primate behavior are assessed with regard to theories on the evolution of human culture.

125A-125B. The Genetics of Human Diversity. Corequisite or equivalent is prerequisite to 125B. A survey of human biological diversity. Emphasis on genetics at the population level for both discrete and quantitative variation. Analytic methods and evolutionary hypotheses.

126P. Anatomy for the Humanitarians: Mind, Body, and Behavior. A discussion of the structure and workings of the human machine for students with little or no knowledge of biology. Human form and function are taught from an evolutionary and developmental perspective, illustrated with relevant examples of behavior and dysfunction (disease). Mr. Russell


Mr. Russell

127Q. Introduction to Primate Anatomy (6 units). Lecture, two hours; laboratory, four hours. Recommended prerequisite: course 127P. Laboratory includes anatomical terms and principles of dissection of a nonhuman primate cadaver, with the study of osteological material. Lectures introduce basic developmental anatomy of gross structure; allometry, morphological and psychological scaling; and the morphological correlates of posture, locomotion, and diet.

Mr. Russell

127R. Introduction to the Comparative Morphology of Primate Anatomy (6 units). Lecture, two hours; laboratory, four hours. Recommended prerequisites: courses 127P. 127Q. The series covers the functional, evolutionary, and taxonomic studies of primate anatomy and physiology. Lectures compare functional systems (e.g., locomotion) through the primate series. In laboratory students dissect regions of several unrelated specimens and perform their own comparative analysis.

Mr. Russell

128A-128B. Primate Behavior Nonhuman to Human. Prerequisite: upper division standing. Course 128A is prerequisite to 128B. Review of primate behavior as known from laboratory and field studies. Stresses theoretical issues and the evolution of causation and behavioral strategies, the evolution of gross structure, and the evolution of nonhuman primate behavior.

Mr. Russell

128P. Social and Psychological Aspects of Myth and Ritual. The course is aimed at understanding the social and psychological constructs of myth and ritual, their evolution, and development. It examines the utility of the culture concept in more applied areas of anthropology. (Core course for cultural field.)

130. The Study of Culture. The course focuses on the 20th-century elaboration and development of the concept of culture from the Boasian period to the present, thereby surveying the major schools of anthropological thought, such as historical particularism, psychological anthropology, functionalism, cultural materialism, structuralism, and symbolic anthropology. It also examines the utility of the culture concept in more applied areas of anthropology. (Core course for cultural field.)

131. American Culture. Prerequisite: upper division standing. An examination of American life in historical and contemporary terms, with special reference to the social and cultural forces that are currently influencing American society. Mr. Osvald

132. Technology and Environment. Significance of material culture in archaeology and ethnology; problems of invention and the acceptance of innovations; the evolution and modification of technology; interrelationships of technological systems; selected problems in material culture.

133P. Social and Psychological Aspects of Myth and Ritual. The course is aimed at understanding the social and psychological constructs of myth and ritual, their evolution, and development. It examines the utility of the culture concept in more applied areas of anthropology. (Core course for cultural field.)

133Q. Symbolic Systems. Prerequisite: upper division standing or consent of instructor. An analysis of the anthropological research and theory on the cultural systems of thought, behavior, and communication expressed in a symbolic mode (as distinguished from the discursive, instrumental, and causal modes). Methods for the study of symbolic meaning, including the experiential approach.

Mr. Maquet

133R. Aesthetic Anthropology. Prerequisite: upper division standing. Elaboration of a cross-cultural notion of the aesthetic; that which meets the requirements of anthropological research. Aesthetic phenomena as cultural; their integration in a cultural system; their relationships with other elements in the individual and society. Mr. Maquet

134. Personality and Cultural Systems: Enculturation. Prerequisite: upper division standing or consent of instructor. The course examines the relationship between individual and culture by focusing on enculturative learning as modality of personality forms and internal dynamics of culture change. Major emphasis on cultural influences of cognition, perception, thought processes, socialization, and development of value.

Mr. Wilbert

135P. Introduction to Psychocultural Studies. Prerequisites: upper division standing or consent of instructor. A survey of the history and development of psychocultural studies. Topics are examined as they relate to the cross-cultural study of such things as personality, ethnocentrism, significance, and attitudinal states of consciousness, cognition, perception, motivation, and other similar phenomena.

135Q. The Individual in Culture. Prerequisite: upper division anthropology, sociology, or psychology standing. The course considers the balance for freedom and determinism for individuals and societies in the interrelation of personality, social structure, and culture. It surveys the nature and limits of human plasticity: the family, the self, personality within and between cultures; the relation of normal and abnormal conformity and deviance.
13SR. Cross-Cultural Socialization and Childhood. Lecture, three hours. Introduction to ethnographic data on socialization and child training. Theories of explanation and forms of socialization, including kinship for general anthropological research. Mr. Kroskrity

136P. Ethnology: Field Training. Training in ethnographic field methods. Execution of individual and group field research projects. Mr. Weisner

M135Q. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Same as Psychology M112 and Psychology M155.) Prerequisite: consent of instructor. The study of observing and recording behavior in natural settings is taught, emphasizing field training and practice in observing behavior. Group and individual projects are included. Some of the uses of observations and their implications for research in the social sciences are also discussed. Mr. Gallimore, Mr. Turner, Mr. Weisner (W)

137. Ethnography on Film. Intensive examination of filmed and written ethnographies of a wide range of the world's peoples, with the purposes of (1) comparing visual with written records and evidence of (2) developing criteria for adequate written and film ethnography. Mr. Moerman

138. Methods and Techniques of Ethnohistory. Introduction to the problems and procedures of extracting cultural data from documentary sources and their interpretation and analysis. The relevant documentary sources of various New World regions are selected as case histories to illustrate more concretely the problems and challenges in this major area of anthropological concern. Mr. Nicholson

139. Field Methods in Cultural Anthropology. Lecture, three hours. Prerequisite: upper division standing. Corequisite: course 139L. The course introduces students to the methods, research design, and techniques of conducting research in cultural anthropology. Field methods and techniques presented in course 139 are practiced and applied in simulated field situations. Styles of presenting ethnographic and anthropological information is systematized for presentation, analysis, and cross-cultural comparison. Mr. Wilbert

139L. Field Methods in Cultural Anthropology Laboratory, three hours. Prerequisite: upper division standing. Corequisite: course 139. The course provides students with supervised practice of field methods in cultural anthropology. Field methods and techniques presented in course 139 are practiced and applied in simulated field situations. Mr. Wilbert

Linguistic Anthropology

M140. Language in Culture. (Same as Linguistics M146.) Prerequisite: upper division standing or consent of instructor. The study of language as an aspect of culture: the relation of habitual thought and behavior to language; and the classification of languages and the characteristics of group membership. The course offers a holistic approach to the study of language and emphasizes the relation of linguistic anthropology to the fields of sociolinguistics and cultural studies. Mr. Kroskrity

141. The Ethnography of Communication: Introduction and Practicum. Prerequisite: upper division standing or consent of instructor. The course has two integral components: (1) to introduce students to the ethnography of communication—the description and analysis of situated communicative behavior—and the sociocultural knowledge which it reflects and (2) to train students to recognize, describe, and analyze the relevant linguistic, proxemic, and kinesic aspects of face to face interaction. Mr. Kroskrity

142A-142B. Human Social Ethnology. Prerequisite: consent of instructor. Course 142A is a strongly recommended prerequisite to 142B. Students make primary field observations (using video, tape, or film) of naturally occurring social interactions. These are analyzed in class for the interactive tasks, resources, and accomplishments displayed. The course requires lab notebooks and work outside of class and involves out-of-town fees to offset costs of equipment maintenance and insurance. Mr. Moerman

143A. Field Methods in Linguistic Anthropology: Practical Phonetics. Practice in elicitation from informants of the purposes and analysis of phonological systems and development of practical transcription, as a preliminary to learning to speak the native language and to the recording of ethnographic materials in native language. No prior experience in linguistics is assumed. Mr. Kroskrity

143B. Field Methods in Linguistic Anthropology: Syntax, Semantics, Textual Cohesion. Prerequisite: course 143A, equivalent experience, or consent of instructor. The course attempts to supply students with the skills of the cues necessary for conducting investigations into the syntactic, semantic, and textual (or discourse) structures of field languages. Practice with native speakers of various non-Indo-European languages is an important aspect. Mr. Kroskrity

144. American Indian Ethnolinguistics and Sociolinguistics. Prerequisite: prior coursework in either anthropology, linguistics, or American Indian studies. The course provides an introduction and comparative analysis of the sociocultural aspects of language use in Native North American Indian speech communities. Specific foci include both macro- and micro-sociolinguistic topics. Micro-sociolinguistic topics are comprised of such issues as multilingualism, cultural differences regarding appropriate communicative behavior and variation within speech communities (e.g., male and female speech, baby talk, ceremonial speech, etc.). Macro-sociolinguistic considerations include language contact and its relationship to language change and language in American Indian education. Mr. Kroskrity

C145. Afro-American Sociolinguistics: Black English. Lecture, three hours. Prerequisite: consent of instructor. The course aims to provide basic information on Black American English, an important minority dialect in the United States. The social implications of minority language groups are examined from the perspectives of their genesis, maintenance, and social functions. General problems and issues in the fields of sociolinguistics are examined through a case study approach. Concurrently scheduled with course 240Q. Ms. Mitchell-Kernan

Social Anthropology

150. Comparative Society. Prerequisite: course 5 or 6 or Sociology 1 or consent of instructor. The general principles of the organization of society; the relation of these to the technological complexity and ecological base of the societies; comparative investigation of structural organization in technological development of social systems. (Core course for social field.) Mr. Goldschmidt

151. Marriage, Family, and Kinship. Prerequisite: course 5 or 22. A survey of marital patterns, descent, and family structure in a range of societies. Emphasis on the relationship between kinship and other aspects of the sociocultural system and on the importance of kinship for general anthropological research. Mr. Levine

152. Traditional Political Systems. Prerequisite: course 150 or consent of instructor. Political organization in preindustrial societies of varying degrees of complexity. Law and the maintenance of order; corporate groups; ideology. The relations of political institutions to other institutions of society. Ms. Levine

152P. Comparative Systems of Social Inequality. Lecture, three hours. Prerequisite: course 5 or 22 or consent of instructor. Exploration of the cultural causes and consequences of social inequality based on rank, caste, class, ethnicity, or sex, with examples from Asian, Pacific, European, African, and American societies. Mr. Hammond

153A-153B. Production and Exchange in Traditional Societies. A review of economic and ecological approaches to studying organization of production and exchange. Economic life is viewed from three perspectives: adaptation, decision making, and social structure. Comparative theories are discussed in the context of various evidence from a wide variety of cultural systems. 153A. Nonstratified Societies; 153B. Stratified Societies. Mr. Earle, Mr. Johnson

154. Principles of Social Structure. Prerequisites: course 5 or 22 or Sociology 1, upper division standing in anthropology or sociology. The course focuses on the methods and theory which derive from Emile Durkheim in France and Radcliffe-Brown in England. It also discusses the variety of approaches and concerns in social anthropology. Ethnographic material is used to illustrate the methods and concepts used by social anthropologists. Ms. Levine

155. Illness in Non-Western Societies. Prerequisite: upper division standing or consent of instructor. An analysis of the cultural modes of thought and social structures associated with illness in non-Western societies. Emphasis on the social roles involved in the diagnosis and curing of illness. Mr. Newman

156. Comparative Religion. A survey of various methodologies in the comparative study of religious ideologies and action systems. These include the understanding of particular religions through descriptive and structural approaches, and the identification of social and psychological factors which may account for variation in religious systems cross-culturally. Mr. Earle

157. Intentional Communities. Prerequisites: upper division standing or consent of instructor. Communities and monasteries, ashram and kibbutz are voluntarily joined societal units, offering complete life-styles perceived as alternatives to the mainstream cultures and strenuous efforts to alter the membership composition. Questions such as the following are discussed in a comparative perspective: institutional goals stated in the community's "charter"; system of acquisition or production of goods and services; internal communication and social organization; individual experience; sociological and psychological functions; criteria of success and failure, subculture and counterculture. Mr. Maquet

158. Hunting and Gathering Societies. Prerequisite: course 5. A survey of hunting and gathering societies. Their distinctive features are examined from both an ecological and cultural viewpoint. The possibility of developing a general framework for synthesizing these two viewpoints is discussed. This synthesis is used as a basis for illustrating the relevance of hunting and gathering societies as an understanding of complex societies. Mr. Read

Social Action/Applied Anthropology

160. Introduction to Social Action Anthropology. Lecture, three hours. Prerequisites: course 5 or 22 and upper division standing, or consent of instructor. The application of anthropology to such domestic and international issues as poverty, discrimination, public health, mental health, child welfare, education, delinquency and drug abuse, aging, housing and urban renewal, organizational change, economic development, environmental protection, population control, diplomacy, warfare and revolution, the protection of native peoples, disaster relief, and refugee resettlement. Mr. Hammond
161. Development Anthropology. Prerequisites: course 5 and upper division standing, or consent of instructor. An introductory survey of the problems of development of tribal peoples, the proletarization of peasants, and the urbanization of ruralities. Particular emphasis on the relation between national, international, and localized sociocultural systems, the role of structural containment. Alternative theoretical constructs are critically discussed. Ms. Levine

162. Contemporary American Indian Problems. Prerequisites: course 5 and upper division standing, or consent of instructor. An introductory survey of the problems of development of tribal peoples, the proletarization of peasants, and the urbanization of ruralities. Particular emphasis on the relation between national, international, and localized sociocultural systems, the role of structural containment. Alternative theoretical constructs are critically discussed. Ms. Levine

164. The Afro-American Experience in the United States. (Same as Afro-American Studies M164.) The course aims to promote understanding of contemporary sociocultural forms among Afro-Americans in the United States by presenting a variety of paradiagnostic and diaphanoscopic perspectives on the African-American experience in the New World. It is concerned with the utilization of anthropological concepts and methods in understanding the origins and main patterns of paradiagnostic and diaphanoscopic perspectives of African-American life. Ms. Mitchell-Kernan (F)

165. Demographic Problems in Nonindustrial Societies. Prerequisite: course 5 or 22. The course explores the demographic phenomena associated with various aspects of sociocultural systems. Ms. Levine

166. Comparative Minority Relations. Prerequisites: courses 5 and 22. Comparative study of minority relations, social discrimination, and prejudice. Emphasis on cross-cultural perspectives and the use of anthropological methods. Ms. Levine

167. Urban Anthropology. Prerequisite: consent of instructor. A survey of urbanization throughout the world, with emphasis on urban adaptation of rural migrants. Special focus on the problems of urban-rural migration of ethnic minority groups and subsequent adaptation of them within the United States explored in terms of the methods and perspectives of anthropology. Ms. Rodriguez

167P. Psychoanalysis and Anthropology. Lecture, three hours. Exploration of mutual relations between anthropology and psychoanalytic, considering both theory and method. History of cutaneous developments in psychoanalysis; anthropological critiques of psychoanalytic theory and method, toward a cross-cultural psychoanalytic approach. Mr. Johnson

M168. Health in Culture and Society. (Same as Nursing M158.) Prerequisite: upper division standing. An examination of the theoretical models and methodological approaches in the study of health in cultural systems. Mr. Johnson

171. Civilization of Sub-Saharan Africa. Prerequisite: upper division standing or consent of instructor. A comprehensive overview of the sociocultural world of sub-Saharan Africa. This world is interpreted as a broad cultural unit with its specific African configuration, both in the historical development and on a particular association of an environment (dry savanna, grassland, equatorial forest, highlands) with a dominant technique of acquisition/production (hunting/gathering, herding, horticulture, cattle herding, commercial crops, industry). Mr. Maquet

North America

172P. North American Indian Cultures. An examination of American Indian cultures from early historic time to modern development. Mr. Oswalt

172Q. Cultures of the California Indians. An examination of the cultural diversity of the Indians of California: their technology, social organization, and religions. Mr. Meighan

172R. Cultures of the Pueblo Southwest. Prerequisite: course 5, 6, 22, upper division standing, or consent of instructor. A survey of the ethnology of the Pueblo Indians (Hopi, Zuni, Tanoan, and Keresan) and their immediate neighbors. The course provides basic information on the history, languages, social organization, and traditional cultural systems of these groups. Mr. Kroskrity

172S. Theory and Method in the Pueblo Southwest. Prerequisite: course 172R or consent of instructor. The course focuses on selected problems in the ethnography of the Pueblo Indians (Hopi, Zuni, Tanoan, and Keresan) and their immediate neighbors. The course considers the problem of objectivity, and the use of native languages as field tools. Mr. Kroskrity

172T. Ethnography of South American Indians. Prerequisite: upper division standing or consent of instructor. An introduction to the ethnography of South American Indians. Mr. Oswalt

172U. Eskimos. Prerequisite: upper division standing. A survey through history, ethnographic, and contemporary Eskimo life stressing their importance in anthropological theory and practice. Mr. Rodriguez

172V. Ethnology of the Hispanic Peoples of the U.S. Southwest. (Formerly numbered 172T.) (Same as Chicago Studies M172T.) Lecture, three hours. Prerequisite: consent of instructor or 22 or consent of instructor. An ethnography of the social and cultural adaptations of the Hispanic peoples in the U.S. Southwest: their respective social organization, economic and political institutions, sacred and secular belief systems, and expressive cultures. P/NP (undergraduates), S/U (graduates), or letter grading. Ms. Rodriguez

172W. Eskimos. Prerequisite: upper division standing. A survey through history, ethnographic, and contemporary Eskimo life stressing their importance in anthropological theory and practice. Mr. Rodriguez

Middle America

173P. Cultures of Middle America. An introduction to the social and cultural anthropology of Middle America, with emphasis on indigenous communities. Aspects of economics, society, politics, and religion are reviewed in light of their historical development and current distribution. Mr. Johnson

173Q. Latin American Communities. An overview of the social and cultural anthropology of small communities in Latin America. Emphasis is placed on social organization and interpersonal relations as described in the context of economic, political, and cultural environments. Mr. Johnson

South America

174P. Ethnography of South American Indians. Introduction to the ethnography of South American Indians, with special emphasis on Lowland South America. Mr. Wilbert

174Q. Ethnology of South American Indians. Prerequisite: course 174P or consent of instructor. Introduction to the ethnography of South American Indians, with special emphasis on Lowland South America. Mr. Wilbert

Asia

175P. Civilizations and Cultures of Southeast Asia. An introduction to the understanding and appreciation of the peoples, cultures, and societies of the Philippines, Indonesia, Malaysia, Thailand, Burma, Laos, Cambodia, and Vietnam seen against their historical and cultural backgrounds. Ms. Levine, Mr. Maquet

175Q. Civilizations of Inner Asia. The course provides an overview of civilization and culture among the diverse peoples of Inner Asia, including Mongolia, Tibet, and the Soviet Central Asia. Mr. Newman

175R. Civilizations of Inner Asia. The course provides an overview of civilization and culture among the diverse peoples of Inner Asia, including Mongolia, Tibet, and the Soviet Central Asia. Ms. Maquet

175S. Japan. Prerequisite: course 22. An overview of contemporary Japanese society. General introduction; kinship, marriage and family life; social mobility and education; norms and values; religions; patterns of interpersonal relations; social deviance. Ms. Levine

Middle East

176. Cultures of the Middle East. Prerequisite: course 5 or consent of instructor. The course delineates the area of "Arab Peoples" through an examination of their historical background, their language, and their belief system. It attempts to uncover the structural principles shared by the Arab people of North Africa and Southwest Asia which underlie Arab culture. Mr. Newman

177. Cultures of the Pacific. The course covers the five major culture areas of Australia, Melanesia, Polynesia, and Micronesia. General geographical features, prehistory, and language distribution of the whole region are discussed. Distinctive sociocultural features of each area are presented in the context of their adaptive significance. Mr. Newman
History and Theory

182. The History of Anthropology: A brief survey of the development of social anthropology in France and Britain from the Enlightenment to the present. Mr. Williams

183. History of Anthropology: The development of world archaeology from the Renaissance to the present. Mr. Sackett

184. History of Human Evolutionary Theory: The men, the events, and the spirit of the time which mark man's attempts to understand his origins and diversity. Ms. Levine

185A-185B. Quantitative Methods and Models in Anthropology: Prerequisite: upper division standing. The course is designed to provide an introduction to quantitative methods of data analysis and the modeling of sociocultural systems. 186A emphasizes methods of data analysis and topics such as data description, sampling, estimation procedures, and hypothesis testing. 186B covers topics from statistical modeling (e.g., linear regression models) and deterministic modeling (e.g., network models, kinship structures, systems, models). Mr. Read

167. Theory and Method in Sociocultural Anthropology: Prerequisite: at least eight units of upper division social and cultural anthropology. A review of the major theoretical orientations in sociocultural anthropology, with special emphasis on the research methods that have been found most useful in each. The relevance of philosophy of science to sociocultural anthropology is examined, and theoretical and methodological links to other social sciences are identified. Mr. Johnson

C188. Simulation in Anthropology: Discussion, three hours; laboratory, three hours. Prerequisites: upper division standing, successful completion of courses 1 or 120, and 186A, or equivalent, consent of instructor. Introduction to the theory, appropriate use, and validation of simulation; review of the history of simulation methods in anthropology; the use of the microcomputer as a research tool. Intensive introduction to dynamic approximations of theoretical demographic and population processes. Concurrently scheduled with course C288. P/NP or letter grading. Mr. Mai

Special Studies

191. Writing for Anthropology: Prerequisite: course 5. Students learn writing skills in various academic forums: term papers, essay examinations, journal articles, and reports. Class projects require student writing and evaluation of professional writing. Emphasis on the organization and presentation of a scholarly argument. Mr. Earle

197H. Departmental Honors Seminar. (Formerly numbered 198H.) Seminar, three hours. Prerequisites: a 3.5 GPA in at least two upper division anthropological courses and eligibility for Letters and Science honors. Must be taken toward the upper division anthropology courses required for the major.

199A. Directed Studies for Honors: Discussion, three hours. Prerequisite: honors major in anthropology. Discussion meetings with the adviser to help define the research and preparation for the project. Extensive reading and research in the field of the proposed honors thesis. The project often involves summer fieldwork. In Progress grading (credit to be given only on completion of course 199HC).

199B. Directed Studies for Honors: Prerequisites: course 199A and honors major in anthropology, or consent of instructor. Must be taken in Fall Quarter of the senior year. Continued reading and research directed toward the analysis and presentation of data in a draft of the honors thesis (no more than 30 pages). In Progress grading (credit to be given only on completion of course 199HC).

199C. Directed Studies for Honors: Prerequisites: course 199A and honors major in anthropology, or consent of instructor. Preparation of the final version of the honors thesis (no more than 30 pages) that argues a central thesis of anthropological relevance. Must be submitted by the last day of class in Winter Quarter of the senior year. (W)

Graduate Courses

Admission to all graduate courses is subject to consent of instructor and completion of appropriate course requirements (when so indicated). Graduate courses are normally nonrepetitive in content but may be repeated for credit by consent of instructor and graduate counselor.

Archaeology

210. Analytical Methods in Archaeological Studies: Prerequisite: one quarter of statistics, consent of instructor. The course covers data analysis procedures in archaeology. Emphasis is on the conceptual framework for the analysis of archaeological data. It begins at the level of the attribute and ends at the level of the region. Mr. Read

211. Regional Analysis in Archaeology: Prerequisite: consent of instructor. Course 210 is not prerequisite to 211. The course surveys the analytical methods used in archaeology to study prehistoric settlement systems. Specific issues include settlement distribution with respect to natural resources, settlement hierarchy, and patterns of exchange. Mr. Earle

212P. Selected Topics in Hunter-Gatherer Archaeology: Prerequisite: consent of instructor. Regional studies in the development of early human culture. May be repeated for credit. Mr. Meighan

212Q. Problems in Southwestern Archaeology: Prerequisite: consent of instructor. A consideration of prehistoric cultural systems in the American Southwest, with emphasis on the description and explanation of organizational variability and change. Specific research questions vary with each course offering. May be repeated for credit. Mr. Hill

212R. Problems in Oceanic Archaeology: Lecture, three hours. Prerequisite: consent of instructor. The prehistory of Oceania is considered. Content may vary, but problems to be considered include the history and process of island occupation, island adaptation, and the evolution of social stratification. May be repeated for credit. Mr. Earle

213. Selected Topics in Problems in Old World Archaeology: Prerequisite: consent of instructor. May be repeated for credit. Mr. Sackett

214. Selected Topics in Prehistoric Civilizations of the New World. Prerequisite: consent of instructor. The Mesoamerican and Andean civilizations normally constitute the major focus of the seminar. May be repeated for credit. Mr. Donnan, Mr. Nicholson

215. Field Training in Archaeology (4 to 8 units): Prerequisite: prior experience in archaeology. Advanced training in archaeological excavation techniques, including organization of projects, supervision of field crews, methodological, field recording and preliminary analysis of field data. May be repeated for credit. Mr. Meighan

216. Dating Techniques in Environmental Sciences and Archaeology. (Same as Geography M216A) Prerequisites: consent of instructor. A colloquium devoted to topics in dating techniques in environmental sciences, archaeology, and biological anthropology, as well as laboratory instruction and experimental work. May be repeated for credit. Mr. Berger

217. Explanation of Societal Change: Prerequisite: consent of instructor. Examination of the processes of societal evolution, emphasizing the usefulness of a variety of explanatory models drawn from general systems theory, ecology, anthropology, and other relevant sources. Specific research questions vary with each course offering. May be repeated for credit. Mr. Hill

218. Historical Reconstruction and Archaeology: Prerequisite: consent of instructor. Interpretation of historical development through archaeological research. Application of ethnohistory to archaeological problems. May be repeated for credit. Mr. Hill, Mr. Nicholson

219A-M219B. Graduate Core Seminars in Archaeology (6 units each). (Same as Archaeology M219A-M219B.) Seminar, three hours. Required of anthropology students in the archaeology field. Seminar consists of five discussion segments dealing with major topics. May be repeated for credit. Mr. Meighan, Mr. Nicholson, Mr. Hill

221A. Directed Studies for Honors: Prerequisite: consent of instructor. An examination of recent research in one of the departmental fields. May be repeated for credit. Mr. Meighan

221B. Specialized Topics in Social, Political, and Economic Anthropology: Prerequisite: consent of instructor. A colloquium devoted to topics in social, political, and economic anthropology, as well as laboratory instruction and experimental work. May be repeated for credit. Mr. Nicholson

222. Population Genetics of Man. Prerequisite: consent of instructor. Examination of the biological and genetic basis of human variation. Emphasis on the nature of hypotheses and their testing in ongoing student and faculty research. May be repeated for credit. Mr. Kennedy

222A-222B. Fossil Evidence for Human Evolution. Prerequisite: consent of instructor. Examination of the fossil evidence for man's evolution. Mr. Kennedy

Biological Anthropology

220. Current Problems in Biological Anthropology: Prerequisite: consent of instructor. An examination of current research in biological anthropology (specific topics to be announced). Emphasis is on the nature of hypotheses and their testing in ongoing student and faculty research. May be repeated for credit.
M222Q. Probability Models and Statistical Methods in Genetics. (Same as Biometrics M246.) Lecture, three hours. Prerequisites: course 222P, Mathematics 3A, two quarters of statistics, graduate standing. An introduction to probability models and statistical methods in genetics. Maximum likelihood methods for estimated genetic parameters are introduced and discussed in depth. Mr. Read (W).

M222R. Models in Genetic Analysis. (Same as Biometrics M207.) Lecture, three hours. Prerequisites: course M222Q and graduate standing, or consent of instructor. Basic concepts of human genetics, with emphasis on methods of computer-oriented genetic analysis. Topics include segregation analysis, genetic linkage, polygenic (quantitative) models, and population structure. Ms. Spence (F).

225. Population Genetics. Prerequisite: consent of instructor. A consideration of some of the special problems of human populations and their current application in research. May be repeated for credit. Mr. Williams.

223. The Roots of Human Behavior. Prerequisite: consent of instructor. An examination of the behavior of living nonhuman primates and of the evolution and biological basis of human behavior. May be repeated for credit.

230P. Cultural Anthropology. Prerequisites: consent of instructor. An examination of the effects of culture on the thought, behavior, and values of non-Western societies. Emphasis is on social and economic aspects of cultural change. May be repeated for credit. Mr. Bailey.

236P. Ethnopsychiatry. Prerequisites: consent of instructor. Consideration of the application of normal psychopathology to the interpretation of deviant behavior in non-Western societies. May be repeated for credit. Mr. Buchwald, Mr. Edgerton, Mr. Price-Wilkins.

239P. Psychological Anthropology. (Same as Psychology M239.) Lecture, three hours. Prerequisite: consent of instructor. Consideration of the implications of the normal psychology of behavior and cognition for the understanding of societies in non-Western cultures. May be repeated for credit. Mr. Kennedy.

240P. Sociocultural Perspectives on Mental Retardation. (Formerly numbered 240.) (Same as Psychiatry M240.) Lecture, three hours. Prerequisite: consent of instructor. The seminar explores concepts such as "intelligence," "competence," and "adaptive behavior" in varying non-Western societies as background to current concerns in the classification and treatment of mental retardation. May be repeated for credit. Mr. Edgerton.
239P. Selected Topics in Field Training in Ethnography (4 to 8 units). Prerequisite: consent of instructor. Supervised collection of ethnographic information in the field. Students spend full time in the field for most of the quarter. May be repeated for credit.

239Q. Analysis of Field Data. Prerequisite: course 239P or other field training course. Supervised analysis of ethnographic materials by students who have participated in a related field training course. Students are required to conduct research in consultation with the instructor, as well as general project data in the preparation of articles for professional journals. May be repeated for credit.

Linguistic Anthropology

240. Seminar in Language and Culture. Prerequisite: consent of instructor. The development of anthropological linguistics, modern linguistic theory, and its application to the study of nonlinguistic aspects of culture, including relationship of language to world view, comparative historical linguistics to prehistory, lexicostatistics, semantic analysis, linguistic acculturation, sociolinguistics, and ethnolinguistics. Mr. Krokskity

241. Topics in Linguistic Anthropology. (Same as Linguistics M246C.) Prerequisite: consent of instructor. Problems in relations of language, culture, and society. May be repeated for credit.

242. The Ethnography of Communication. Prerequisite: graduate standing or consent of instructor. A seminar devoted to examining representative scholarship from the fields of sociolinguistics and the ethnography of communication. Particular attention to theoretical developments including the relationship of the ethnography of communication to such disciplines as anthropology, linguistics, and sociology. Topical foci include style and strategy, speech variation, varieties of noncasual speech genres, languages and ethnicity, and nonverbal communication behavior. Mr. Krokskity

243P. American Indian Ethnolinguistics and Sociolinguistics. Prerequisites: prior coursework in either anthropology, linguistics, or American Indian studies, consent of instructor. The course examines the social and cultural aspects of language use in Native North American speech communities. Specific foci include both micro-sociolinguistic topics (such as multilingualism, cultural differences regarding appropriate communicative behavior, and variation within speech communities) and macro-sociolinguistic topics (such as language contact, language change, and language in American Indian education). Graduate students conduct library and/or other research and participate in group discussion. Mr. Krokskity

243Q. Afro-American Sociolinguistics: Black English. (Same as Afro-American Studies M200D.) Lecture, three hours. Prerequisite: consent of instructor. The seminar aims to provide basic information on Black American English, an important minority dialect in the United States. The social implications of minority dialects are examined from the perspectives of their genesis, maintenance, and social functions. General problems and issues in the fields of sociolinguistics are examined through a case study approach. Concurrently scheduled with course C145. Students are required to conduct research in consultation with the instructor, as well as participate in group discussion. Mr. Mitchell-Kernan

244. Topics in Language Socialization. Prerequisite: consent of instructor. Selected topics in the study of language socialization, with a special focus on the development of discourse skills and the mastery of situationally appropriate speech, may be repeated for credit. Ms. Mitchell-Kernan

245. Linguistic and Intrastructural Variation. Prerequisite: consent of instructor. The course addresses the problem of variation as it impinges on the disciplines of anthropology and linguistics. Among the objectives of the course are to: (a) acknowledge the importance of speech variation in anthropological linguistics research, to critically assess a broad and representative sample of modern scholarly contributions to this field, as well as our understanding of interindividual and intergroup variation, and to evaluate the utility and potential applicability of recent linguistic models to anthropological linguistics and anthropological theory. Mr. Krokskity

246. Research Design and Field Training in Linguistic Anthropology. Prerequisite: consent of instructor. Supervised collection of linguistic information in the field. Students spend full time in the field for most of the quarter. May be repeated for credit. S/U or letter grading.

247. Analysis of Linguistic Field Data. Prerequisite: course 246, other field training course, or consent of instructor. Supervised analysis of linguistic field data by students who have participated in a related field training course. Work involves their own as well as general project data in the preparation of articles for professional journals. May be repeated for credit. S/U or letter grading.

247A. Ethnographic Film. (Same as Theater Arts M145.) Lecture, three hours. Prerequisite: consent of instructor. Discussion of the history, methods, and criteria for the use of film as a medium for the preservation and communication of human cultures. Filming assignments are given to increase the understanding of the theoretical and practical aspects of ethnographic filming. The potential of both film and video for fieldwork is considered. Mr. Boehm, Mr. Moerman (F)

248. Practicum in a Field Language (4 to 8 units). Prerequisite: consent of instructor. Intensive training in an indigenous language as preparation for work in the field.

Social Anthropology

250. Social Anthropology. Prerequisite: consent of instructor. Intensive examination of current theoretical views and literature. Ms. Levine

251P. Cultural Ecology. Prerequisite: consent of instructor. May be repeated for credit. Mr. Johnson

251Q. Cultural Ecology of Lowland South America. Prerequisite: consent of instructor. Seminar on traditional adaptations to the tropical forest. Explanatory principles accounting for cultural differences are explored, and special attention is given to effects of modern changes on the people and their environment. Mr. Johnson

252. Special Topics in Social Process. Prerequisite: consent of instructor. Selected aspects of the literature on cultural and social process. The significance of repeated and/or cumulative sequences of events in a variety of social and cultural contexts. Understanding approaches compared with normative concepts and ideal models. May be repeated for credit.

252P. Social Inequality. Lecture, three hours. Prerequisites: course 152P, upper division standing, consent of instructor. Seminar participants analyze particular problems in understanding systems of structured social inequality based on rank, caste, class, ethnicity, or sex. Participants serve as seminar discussion leaders and present a research paper. S/U or letter grading. Mr. Hammond

253. Economic Anthropology. Prerequisite: consent of instructor. May be repeated for credit.

254. Kinship. Prerequisite: consent of instructor. May be repeated for credit.

255. Comparative Political Institutions. Prerequisite: consent of instructor. May be repeated for credit.

257. Social Interaction. Prerequisite: consent of instructor. The course focuses on issues for ethnographic theory and practice raised by developments in anthropological, sociological, psychological, linguistic, and ethnological contributions to our understanding of the organization of face-to-face behavior. May be repeated for credit. Mr. Moerman

258. Comparative Studies of Intentional Communities. Prerequisite: course 157 or consent of instructor. Questions concerning the ideational, social, and individual significance of intentional communities are selected and discussed in depth, with reference to particular collectivities. May be repeated for credit. Mr. Maquet

Social Action/Applied Anthropology

260. Urban Anthropology. Prerequisite: course 167 or consent of instructor. An intensive anthropological examination of the urban setting as a human environment.

261. Comparative Minority Relations. Prerequisite: consent of instructor. An analysis of the major theoretical and methodological issues in the study of minority relations from a comparative perspective. Concepts, conflict, and pluralistic constructs are analyzed and their strengths as explanatory devices investigated as they pertain to dependent populations in North America, Latin America, Southern Africa, India, Asia, and the Euro-Slavic continent. May be repeated for credit. Ms. Rodriguez

261P. Issues in Development Anthropology. Lecture, three hours. Prerequisite: course 160 or 161 or consent of instructor. Seminar participants analyze selected problems in economic development in Third World countries in the context of related issues such as health and education, environmental protection, housing and urbanization, promotion of local participation, women's roles, protection of indigenous minorities, infrastructural development, diplomacy, warfare and revolution, and migration and refugee resettlement, with recommendations for action. Mr. Hammond

262. The Cultural Context of Health Care. Prerequisite: consent of instructor. Concepts and treatment of illness and disease in cross-cultural perspectives, with emphasis on research problems and methods. The course introduces the anthropological approach to health-related research, then explores the intersections of anthropology and problem areas in public health and psychiatry (such as epidemiology, fertility regulation, socialization, and developmental disabilities). Mr. Johnson

263P. Culture and Human Reproduction. (Same as Public Health M276.) Lecture, two hours; discussion, two hours. Prerequisites: Public Health 110, 112, 172, 474, or equivalent, consent of instructor. Exploration of human behavior related to reproduction. Cross-cultural exploration of biological and behavioral factors, with particular reference to human adaptation. Ms. Sroczynski

265. Medical Anthropology. (Same as Nursing M217.) Lecture, three hours. Prerequisite: course M168 or consent of instructor. Any of the topics covered in course M168 are selected each quarter for intensive literature review and independent projects. May be repeated for credit.

265P. Gender Systems. Discussion, three hours. Prerequisite: graduate standing or consent of instructor. The course focuses on current theoretical developments in understanding gender systems cross-culturally. Of particular concern is the relationship between systems of gender, economy, ideological systems, and social inequality. Ethnographic cases are selected from the recent literature. S/U or letter grading. Ms. Levine
Regional Cultures

271. African Cultures. Prerequisite: consent of instructor. Survey of the literature and problems of African culture.

272. Indians of South America. (Same as Latin American Studies M250A.) Lecture, three hours. Prerequisite: consent of instructor. Survey of the literature and research topics related to Indian cultures of South America. May be repeated for credit.

Mr. Wilbert

273. Cultures of the Middle East. Prerequisite: course 176 or consent of instructor. Survey of the literature and problems of the various cultures of the Middle East.

274. Cultures of the Pacific Islands. Prerequisite: consent of instructor. Topics in the contemporary sociocultural anthropology and classic ethnography of Melanesia, Polynesia, and Micronesia. May be repeated for credit.

Mr. Newman

275. Ethnicity in the Southwest. Discussion, three hours. Prerequisite: graduate standing. Comparative focus on ethnic relations among Indian, Mexican American, and Anglo populations within four sub-regions of the U.S. Southwest: the lower Rio Grande valley of south Texas, the Rio Arriba of northern New Mexico, western Arizona, and Southern California.

Ms. Rodriguez

History and Theory

280. Anthropology Theory. Prerequisite: graduate standing in anthropology or consent of instructor. The course examines the range of theories that anthropologists have employed in describing and explaining variability in sociocultural phenomena. The organization of particular theories, as well as issues that separate divergent theories, is explored. Emphasis is on up-to-date examples of different theoretical perspectives. Major perspectives include evolutionism, cultural ecology, British functionalism, French functionalism, structuralism, cultural and personality, psychological anthropology (Freudian, neo-Freudian, non-Freudian), behavioral anthropology, cognitive anthropology, and ethnomasculism.

281. Selected Topics in the History of Anthropology. Prerequisite: consent of instructor. The seminar deals in depth with particular problems in the history of anthropology as dictated by the interests of students and faculty. May be repeated for credit.

282. Ethnographic Design in Cultural Anthropology. Prerequisite: consent of instructor. Primarily intended for graduate students preparing for fieldwork. The unique position of anthropology among the sciences and the resulting problems for scientific research design are discussed. Lectures and readings review typical research problems and appropriate methods. Students prepare their own research designs and present them for class discussion.

Mr. Johnson

283. Mathematical Models in Anthropology. Prerequisite: consent of instructor. The course is organized around current topics and issues in mathematical anthropology. An overview of a variety of mathematical approaches relevant to theory, systems theory, decision theory, Markov processes, etc., is presented and discussed.

Mr. Read

284. Qualitative Research Methodology. (Same as Public Health M273.) Discussion, three hours; laboratory, one hour. Prerequisites: Public Health 100A and 181, one undergraduate course in social psychology, anthropology, or sociology, consent of instructor. Intensive seminar-field course in qualitative research methodology. Emphasis on using qualitative methods and techniques in research and evaluation related to health care.

Ms. Scrimshaw

285. Society and Culture in the History of Social Sciences. Lecture, two hours; discussion, two hours. Prerequisite: consent of instructor. The course investigates the history of the concepts of society and culture and their functions in various social sciences. It focuses on works of particular importance in the moral and political sciences (e.g., works of Vico, Montesquieu, Durkheim, Weber, and De Tocqueville) and in the ways in which these are seen as evaluated from the vantage points of different disciplines.

Mr. Klborne

Quantitative Methods in Anthropology. Laboratory, three hours. Prerequisites: courses 186A-186B or equivalent, consent of instructor. Computer-aided methods of quantitative data analysis, including multivariate techniques, in the context of student research data sets.

Mr. Read

Simulation in Anthropology. Discussion, three hours; laboratory, three hours. Prerequisites: graduate standing, successful completion of courses 1 or 120 and 186A, or equivalent, consent of instructor. Introduction to the theory, appropriate use, and validation of simulation; review of the history of simulation methods in anthropology; the use of the microcomputer as a research tool. Intensive introduction to dynamic approximations of theoretical demographic and population processes. Concurrently scheduled with course C186B. Graduate students are required to meet one additional hour each week to discuss relevant simulation literature. S/U or letter grading.

Mr. Mai

Computer Methodologies in Latin American Studies and Anthropology. (Same as Latin American Studies M225.) Lecture, three hours. Prerequisite: consent of instructor. The seminar introduces some basic principles of computing and information processing, along with their potential applications in Latin American research. The impact that computers are having in Latin American society is also examined.

Mr. Behrens

The Roots of Human Behavior. Prerequisite: consent of instructor. An examination of the behavior of living nonhuman primates and of the evolution and basic principles of human behavior.

Special Studies

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching assistantship under the guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA adviser and Graduate Dean, and host campus instructor, department Chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596. Individual Studies for Graduate Students (2 to 8 units). Prerequisite: consent of instructor. Directed individual studies. S/U or letter grading.


599. Research for Ph.D. Dissertation (2 to 12 units). Prerequisite: consent of instructor. Ph.D. dissertation research or writing. Students must have completed the qualifying examinations and ordinarily take no other coursework.
Applied Linguistics
(Interdepartmental)

3308 Rolfe Hall, 825-4631

Professors
Stephen R. Anderson, Ph.D. (Linguistics)
Raimo A. Antilla, Ph.D. (Linguistics)
J. Donald Bowen, Ph.D. (English)
William O. Bright, Ph.D. (Linguistics)
Russell N. Campbell, Ph.D. (English), Chair
Marianne Celce-Murcia, Ph.D. (English)
Victoria A. Fromkin, Ph.D. (Linguistics)
Evelyn R. Hatch, Ph.D. (English)
Edward L. Keenan, Ph.D. (Linguistics)
Peter Ladefoged, Ph.D. (Phonetics)
Pamela L. Munro, Ph.D. (Linguistics)
John F. Povey, Ph.D. (English)
Paul M. Schachter, Ph.D. (Linguistics)
Russell G. Schuh, Ph.D. (Linguistics)
Robert P. Stockwell, Ph.D. (Linguistics)
Sandra A. Thompson, Ph.D. (Linguistics)
Clifford H. Prator, Ph.D., Emeritus (English)

Associate Professors
Roger W. Andersen, Ph.D. (English)
George D. Bedell, Ph.D. (Linguistics)
Thomas J. Hinnebusch, Ph.D. (Linguistics)
Earl J. Rand, Ph.D. (English)
John H. Schumman, Ed.D. (English)

Assistant Professors
John W. DuBois, Ph.D. (Linguistics)
Bruce P. Hayes, Ph.D. (Linguistics)
Patricia A. Keating, Ph.D. (Linguistics)
Mary E. McGroarty, Ph.D. (English)
Timothy A. Stowell, Ph.D. (Linguistics)

Visiting Associate Professor
Grant Henning, Ph.D.

Visiting Assistant Professor
Suzanne Salimbene, Ph.D.

Scope and Objectives

Since language permeates every aspect of our social, economic, political, and academic pursuits, it is small wonder that we have deep abiding curiosity about its origin, its use, and its acquisition. The UCLA doctoral program in applied linguistics provides a rich and supportive environment for graduate students and faculty to define and resolve questions that satisfy that curiosity.

The combined faculties of the Department of Linguistics and the English as a Second Language (ESL) Section, as well as professors in Psychology, Sociology, and Education, represent a wide range of expertise and experience in language-related research. Their guidance and collaboration with students as they apply relevant elements of linguistics, psycholinguistics, and sociolinguistics result in substantial research findings in the area of language use, education, acquisition, and analysis. Graduates of the program are well prepared to pursue academic and professional careers at the highest level of service and inquiry.

Ph.D. Degree

Admission

The basic requirement for admission is the completion of the UCLA Master of Arts degree in Teaching English as a Second Language (TESL) or in Linguistics or the equivalent of one of these. Applicants with a graduate degree in TESL, linguistics, applied linguistics, psycholinguistics, or sociolinguistics from another recognized institution may be admitted provided they then make up the courses in one or the other of the two UCLA M.A. programs whose equivalents they have not yet taken. Students with graduate degrees in other related disciplines (such as a foreign language, English, education, psychology, sociology, or anthropology) are advised to complete the UCLA M.A. in Linguistics or TESL before seeking admission to the Ph.D. program.

Prospective candidates are required to submit (1) three letters of recommendation from professors who are well acquainted with their academic background; (2) a definite and complete statement of the type of dissertation they hope to prepare; (3) copies of any relevant professional publications, M.A. theses, or substantial papers they may have written. The Aptitude Test of the Graduate Record Examination (GRE) should also be taken. Applications for admission to Fall Quarter, which is when most students are admitted, should reach the Graduate Admissions Office by the preceding December 30; the supporting materials should reach the Applied Linguistics Program (3308 Rolfe Hall, UCLA, Los Angeles, CA 90024) no later than February 15.

Admission criteria include graduate and undergraduate grade-point averages, relevant professional experience, command of a foreign language, the quality of the M.A. thesis, and any language-related publications the candidate may have written.

Major Fields and Specializations

Four areas of specialization are available: language analysis, language education, language acquisition, and language use. For details on each specialization, contact the program office.

Foreign Language Requirement

Before advancement to candidacy, students whose native language is English must demonstrate proficiency in two foreign languages by one of the following: (1) a reading examination; (2) a research paper based on extensive sources in the language; (3) a conversation examination showing knowledge in depth; (4) an Educational Testing Service (ETS) graduate examination. You may substitute three graduate courses in research design and statistics for one of the two foreign languages. In consultation with the interdepartmental committee, you must select the most appropriate means of fulfilling the requirement.

Course Requirements

In addition to fulfilling the general University requirements, candidates for the Ph.D. in Applied Linguistics must meet the program requirements listed below.

Basic Preparation: Any of the following courses not already taken must be completed as early as possible, and before advancement to candidacy for the degree. For basic preparation in linguistics, you can select either a phonetics and phonology track or a syntax and semantics track. For both tracks, you must take Linguistics 120A and either Linguistics 120B, 127, or English 122K. Students selecting the phonetics and phonology track would then take Linguistics C165A/C200A, followed by Linguistics 201A or 203. Students selecting the syntax and semantics track would take Linguistics C165B/C200B, followed by Linguistics 206A or 206B or 207. For basic preparation in TESL, you must take English 241K, 370K, and 380K. Course 370K, which is organized as a general orientation to the ESL Section, must be taken at UCLA. If you have taken courses equivalent to any of the remaining courses at another institution, you will not be required to take them at UCLA. If you have at least one year of experience in teaching a second language, you may be exempted from course 380K.

Units and Courses: As a breadth requirement, all candidates must take at least 32 units of graduate-level coursework (in the 200 or 500 series). These 32 units may not include courses taken while completing basic preparation courses. Linguistics 275, English 400K, or Applied Linguistics 597 or 599. No more than eight of the 32 units may be in 596 courses, and these should be in Applied Linguistics 596, if possible.

The 32 units (eight courses) must include at least two courses in each of the specializations of language analysis and language education, as well as two courses in either language acquisition or language use. (None of the aforementioned six courses may be 596 courses taken in departments other than Linguistics or English.) An additional two courses are required in the specialization in which the dissertation research will be done. Thus, a student who opted for a dissertation in language acquisition would take a minimum of four courses in that area, plus two in language analysis and two in language education.

Appropriate graduate courses taken at UCLA after completion of the M.A. but before admission to the doctoral program may be applied toward the eight-course requirement for the Ph.D. Credit may be transferred for up to two courses taken at another institution, but only
for graduate-level courses taken after completion of the M.A. and preferably taken within the framework of UCLA’s Applied Linguistics 501.

Within Graduate Division limits, courses that may be taken on an S/U basis include undergraduate courses taken as prerequisites to needed graduate courses, undergraduate courses not required, reading courses in a foreign language, graduate courses taken in addition to the required 32 units, Applied Linguistics 501 and 597 through 599, English 400K, and Linguistics 275. All other courses must be taken for letter grades.

Research Papers
In lieu of a written qualifying examination, two original research papers of publishable quality in different areas of specialization are required. These may be revised or extended seminar papers but must be prepared after admission to the Ph.D. program. The topics of these papers are to be selected by the student, in consultation with appropriate faculty members and with consent of the Ph.D. program adviser. Each of the finished papers is evaluated by two faculty members.

All candidates are required to prepare a dissertation as a demonstration of their ability to carry out original research under the guidance of their doctoral committee. The doctoral committee also administers the University Oral Qualifying Examination before advancement to Ph.D. candidacy.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
As the dissertation nears completion, you must make a public report on the results of your research. This may be done, at your choice, at a meeting of the colloquium of either the Department of Linguistics or the ESL Section. You must, therefore, enroll in either English 400K or Linguistics 275 during the appropriate quarter. The public report will determine whether a final oral examination will be required.

Graduate Courses
501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA Ph.D. program adviser and Graduate Dean, and host campus instructor, department Chair and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading. (F,W,Sp)

596. Directed Individual Study (4 to 8 units). Prerequisite: doctoral standing. Independent study in an area of applied linguistics. Up to eight units may be applied toward the Ph.D. course requirements. May be repeated for credit. (F,W,Sp)

597. Preparation for Ph.D. Candidacy Examination (4 to 8 units). Prerequisite: completion of at least six courses of the 32-unit requirement for the Ph.D. May not be applied toward the 32-unit requirement. May be repeated for credit. S/U grading. (F,W,Sp)

599. Research and Preparation of Ph.D. Dissertation (4 to 16 units). Prerequisite: advancement to Ph.D. candidacy. Required of all Ph.D. candidates each quarter they are registered and engaged in dissertation preparation. May be repeated for credit, but may not be applied toward the Ph.D. course requirements. S/U grading. (F,W,Sp)

Applied Linguistics Course List

Language Acquisition
Education 212A. Learning and Education
212B. Motivation and Affect in the Educative Process
212C. Cognition and Creativity in Education
217D. Language Development and Education
English 280K. Psycholinguistics and Language Teaching
261K. Second-Language Acquisition
269K. Current Issues in Language Acquisition
Linguistics 254. Topics in Linguistics I: Proseminar
Psychiatry 257A-257B-257C. Diagnostics and Therapeutics of Language Disabilities
Psychology 240. Developmental Psychology
260A-260B. Proseminar in Cognitive Psychology
263. Psycholinguistics

Language Analysis
English 249K. Current Issues in Language Analysis
250K. Advanced Seminar in Cohesion Analysis of English Structure
251K. Advanced Seminar in Interlanguage Analysis
Linguistics 201A, 201B. Phonological Theory
206A, 206B. Syntactic Theory
210A, 210B. Field Methods
220. Linguistic Areas
225. Linguistic Structures
251. Topics in Phonetics and Phonology I: Prosminar
252. Topics in Syntax and Semantics I: Prosminar
253. Topics in Language Variation I: Prosminar
254. Topics in Linguistics I: Prosminar
Spanish (Spanish and Portuguese) 256A-256B. Studies in Spanish Linguistics

Language Education
Education 204A. Topics and Issues in International and Comparative Education
204D. Minority Education in Cross-Cultural Perspective
210A. Basic Concepts in Educational Research
210B. Experimental Design in Educational Research
210C. Experimental Design: Advanced Topics
210D. Experimental Design: Multivariate Analysis (courses 210A-210D are highly recommended for statistical work, but only two may be applied toward the eight-course requirement)
211A. The Measurement of Educational Achievement and Aptitude
211B. Measurement in Education: Underlying Theory
262B. Seminar: Reading
262F. Seminar: Research Topics in Bilingual/Multicultural Education
264. Seminar: Teacher Education
English 220K. Materials Development for Language Teaching
221K. Media for Language Teaching
222K. Language Testing for Teachers of English as a Second Language
223K. Role of English as a Second Language in Bilingual Education
M224K. The Teaching of English for Minority Groups

229K. Current Issues in Language Education
232K. Advanced Seminar in the Construction and Administration of Language Tests

Language Use
Anthropology M323P. Cultural Modes of Thought
M324Q. Psychological Anthropology
240. Seminar in Language and Culture
M241. Topics in Linguistic Anthropology
244. Topics in Language Socialization
Education 200B. Survey Research Methods in Education
English 223K. Role of English as a Second Language in Bilingual Education
242. Language and Literature
M262. Studies in Afro-American Literature
275. Stylistics and the Teaching of English
280K. Language Policy in Developing Countries
281K. Language Policy in the United States
282K. Intercultural Communication and the Teaching of English as a Second Language
283K. Discourse Analysis
284K. English for Specific Purposes
M285K. Studies in African Literature in English
289K. Current Issues in Language Use
Linguistics 251. Topics in Phonetics and Phonology I: Prosminar
252. Topics in Syntax and Semantics I: Prosminar
254. Topics in Linguistics I: Prosminar
Sociology 216A-216B. Survey Research Methods
217A-217B. Ethnographic Fieldwork
238A-238B. Fieldwork in Minority Communities
266. Selected Problems in the Analysis of Conversation
267. Selected Problems in Communication
Spanish (Spanish and Portuguese) 209. Dialectology
257. Studies in Dialectology

Archaeology (Interdepartmental)

288 Kinsey Hall, 825-4169

Professors
C. Rainer Berger, Ph.D. (Anthropology, Geography, and Geophysics), Chair
Gioia Buccellati, Ph.D. (Ancient Near East and History)
John Callender, Ph.D. (Near Eastern Languages and Cultures)
Christopher B. Donnan, Ph.D. (Anthropology)
Susan B. Downey, Ph.D. (Art History)
Marija Gimbutas, Ph.D. (European Archaeology)
James N. Hill, Ph.D. (Anthropology)
Clement W. Megahan, Ph.D. (Anthropology)
Henry G. Nicholson, Ph.D. (Anthropology)
Wendell H. Oswalt, Ph.D. (Anthropology)
Merrick Posnansky, Ph.D. (History and Anthropology)
James R. Sackett, Ph.D. (Anthropology)
Stanislaw Sogert, Ph.D. (Near Eastern Languages and Cultures)
Alexander Badawy, Ph.D., Emeritus (Art)
Paul A. Clement, Ph.D., Emeritus (Classics and Classical Archaeology)
Kan Lao, B.A., Emeritus (East Asian Languages and Cultures)
Katharina Otto-Dorn, Ph.D., Emeritus (Art History)
Richard C. Rudolph, Ph.D., Emeritus (East Asian Languages and Cultures)
Scope and Objectives

The interdisciplinary program offers M.A. and Ph.D. degrees in Archaeology. It brings together the interests and specialties represented by those departments offering courses in archaeology, as well as others offering courses relevant to archaeology. Qualified undergraduates or masters may enroll in courses offered by the program provided they receive consent of the instructor.

The primary purpose of the program is to train scholars in archaeology for university-level teaching and research and other professional opportunities. Its resources are intended for those archaeology students whose academic goals cannot be met within any single department and who, consequently, require an individually designed plan of study combining academic preparation in two or more departments. Applications are especially encouraged from students whose interests may form bridges with disciplines and departments not offering archaeology (e.g., botany, geology, mathematics, statistics, zoology, etc.). There are opportunities for participation in a variety of field, laboratory, and computer studies on a worldwide scale.

Requirements for Graduate Degrees

Admission

Any undergraduate major may be considered for admission to the program although those applicants who have had little previous archaeological education may be admitted under probationary status and may be required to take a series of courses to make up deficiencies. A Graduate Record Examination (GRE) Aptitude Test report is required. The following application materials should be submitted directly to the Chair of the program: an acceptable plan of study (including a statement of objectives, an outline of projected coursework, and a general indication of an M.A. paper or dissertation topic); three letters of recommendation; a research paper preferably relevant to archaeology or comparable evidence of scholarly work. Applicants are accepted for admission to the Fall Quarter only. The program’s “Study Guidelines” brochure will be sent to applicants on request to the Chair, Archaeology Program, 288 Kinsey Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

Africana; analysis of archaeological materials; ancient Near East; Andean South America; Caribean; China and the Far East; classical Greece and Rome; dating techniques in archaeological sciences; Europe; India and Central Asia; Mesoamerica; Pacific; paleoenvironmental studies; Western North America.

Other areas of specialization are also available.

Fieldwork

No graduate degree will be awarded until you have worked in the field and have demonstrated your competency to direct field research in archaeology. Both theoretical and practical knowledge of methods and techniques used in the field are necessary.

This requirement may be met in several ways. Ordinarily you will take a regular UCLA field course such as Anthropology 115P (which satisfies the M.A. field course requirement) or Archaeology 259, Ancient Near East 261, or History 276 (which satisfy both the M.A. and Ph.D. field requirements), or similar courses offered by other departments. Comparable courses offered by other institutions may also be accepted. An informal report, submitted by the director of an excavation, describing work performed by the students under supervision, may be sufficient. Excepting the four courses listed above, any given formula to fulfill the requirement will have to be cleared in advance with the Chair of the program.

Master of Arts Degree

Completion of a master's program is required. Applicants who do not have a UCLA M.A. in Archaeology should refer to the admission section under “Requirements for Graduate Degrees” above. Admission to the doctoral program for students completing a UCLA M.A. in Archaeology is based on written recommendation by all three members of the M.A. committee and at least a high pass on either the M.A. core examination or the M.A. paper. Doctoral students entering the program with an M.A. from another university will be required to pass the comprehensive core examination (see “Master of Arts Degree”) unless they can demonstrate to the Chair and the members of the admissions committee that the examination should be waived.

Course Requirements

A minimum of 42 units (at least nine courses, of which five must be graduate) taken for a letter grade are required, to be distributed as follows: a minimum of five courses (26 units) in the 200 and 500 series, including Archaeology 200 (six units), M201A-M201B (six units each), and two elective graduate courses*, one of which may be course 596. Course 596 may be taken twice for a maximum of 12 units, but only six units may be applied toward the minimum graduate course requirement (a letter grade is given for the course). Four upper division elective courses* (a minimum of 16 units, excluding 596s) are also required.

*Of the six combined elective courses, no more than four may be offered by the same department. At least one must be outside the student's sphere of regional interest to be selected from a pool of eligible courses by the student's adviser.

Comprehensive Examination Plan

You will be required to take a comprehensive core examination during your third quarter in residence. This written examination is based largely on a reading list of about 30 volumes which have been the focus of the seminar discussions in Archaeology M201A-M201B. The examination will be graded high pass, pass, or no pass and may be repeated once.

M.A. Paper

A master's-level research paper, normally no longer than 20 to 35 pages and graded by the three members of the committee, is to be submitted by the end of the third week of the seventh quarter to the Chair of the program.

Ph.D. Degree

Admission

Completion of a master's program is required. Applicants who do not have a UCLA M.A. in Archaeology should refer to the admission section under “Requirements for Graduate Degrees” above. Admission to the doctoral program for students completing a UCLA M.A. in Archaeology is based on written recommendation by all three members of the M.A. committee and at least a high pass on either the M.A. core examination or the M.A. paper.

Doctoral students entering the program with an M.A. from another university will be required to pass the comprehensive core examination (see “Master of Arts Degree”) unless they can demonstrate to the Chair and the members of the admissions committee that the examination should be waived.
Foreign Language Requirement
Reading competence in two modern foreign languages relevant to your interests is not mandated by your interest, you may petition to waive the second language.

Course Requirements
You must be enrolled in a minimum of 12 units per quarter. Archaeology 200 is required. There are no other restrictions or requirements concerning courses.

Qualifying Examinations
By the end of the fourth quarter of the doctoral program, after the foreign language requirement has been fulfilled, you must take a written qualifying examination in the following three areas: (1) topical specialization; (2) analytical theory, method, and technique; (3) regional culture history. If you pass this examination, you may then make arrangements to take the oral examination. If the written examination or any portion thereof is failed, you may make one further attempt if your committee deems it appropriate.

The University Oral Qualifying Examination must be taken by the end of the sixth quarter of the doctoral program. You will be required to submit to the doctoral committee a formal dissertation proposal (of about ten pages), including the particular research problem on which you will be examined during the oral qualifying examination.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
The final oral examination may be waived by your doctoral committee.

Upper Division Course

Graduate Courses
200. Archaeology Colloquium (5 units). Seminar, two hours. Prerequisite: archaeology major or consent of instructor. Required of all students. The development of archaeology as a discipline. Major intellectual trends and current issues in archaeology. Scientific and humanistic viewpoints presented by archaeologists from different academic departments. May be repeated for credit, but may be applied only twice toward the departmental M.A. requirements.

Methodology and History
Ancient Near East (Near Eastern Languages) 261. Practical Field Archaeology
Anthropology 115P. Archaeological Field Training
115Q. Archaeological Research Techniques
115R. Strategy of Archaeology
M115S. Historical Archaeology
116P. Laboratory Analysis in Archaeology
116Q. Dating Techniques in Environmental Sciences and Archaeology
118A, 118B. Museum Studies
121A. Fossil Man and His Culture
121B. The Australopithecines
121C. Evolution of the Genus Homo
129P. Laboratory Methods in Biological Anthropology: Skeletal
132. Technology and Environment
138. Methods and Techniques of Ethnohistory
158. Hunting and Gathering Societies
183. History of Archaeology
186A-186B. Quantitative Methods and Models in Anthropology
210. Analytical Methods in Archaeological Studies
211. Regional Analysis in Archaeology
216. Dating Techniques in Environmental Sciences and Archaeology
217. Explanation of Societal Change
218. Historical Reconstruction and Archaeology
221A-221B. Fossil Evidence for Human Evolution
238. Mathematical Models in Anthropology
Art History (Art, Design, and Art History) 203. Museum Studies
205. Fieldwork in Archaeology
Materials Science and Engineering 149C. Properties of Art Ceramic Materials
149E. Ceramic Materials in History and Archaeology

New World
Anthropology 113P. Archaeology of North America
113Q. The Prehistory of California Indian Cultures
113R. Southwestern Archaeology
114P. Ancient Civilizations of Western Middle America (Nahuatl Sphere)
114Q. Ancient Civilizations of Eastern Middle America (Maya Sphere)
114R. Ancient Civilizations of Andean South America
172P. North American Indian Cultures
212P. Selected Topics in Hunter-Gatherer Archaeology
212Q. Problems in Southwestern Archaeology
214. Selected Topics in Prehistoric Civilizations of the New World
215. Field Training in Archaeology
Art History (Art, Design, and Art History) C117A. Advanced Studies in Pre-Columbian Art: Mexico
C117B. Advanced Studies in Pre-Columbian Art: Central America
C117C. Advanced Studies in Pre-Columbian Art: The Andes
118A. The Arts of Oceania
118B. The Arts of Pre-Columbian America
189D. The Arts of Native North America
220. Oceanic, Pre-Columbian, African, and Native North American Art

Old World — Africa
Asian American Studies
(Interdepartmental)

3232 Campbell Hall, 825-2974

Professors
Lucie Cheng, Ph.D. (Sociology)
Dolores Hayden, M.Arch. (Architecture and Urban Planning)
Fred G. Notehelfer, Ph.D. (History)
Larry Sue, Ph.D. (Psychology), Chair

Associate Professors
Robert A. Nakamura, M.F.A. (Theater Arts)
Philip L. Newman, Ph.D. (Anthropology)
Jeffrey Prager, Ph.D. (Sociology)
Leo M. Snowiss, Ph.D. (Political Science)

Assistant Professors
King-Kok Cheung, Ph.D. (English)
Don T. Nakamishi, Ph.D. (Education)

Scope and Objectives
The Asian American Studies Program, an interdepartmental program supported by the Asian American Studies Center, promotes the study of Asian and Pacific peoples in the United States from several disciplines. The undergraduate program provides a general introduction to Asian American studies for those who anticipate advanced work at the graduate level or careers in research and community work related to the Asian American. Although no undergraduate major is offered in Asian American studies, students may participate in the program through a departmental major or the interdepartmental major in East Asian studies. The graduate program leads to an M.A. degree.

A major goal of the program is to communicate the experiences of Asians as an American ethnic group. Courses examine the important issues and concerns of Asian Americans, including their history, mental health, social organization, and culture.

Special Undergraduate Program

Preparation for the Program
Required: Asian American Studies 100A-100B.

Upper Division
Since this is not a degree-granting program, students participating in it must complete an organized major.

For further information on the undergraduate program, contact the Curriculum Coordinator, Asian American Studies Center, at the above address.

Master of Arts Degree

Admission
In addition to the University’s minimum requirements, applicants are expected to present evidence of their previous interest in Asian American studies through courses taken at the undergraduate level, by research papers written independently or for related classes, or by work experience in an Asian American community. In any case, applicants are required to submit a paper or article, preferably on Asian Americans, directly to the Asian American Studies Center, at the above address. Three letters of recommendation are also required.

Major Fields
Since the program is interdepartmental, its major fields are determined by the participating faculty from various departments.

Research Tool Requirement
The research tool requirement may be satisfied by one of two options:

(1) Asian Language: A minimum of two full years of study in an Asian language at the university level or equivalent. This requirement may be fulfilled before entering the program, but you must pass a proficiency examination administered by the Asian American Studies Center and the interdepartmental committee.

(2) Research Methods: Three upper division or graduate courses in research methods (e.g., statistics, computer science, field and observational techniques, experimental techniques, archival methods). Specific courses must be approved by the interdepartmental committee.

You must justify your choice of option in a written statement. The rationale must specify the courses selected and how they directly relate to research and career goals.

Course Requirements
A total of 11 upper division and graduate courses is required for the degree. Of that number, seven must be graduate courses, including the required Asian American Studies
200A, 200B, 200C. Three of the graduate courses must be selected from Anthropology 231, Education 253G, History 201H, Sociology 261.

Two courses in the 500 series may be applied toward the required 11 courses; however, only one of the two may be applied toward the required seven graduate courses.

Thesis Plan
The thesis committee is normally constituted at the beginning of the second year of residence, at which time you are expected to submit a plan for approval. After the approval of the thesis, the committee will conduct an oral examination on its subject.

Upper Division Courses

100A-100B. Introduction to Asian American Studies. This survey sequence is an introduction to Asian American studies. 100A deals with the history of Asians in America. 100B examines contemporary Asian American communities.

103. Asian Americans and the Law. The course surveys 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 Japanese relocation orders, anti-Asian labor legislation, legal prohibitions against Asians right to testify, case law on Asian women, and equal educational opportunity for Asians.

105. Asian American Women. Lecture, three hours. The course presents the condition of Asian women in America. Topics include racial and cultural stereotypes, women in Asian American history, and contemporary issues and concerns of Asian American women. Current approaches to Asian American women are presented and evaluated. Ms. Cheng.

197. Topics in Asian American Studies. Lecture, three hours. Variable topics selected from the following: Filipino American Experience, Japanese American History, Korean American Experience, Asian American Literature, Asian American Personality and Mental Health; Asian American Communities.

Graduate Courses

200A. Critical Issues in Asian American Studies. Prerequisites: graduate standing, consent of instructor. The course examines and seeks to develop a critical appreciation of the research literature on Asians in America and to develop alternative interpretations of the Asian American experience. Topics include Asian American history and economic/political and social/psychological issues. Ms. Cheng.

200B. Critical Issues in Asian American Studies. Prerequisites: graduate standing, consent of instructor. A critical review of research methods, strategies, and philosophies in Asian American studies. Mr. Nakashiba.

200C. Critical Issues in Asian American Communities. Lecture, three hours. Prerequisites: graduate standing, consent of instructor. Traditional and contemporary theories and models of community are evaluated for their appropriateness to understanding Asian Pacific American communities. Specific topics which explicate the development, structure, and dynamics of Asian Pacific American communities are considered in studying community issues and concerns. Ms. Cheng, Mr. Sue.

297. Topics in Asian American Studies.

490. Writing Workshop for Graduate Students (2 units). Lecture, one hour; discussion, one hour. Prerequisite: consent of instructor. 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 the M.A. degree requirements. May be repeated once for credit. S/U grading. Ms. Cheung.

596. Directed Individual Study or Research (2 to 8 units). Hours to be arranged. Prerequisite: consent of instructor.


Related Courses in Other Departments

Anthropology M163. Women in Culture and Society
M166. Comparative Minority Relations
167. Urban Anthropology
175P. Civilizations and Cultures of Southeast Asia
175Q. Civilizations of South Asia
175S. Japan
177. Cultures of the Pacific
231. Asian Americans: Personality and Identity
261. Comparative Minority Relations
274. Cultures of the Pacific Islands
Architecture and Urban Planning 197. Planning for Minority Communities
251. Planning for Multiple Publics
253. Social Theory for Planners
255. Urban Morphology: Definitions and Consequences
256. Social Impact Analysis
Education 253G. Seminar: The Asian American and Education
History 153. The United States and the Philippines
154A-154B. United States Urban History
155A-155B. American and European Working Class Movements
160. The Immigrant in America
161. Asians in American History
163. History of California
183. Modern China, 1840-1920
187C. Modern Japanese History
200H. Advanced Historiography: United States
201H. Topics in History: United States
245. Colloquium in U.S. History
252A-252B. Seminar in Recent United States History to 1930
254A-254B. Seminar in United States Social and/or Intellectual History
256A-256B. Seminar in American Diplomatic History
257A-257B. Seminar in United States Urban History
258A-258B. Seminar in Working Class History
259A-259B. Seminar in Social History of Women in the U.S.
263A-263B. Seminar in the History of the American West
M264. History of American Education
282A-282B-282C. Seminar in Chinese History
285A-285B. Seminar in Modern Japanese History
Library and Information Science 111D. Ethnic Groups and their Bibliographies: Asian American History and Culture
Political Science 135. International Relations of China
136. International Relations of Japan
M147. Minority Group Politics
159. Chinese Government and Politics
160. Japanese Government and Politics
C250C. Chinese and East Asian Studies
C250D. Japanese and Western Pacific Studies
Psychology 175. Community Psychology
176. Experimental Community Psychology
225. Seminar: Critical Problems in Social Psychology
M228. Seminar in Political Psychology
229A. Issues in the Social Development of the Minority Child
Sociology 124. Ethnic and Status Groups
125. Urban Sociology
134. Comparative Social Institutions of East Asia
155. Intergroup Conflict and Prejudice
234. Sociology of Community Organization
238A-238B. Fieldwork in Minority Communities
259. Social Structure and Economic Change: Histori cal and Comparative Perspectives
260. Economy and Society
261. Ethnic Minorities
M262. Selected Problems in Urban Sociology
276. Selected Topics in the Sociology of East Asia
291. Moral Solidarity in Communities
Theater Arts 102E. Theater of the Non-European World
128. Media and Ethnicity
202R. Seminar in East Asian Theater
202S. Seminar in South Asian Theater
202T. Seminar in Southeast Asian Theater

Astronomy

8979 Math Sciences, 825-4434

Professors
Ferdinand Coroniti, Ph.D., Chair
Harland W. Epps, Ph.D.
Michael A. Jura, Ph.D.
Mirek Plavec, Ph.D.
Roger K. Ulrich, Ph.D.
Edward L. Wright, Ph.D.
Benjamin Zuckermand, Ph.D.
Lawrence H. Aller, Ph.D., Emeritus
Daniel M. Popper, Ph.D., Emeritus

Associate Professors
Mark Morris, Ph.D.
William I. Newman, Ph.D.

Assistant Professor
Matthew Malkan, Ph.D.

Scope and Objectives
Astronomy, the oldest science, has now become a meeting place of nearly all physical sciences. It is difficult for any educated person to escape the awe and wonder of such things as the nature of the other planets, the likelihood of black holes in space, the origin and future of the universe, and the possibility of life elsewhere.
The Astronomy Department, therefore, has several educational missions: to develop skills in graduate students which will enable them to make contributions at the frontier of astronomical research, to prepare undergraduate majors for entry into a graduate program, and to provide insight and understanding for nonmajors and nonscience students.

Graduate training of future astronomers, up to the Ph.D. level, is the department's first responsibility. Applicants must have solid backgrounds in physics and mathematics. The program provides training in both theoretical and observational astronomy; its strengths, at present, are in solar physics, stellar structure and evolution, magnetohydrodynamics, gaseous nebulae and interstellar medium, optical design, galaxies, quasars, and observational and theoretical cosmology.

The department's second responsibility is to the undergraduate astronomy major who hopes for a career in astronomy. Some Bachelor of Science degree recipients go on to graduate work; some opt for teaching careers, for which their training in physics, astronomy, and mathematics is most useful; still others find excellent jobs in industry, where their broad background in physical science with a specialty in astronomy makes them particularly valuable (especially in computer science, space, and aeronautical fields).

Classes for Nonmajors

The department offers general courses to all University students, including those who are not science oriented. Astronomy 3, 4, 5, and 6 are nonmathematical courses open to the general University student normally not intending to major in the physical sciences.

Astronomy 3 is the fundamental course recommended for every University student who does not major in physical sciences and should be taken in the first or second year. If you had an astronomical introductory course in high school, you should take either course 3H or 4, 5, or 6.

Astronomy 4, 5, and 6 are nonmathematical courses which develop the topics covered in course 3 to somewhat greater depths. Course 5 concentrates on the problem of life in the universe; course 6 discusses the structure and evolution of the universe and the historical development of our ideas about it. In course 4, the topics vary. These three courses may be taken in any order by students with a grade of C or better in course 3, or whose astronomical knowledge is on a similar level.

Students who have had at least two courses in high school algebra and one course in trigonometry are advised to take, instead of Astronomy 3, the parallel honors course, Astronomy 3H. Declared or potential majors in astronomy or in physical sciences should take course 3H if they need an elementary introductory course in astronomy.

Astronomy 81 and 82 are general survey courses recommended for science majors in their second year. They represent a serious and systematic introduction to astrophysics and require a good background in physics and mathematics (at least two quarters of the Physics 8 series and two quarters of the Mathematics 31/32 series).

Students of junior and senior standing in physics or related sciences are invited to select any of these courses: 115, 117, 127, 140, 180.

Bachelor of Science Degree

Preparation for the Major

Required: Astronomy 81, 82, Physics 8A/BAL, 8B/BBL, 8C/8CL, 8D/BDL, 8E, Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 3 or 10. Recommended: Chemistry 11A. Systematic study of astronomy should begin with Astronomy 81 and 82, taken in the second year.

The Major


Honors Program

Senior majors in astronomy with a 3.4 grade-point average in all astronomy, mathematics, and physics courses are eligible for the honors program in astronomy. In addition to completing all courses required for the major, the honors student must complete two quarters of Astronomy 199. To receive honors and highest honors at graduation, the grade-point average must remain at 3.4 or higher, and the work in course 199 must reflect original research and be accepted by the departmental honors committee.

Graduate Study

Admission

The basic requirement for admission is a bachelor's degree in physics or astronomy. Students in closely related fields (e.g., mathematics or chemistry) may be admitted at the discretion of the department. All students who apply should submit at least three letters of recommendation and take the Graduate Record Examination (GRE) Aptitude Test and Advanced Test in Physics. For further information, contact the Graduate Adviser, Department of Astronomy, 8979 Math Sciences, UCLA, Los Angeles, CA 90024.

New students and those who have not been admitted to candidacy for the Ph.D. should consult with the graduate adviser at the beginning of Fall Quarter to determine a program for the year.

Master of Science Degree

Course Requirements

Nine courses are required for the master's degree, of which at least five must be at the graduate level in astronomy. The B segments of the graduate multiple-term courses (Astronomy 204B, 208B, 217B, 219B, 227B, 230B) count as 1.5 courses each for the purpose of receiving degree credit. Courses taken in the 300 or 500 series may not be applied toward the total course requirement or the graduate course requirement.

Comprehensive Examination Plan

To receive the master's degree, you must obtain at least a B average in the departmental written comprehensive examinations. The examinations are divided into sections, with one section for each course in the A or B series that you may apply toward the M.S., M.A.T., or Ph.D. requirements. The examination is scheduled at the time the final examination for the course would normally be scheduled and is letter graded. You may repeat failed courses for credit but may not repeat the departmental examinations for departmental credit.

Master of Arts in Teaching

Course Requirements

Nine courses are required for the academic portion of the M.A.T. program. They must include at least five graduate courses in astronomy and at least three upper division or graduate courses in astronomy, mathematics, physics, or 100-200-series courses in education required for the teaching credential. The B segments of the graduate multiple-term courses (Astronomy 204B, 208B, 217B, 219B, 227B, 230B) count as 1.5 courses each for the purpose of receiving degree credit. Although it does not count for degree credit, Physics 370 is also required. Courses taken in the 300 or 500 series may not be applied toward the total course requirement or the graduate course requirement.

In order to obtain a secondary credential with the M.A.T. in Astronomy, additional courses in education, including supervised teaching, should be taken.

Comprehensive Examination Plan

This plan is the same as for the M.S. degree.

Ph.D. Degree

Course Requirements

Required for the degree are Astronomy 200, 204A, 208A, 217A, 219A, 227A, 230A; at least four courses from 204B, 208B, 217B, 219B, 227B, 230B; and at least two courses (projects) from 204C, 208C, 217C, 219C, 227C, 230C. You are required to take course 250 each quarter in residence.
Teaching Experience
Before receiving a Ph.D., you are required to spend at least three quarters as a teaching assistant at UCLA or have equivalent experience elsewhere.

Comprehensive Examinations
The departmental written comprehensive examinations are the same as described under the M.S. Degree. To be qualified to go on to the Ph.D., you must receive a minimum score on these examinations.

After the written comprehensive examinations are completed, you must then fulfill the normal University requirements for a dissertation and pass the University Oral Qualifying Examination.

Projects
During the Fall Quarters of the second and third years, you are expected to complete a research project. You should work closely with one of the staff both when the project subject is selected and throughout the course of the work. The projects may be a continuation of work begun during the preceding Spring Quarter; the goals of the project should be selected to reflect the amount of work completed in the Spring Quarter.

The evaluation of the projects is based as much on the quality of the written report as on the quality of the research itself. The project report should include statements of the project goals, the relationship of the project to broader issues in astronomy, the techniques chosen to attack the project problem, and the reasons for this choice. If the project is original and interesting, but incomplete, you would be encouraged to complete it later, but the grade assigned is based on the portion completed by the end of the Fall Quarter.

Final Oral Examination
You must pass a final examination after completing your dissertation.

Lower Division Courses
3. Astronomy: The Nature of the Universe. Lecture, three hours; discussion, one hour. Not open to students with credit for or currently enrolled in course 3H or 81 or 82. No special mathematical preparation is required beyond that necessary for admission to the University in freshman standing. A course for the general University student, normally not intending to major in physical sciences, on the development of ideas in astronomy and what has been learned of the nature of the universe, including recent discoveries and developments.

3H. Introductory Astronomy and Astrophysics. Lecture, three hours; discussion, one hour. Not open to students with credit for or currently enrolled in course 3. Introduction to astronomy and astrophysics for freshmen who are seriously interested in science. Course requires the ability to understand mathematical and physical concepts, but high school algebra and trigonometry classes provide sufficient qualification. Particularly recommended for declared or potential majors in astronomy or in physical and mathematical sciences.

4. The Universe of Stars and Stellar Systems. Lecture, three hours; discussion, one hour. Prerequisite: course 3 or 3H or equivalent. An essentially nonmathematical course for the general University student with previous introduction to astronomy; a sequel to course 3, dealing in greater detail with stars and stellar systems. Various observed types of stars in relation to their internal structure and evolutionary state. Interacting binary stars, pulsating stars, explosive stars (novae and supernovae). Mass loss from stars, stellar wind. Galactic and planetary nebulae and their relation to stars. Interstellar medium. Initial stages of stellar evolution (protostars, T Tauri stars) and final stages (degenerate and collapsed stars). Stellar systems from clusters to galaxies.

5. Life in the Universe. Lecture, three hours; discussion, one hour. Prerequisite: prior introduction to astronomy or consent of instructor. The course treats life on earth and the prospects for life elsewhere in the context of the evolution of the universe from the simple to the complex. Course material is primarily from astronomy and biology, but includes some chemistry, geology, and physics. Selected topics are treated in some depth, but with little or no formal mathematics.

6. Cosmology: Our Changing Concepts of the Universe. Lecture, three hours; discussion, one hour. Prerequisite: course 3 or 3H or equivalent. An essentially nonmathematical exposition of our ideas about the nature and structure of the universe. Historical development of the ideas up to the present time. Problem of cosmic center and cosmic edge. Space and time. Curvature of space. General relativity. Black holes. The expanding universe and cosmological redshift. Early stages of the universe, Big Bang, current ideas of the inflationary universe.

10. Practice in Observing (2 units). Laboratory, two and one-half hours one evening per week. Prerequisites: knowledge of plane trigonometry and prior or concurrent course in astronomy, or consent of instructor. Practical work for beginners, including telescopic observations and laboratory exercises cognate to an introductory course in astronomy.

81. Astrophysics I: Stars and Nebulae. (Formerly numbered 101.) Lecture, three hours; laboratory, one hour. Prerequisites: Mathematics 31A, 31B, Physics 8A, or equivalent, or consent of instructor. Open to qualified sophomore and upper division students. A survey of our knowledge about stars: their distances, masses, luminosities, temperatures, and interrelations between these parameters. Methods and importance for astrophysics. Variables. Planetary and gaseous nebulae. Mr. Epps, Mr. Plavec (W)

82. Astrophysics II: Stellar Evolution, Galaxies, and Cosmology. (Formerly numbered 102.) Lecture, three hours; discussion, one hour. Prerequisites: Mathematics 31A, 31B, Physics 8A, or equivalent. Recommended: course 81, Physics 8B, 8C. Open to qualified sophomore and upper division students. Basic principles of stellar structure and evolution. Red giants, white dwarfs, novae, supernovae, neutron stars, and black holes. Pulsars and galactic X-ray sources. The Milky Way galaxy and the interstellar medium. Extragalactic astronomy, galaxy clustering, active galactic nuclei, and quasars. Introduction to cosmology: Hubble law, thermal history of the Big Bang, and the earliest moments of the universe.

84. Statistical Mechanics and Its Application to Astrophysics. Lecture, three hours. Prerequisites: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 8A, 8B, 8C, 8D. Particle distributions, partition functions, black body radiation, the Saha equation, degeneracy. Applications to stellar atmospheres, stellar interiors, and the interstellar medium.

85. Radiation and Fluids in Astrophysics. Lecture, three hours. Prerequisites: course 115 or equivalent and junior standing in astronomy or physics, or consent of instructor. Emission and absorption of radiation by matter, spectroscopy, spectral lines, and radiative transfer. Hydrodynamics and shock waves. Applications to stars, to the interstellar and intergalactic media, and to the early universe.

117. Radiation and Fluids in Astrophysics. Lecture, three hours. Prerequisites: course 115 or equivalent and junior standing in astronomy or physics, or consent of instructor. Emission and absorption of radiation by matter, spectroscopy, spectral lines, and radiative transfer. Hydrodynamics and shock waves. Applications to stars, to the interstellar and intergalactic media, and to the early universe.

127. Stellar Atmospheres, Interiors, and Evolution. Lecture, three hours. Prerequisite: senior standing in astronomy or physics or consent of instructor. Recommended: courses 102, 117. Physical conditions in stellar interiors. Energy production in stars. Stellar evolution from star formation through the normal observed stages to white dwarfs, neutron stars, and black holes. Novae, supernovae, other variable stars, chromospheres and coronae of the sun and stars. Evolution of binary stars. Analysis of stellar atmospheres.

140. Stellar Systems and Cosmology. Lecture, two hours; laboratory, four hours. Prerequisites: junior or senior standing in astronomy, physics, or a related field, consent of instructor. Lectures cover statistical methods in astrophysics, one- and two-dimensional random processes, and modern cosmology, including the expansion of the universe, microwave background, galaxy formation from primordial fluctuations, and observational constraints on the Big Bang.

180. Astrophysics Laboratory. Lecture, two hours; laboratory, four hours. Prerequisites: junior or senior standing in astronomy, physics, or a related field, consent of instructor. Laboratory experiments involve radio astronomy, interferometry, narrowband solar imaging, and visual photometry. Use of computers for the automatic collection of data and for processing 2-D astronomical images is emphasized.

Graduate Courses
Prerequisite to all graduate courses is consent of instructor. Courses 204A through 230C are offered in alternate years and consist of three quarters according to the following scheme: level A (Winter Quarter, four units) — a basic survey course presenting the minimum knowledge in the field expected of all students who wish to obtain the Ph.D., but who need not necessarily plan to specialize in the field covered by the course; level B (Spring Quarter, six units) — advanced level for those considering the possibility of taking up a research project in the field; level C (Fall Quarter, following academic year, ten units) — individual research projects supervised by the instructor in the form of a laboratory. Course 240 is equivalent to the B courses.
200. Introduction to Graduate Study of Astronomy. Required of all new graduate students. Surveys the various fields of astronomy and astrophysics; gives first acquaintance with working methods and with the department. Basic astronomical nomenclature is surveyed, and the background in physics and mathematics is outlined as required in graduate courses.

201. Astrophysics of the Solar System. Prerequisite: graduate standing or consent of instructor. The sun, solar phenomena, and solar-terrestrial relationships. The interplanetary medium and astronomical plasma physics, comets, meteoreites, meteors, satellites and planets, planetary atmospheres. Origin and evolution of the solar system.

204A-204B-204C. Observational Astronomy (4 units, 6 units, 10 units). Star catalogs and charts. Radiation measurements, photovoltaic photometry, and solid-state detectors. Radio and infrared techniques. Spectroscopic observations. Includes laboratory work.


240. Modern Problems in Astronomy and Astrophysics. Special topics offered by distinguished visiting professors. Open to qualified graduate students in astronomy and in related fields (physics, atmospheric sciences, earth and space sciences). May be repeated for credit.


285. Origin and Evolution of the Solar System. (Same as Earth and Space Sciences M285.) Dynamical problems of the solar system; chemical evidences from geochemistry, meteorites, and the solar atmosphere; nucleosynthesis; solar origin, evolution, and termination; solar nebula, hydromagnetic processes, formation of the planets and satellite systems. Content varies from year to year. May be repeated for credit. SU grading.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. SU grading.

The following courses may be repeated at the discretion of the department:

596A. Directed Individual Studies (4 to 10 units).

596L. Advanced Study and Research at Lick Observatory (4 to 12 units). Intended for graduate students who require observational experience, as well as those working on observational problems for their theses.

599. Ph.D. Research and Writing (10 to 12 units).

**Atmospheric Sciences**

7127 Math Sciences, 825-1217

Professors
- Aki Arakawa, D.Sc. (Atmospheric Dynamics)
- Michael Ghil, Ph.D. (Climate Dynamics)
- George L. Siscoe, Ph.D. (Atmospheric Physics), Chair
- Richard M. Thorne, Ph.D. (Atmospheric Physics)
- Michio Yanai, D.Sc. (Atmospheric Dynamics)

Assistant Professors
- Carlos R. Mechoso, Ph.D. (Atmospheric Dynamics)
- Derek C. Montague, Ph.D. (Atmospheric Chemistry)
- Roger M. Wakimoto, Ph.D. (Atmospheric Dynamics)

Scope and Objectives

The atmospheric sciences present a wide variety of problems of compelling scientific interest and increasing social concern. This is exemplified by the efforts to improve air quality, the depredations caused by severe storms and floods, the attempts to control or modify weather phenomena, the problems of long-range weather forecasts and climate change, the expanding scientific frontiers into our outer atmosphere and the atmospheres of other planets.

The department offers a broad curriculum in dynamic and synoptic meteorology, upper atmospheric and space physics, cloud microphysics, atmospheric chemistry, and radiative transfer in planetary atmospheres.

The Bachelor of Science degree may qualify students for entry-level technical positions or represent valuable background for training in other professions. Master of Science and Ph.D. degree holders work in universities, research centers, laboratories, and government services and, increasingly, in the rapidly burgeoning private sector.

**Bachelor of Science Degree**

**Preparation for the Major**


**The Major**

Required: Atmospheric Sciences M140, 141, 142, 160, 161; Physics 110A, 110B, 131; two courses from Atmospheric Sciences 143, 144, 151, and two courses from 152, 153, 155A, 155B, 156. In addition, students preparing for graduate studies in atmospheric chemistry should take Chemistry 11B, 110B, and 110A or Physics 112; students preparing for graduate studies in cloud physics and precipitation should take Physics 112, 140, Mathematics 135A-135B, 140A; students preparing for graduate studies in upper atmospheric and space physics should take Physics M122.

**Graduate Study**

The Department of Atmospheric Sciences offers the M.S., C.Phil., and Ph.D. degrees.

**Admission**

There are no admission requirements in addition to University minimum requirements and no application form in addition to the one used by the Graduate Admissions Office. Three letters of recommendation are required. For departmental brochures and information, write to Department of Atmospheric Sciences, 7127 Math Sciences, UCLA, Los Angeles, CA 90024. In addition to students holding bachelor's degrees in meteorology or atmospheric sciences, graduates with degrees in related disciplines—astronomy, chemistry, engineering, geophysics, mathematics, and physics—are encouraged to apply for graduate standing in the department. Programs are arranged by consultation between the student and the department's graduate advisers, and considerable flexibility is maintained so that maximum advantage may be taken of the candidate's previous education.

**Major Fields or Subdisciplines**

Dynamic and synoptic meteorology; cloud physics and precipitation; radiation; upper atmospheric and space physics.

**Master of Science Degree**

**Course Requirements**

A total of nine courses must be completed, five of which must be in the 200 or 500 series. You must also attain a grade of B (3.0) or better in one 150-series or graduate course in each of two fields other than your field of specialization. The only formal course requirement beyond the UCLA general requirements is Atmospheric Sciences 260 in which you must pre-
sent a formal seminar attended and graded by all faculty.

Only one 500-series course (four units) may be applied toward the minimum graduate course requirement for the M.S. degree.

Comprehensive Examination Plan

The comprehensive examination is based on coursework given during a prior two-year period. The examination is usually conducted at the end of the Fall and Spring Quarters, but special arrangements can be made for the Winter Quarter. A grade-point average of 3.0 is required for a pass at the M.S. level; a GPA of 3.5 or better allows you to continue toward the degree (at the end of the first year of study). Provided you maintain a high academic standard in coursework, the accepted thesis may be used instead of the comprehensive examination for continuation toward the Ph.D. program.

Ph.D. Degree

Course Requirements

Students entering the department with an M.S. degree have no specific course requirements. The graduate advisers may, at their discretion, prescribe courses in areas in which they deem students to have insufficient background to help them in preparing to pass the comprehensive examination.

Teaching Experience

There is no formal requirement for teaching experience, but it is strongly encouraged, and approximately 95 percent of our graduate students serve as teaching assistants for one or more quarters.

Qualifying Examinations

After passing the comprehensive examination at the requisite level or completing the M.S. thesis in this department, you must take a further in-depth written or oral examination in your area of research specialization conducted by your departmental guidance committee. Subsequently, a full doctoral committee is appointed to conduct the University Oral Qualifying Examination on your selected dissertation topic and related areas and the final dissertation defense which is required of all students. Each of these examinations must be passed in no more than two attempts.

Candidate in Philosophy Degree

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination

This examination is required of all students.

Lower Division Courses

1. Introduction to Weather Maps and Weather Forecasting. Lecture, three hours; discussion, one hour. A course specifically designed to satisfy in part the Letters and Science breadth requirement for students majoring outside the physical sciences. The nature and causes of weather phenomena, including winds, clouds, rain, lightning, tornados and hurricanes, and terrestrial radiation; phenomena of the higher atmosphere; the ionosphere and the auroras; causes of air pollution; proposed methods and status of weather modification. Prerequisites: Physics 8D or exception.

Mr. Wakimoto

2. Air Pollution. Lecture, three hours; discussion, one hour. A course specifically designed to satisfy in part the Letters and Science breadth requirement for students majoring outside the physical sciences. The nature and causes of weather phenomena, including winds, clouds, rain, lightning, tornados and hurricanes, and terrestrial radiation; phenomena of the higher atmosphere; the ionosphere and the auroras; causes of air pollution; proposed methods and status of weather modification. Prerequisites: Physics 8D or exception.

Mr. Montague, Mr. Siscoe

3. Introduction to the Atmospheric Environment. Lecture, three hours; discussion, one hour. A course specifically designed to satisfy in part the Letters and Science breadth requirement of students majoring outside the physical sciences. The nature and causes of weather phenomena, including winds, clouds, rain, lightning, tornados and hurricanes, and terrestrial radiation; phenomena of the higher atmosphere; the ionosphere and the auroras; causes of air pollution; proposed methods and status of weather modification. Prerequisites: Physics 8D or exception.

Mr. Montague, Mr. Siscoe

4. Clouds, Rain, and Storms. Lecture, three hours; discussion, one hour. The raindrop and the ice crystal. Relation of meteorological conditions to cloud types. Precipitation mechanisms from clouds. Different scales of atmospheric cloud organization. Description and dynamics of spectacular weather systems, ranging from tornados to hurricanes. Severe weather forecasting. Prerequisites: Physics 131 and Physics 132.

Mr. Venkateswaran

5. Climates of Other Worlds. Lecture, three hours; discussion, one hour. The climates of the Planets are determined by the physical characteristics of each planet and its location within the solar system. This course introduces the planets of the solar system and their climates through the study of the physical characteristics of each planet and its location within the solar system. The course also covers the major climate types found on Earth and their relationship to the physical characteristics of each planet.

Prerequisites: Physics 8D or exception.

Mr. Venkateswaran

6. Climate and Climatic Change. Lecture, three hours; discussion, one hour. A course specifically designed to satisfy in part the Letters and Science breadth requirement of students majoring outside the physical sciences. Introduction to the physical characteristics of climate, the classification of climate, and the global distribution of climate types. Description of climate changes over time scales ranging from the lifetime of earth to el nino events. Discussion of the causes of climatic change (e.g., the long-term steady increase in solar luminosity, short-term fluctuations in solar luminosity, changes in the earth's orbit, changes in atmospheric composition, volcanoes, anthropogenic changes such as increased CO2 and nuclear war). State of the art in modeling and predicting climate. Prerequisites: Physics 131 and Physics 132.

Mr. Venkateswaran

7. Meteorology in History and Art. Lecture, three hours; discussion, one hour. The impact of weather and climate on society, their dominant role in mythology and religion, their prominence in art, literature, and music. The major developments in man's understanding of nature as reflected through his reaction to and thoughts about the sky and its phenomena. Prerequisites: Physics 8D or exception.

Mr. Siscoe

101. Introduction to Atmospheric Sciences. (Formerly numbered 3H.) Lecture, three hours; discussion, one hour. Prerequisite: Physics 8D or exception. An introductory course in atmospheric phenomena and atmospheric processes, required of atmospheric sciences majors and recommended for honors students who are declared or potential majors in the physical sciences or engineering.

Mr. Siscoe


144. Micrometeorology and Air Pollution Meteorology. Lecture, three hours; discussion, one hour. Prerequisite: course 142. Wind and temperature structure in the surface layer; mesoscale weather and wind systems; turbulence and diffusion; evaporation; transport; diffusion, and transformation of atmospheric contaminants. Mr. Wurtele (Sp)

151. General Circulation of the Atmosphere. Lecture, three hours; discussion, one hour. Prerequisite: course 142. Observed mean circulations of the atmosphere. The momentum, heat, and moisture budgets and the energy cycle. Laboratory experiments. Basic dynamics of the Hadley and Rossby regimes. Vertical propagation of planetary waves. Stratospheric sudden warming. The quasi-biennial oscillation. Mr. Venketeswaran

152. Introduction to Physics of Clouds and Precipitation. Lecture, three hours; discussion, one hour. Prerequisite: course 142 or consent of instructor. Macroscopic and microscopic description of clouds and precipitation; phase change processes in the atmosphere; theory of drop forming and ice forming nuclei; development of precipitation; clouds; cloud microphysics and electrical development. Mr. Maguire

153. Atmospheric Radiation. Lecture, three hours; discussion, one hour. Prerequisite: Physics 110B or consent of instructor. Thermal radiation from the sun and planets. Transfer of thermal radiation through planetary atmospheres. Absorption and emission processes of electromagnetic radiation by atoms. Molecules, dust, and aerosols. Remote sensing. Meteorological optics. Mr. Sicoe

M101. Solar Terrestrial Physics. (Same as Earth and Space Sciences M154.) Lecture, three hours; discussion, one hour. Prerequisite or corequisite: Physics 110B. Particle and electromagnetic emissions from the sun under quiet and under disturbed conditions. Anode cathode phenomena. Properties of the ionosphere of the earth and other planets. Geomagnetic phenomena. Aurora and airglow. Mr. Thorne (F)

155. Introduction to Atmospheric Chemistry. Lecture, three hours; discussion, one hour. Prerequisites: course 142 and Chemistry 11B, or consent of instructor. Chemical composition and history of the atmosphere; natural cycles of important minor constituents; relevance and application of elementary chemical kinetics, thermochimistry, spectroscopy, and photochemistry to chemical processes in the lower and upper atmosphere; chemical aspects of air pollution and aerosol formation. Mr. Montague

160. Synoptic Meteorology Laboratory. Lecture, two hours; laboratory, six hours. Prerequisite: course 11. Corequisite: course 141. Study of extratropical cyclone structure and fronts through analysis of surface and upper-level weather charts. Interpretation of satellite imagery and remote soundings. Isentropic analyses. Discussion of the principal jet streams and tropopauses. Severe weather forecast. Mr. Wakimoto (Sp)

161. Numerical Methods in Atmospheric Sciences. Lecture, two hours; laboratory, three hours. Prerequisites: course 141 and Program in Computing 3, or consent of instructor. Numerical solutions of problems selected from atmospheric sciences. Matrix inversion. Solution of the oscillation, decay, advection, and vorticity equations. Mr. Mechoso

165. Laboratory in Meteorological Observation. Laboratory, six hours. Prerequisite: junior standing. Theory and application of instrumentation in field and laboratory. The material covered is partly determined by the students' interests.

M180. Nonlinear Waves. (Same as Earth and Space Sciences M180.) Lecture, three hours; discussion, one hour. Prerequisite: course M140 or consent of instructor. Basic concepts and examples of nonlinear wave behavior: limit cycles, attractors, bifurcations, relaxation, subharmonics, solitons, periodic versus chaotic behavior, Lorenz masks and Rossby bands. Mr. Newman (Sp)

198. Operational Meteorology (2 units). Laboratory, six hours. Prerequisite: junior or senior standing in atmospheric sciences. Daily 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. Mr. Wurtele (Sp)

199. Special Studies in Meteorology (2 or 4 units). Prerequisite: consent of instructor. Special individual study.

Graduate Courses

Dynamic and Synoptic Meteorology

201. Mesometeorology. Lecture, three hours. Prerequisite: consent of instructor. Observations of phenomena with length scales ranging from 20 km to 2,000 km. Topics include polar lows, air mass thunderstorms, multicell storms, supercell tornadoes, gust fronts, downbursts, microbursts, and the dry line. Discussions focus on the design of a field project. Mr. Wakimoto

203. Dynamics of Fronts. Lecture, three hours. Prerequisites: courses 209, 210A. Margules relations; early Norwegian cyclone models; quasi-geostrophic and semi-geostrophic frontogenesis; orography and surface friction; mesoscale organizations near fronts; observations and theory; frontogenesis as a problem in nonlinear dynamics. Mr. Venketeswaran


208A. Atmospheric Turbulence. Lecture, three hours. Kinematics of homogeneous and shear flow turbulence. Surface and planetary boundary layers, including heat transfer and turbulent convection. Survey of field and laboratory observations and their interpretation. Mr. Maguire

208B. Atmospheric Diffusion and Air Pollution. Lecture, three hours. Nature and sources of atmospheric pollution; diffusion from point, line, and area sources; pollution dispersion in urban complexes; meteorological factors and their interaction; the role of diffusion; and the observation of pollution. Mr. Maguire

212A. Numerical Methods in Geophysical Fluid Dynamics. Lecture, three hours. Prerequisite or corequisite: course 209. Basic numerical methods for initial-boundary value problems in fluid dynamics, with emphasis on applications to atmospheric and oceanographic problems. Finite difference methods and truncation error. Linear and nonlinear computational instability. Computational modes and computational boundary conditions. Spectral methods. Mr. Arakawa

212B. Numerical Modeling of the Atmosphere. Lecture, three hours. Prerequisites: courses 210A and 212A, or consent of instructor. Physical and computational design of numerical weather prediction models and climate simulation models. The basic dynamical models. Vertical, horizontal, and time differencing. Parameterizations of sub-grid scale processes. Mr. Arakawa


214B. Climatic Oscillations. Climatic history of our planet. Quaternary glaciations. Fluid dynamics of the atmosphere-ocean system and models of climate. Oscillatory models of glacial cycles. Bifurcations from equilibria to periodic and aperiodic solutions. The predictability of climatic change on various time scales. Mr. Arakawa

216A. Tropical Motions Interacting with Cumulus Convection. Lecture, three hours. Prerequisite: course 206. Cumulus convection and the boundary layer in the tropics. Interaction of cumulus convection with boundary layer wind. Tropical cyclones. Models of tropical cyclogenesis and soon meteorology. Mr. Yanai


218. Dynamics of the Atmosphere-Ocean System. Lecture, three hours. Transfer of properties between atmosphere and ocean; wind-driven ocean currents; coastal upwelling. Air-sea interactions. Effects of the oceans on climate. Mr. Mechoso

219. Special Topics in Dynamic Meteorology (2 to 4 units). Content varies from year to year. S/U grading.

Cloud Physics and Precipitation

221A. Atmospheric Chemistry I. Lecture, three hours. Prerequisite: course 156 or consent of instructor. Clean air chemistry of the troposphere; trace gases of biogenic and anthropogenic origin; tropospheric air pollution chemistry; physical and chemical properties of atmospheric aerosols; wet and dry deposition of pollutant gases and aerosol particles. Mr. Montague

221B. Atmospheric Chemistry II. Lecture, three hours. Prerequisite: course 156 or consent of instructor. Composition of the stratosphere, mesosphere, and ionosphere; chemistry of ground and excited state neutrals and of ions in the upper atmosphere; stratospheric pollution; chemistry of the airglow and nightglow; chemistry of other planet's atmospheres. Mr. Montague

223A. Cloud and Precipitation Physics I. Lecture, three hours. Prerequisite: course 152 or consent of instructor. Microstructure of atmospheric clouds; structure of the three phases of water substance, including surface effects; thermodynamic theory for equilibrium between the three phases of water substance, including surface effects; theory of homogeneous and heterogeneous nucleation of water drops and ice crystals.
223B. Cloud and Precipitation Physics II. Lecture, three hours. Prerequisite: course 223A. Theory of the growth and evaporation of water drops and ice crystals by diffusion of water vapor; hydrodynamics of rigid bodies in a viscous medium; raindrops, snowflakes, and ice particles; growth of cloud drops and atmospheric ice particles by collision.

224. Atmospheric Electricity. Lecture, three hours. Prerequisites: course 223B, Physics 110A, 110B. Fair weather electricity; atmospheric ions; electric structure of stormy and nonstormy clouds; electric charge generation mechanisms in atmospheric clouds; physics of thunder and lightning; effect of electric fields and charges on cloud and precipitation formation.

228A. Clouds and Radiation. Lecture, three hours. Budget radiation of cloudy atmospheres, including cloud-albedo feedback mechanisms; dependence of cloud radiative properties on microphysical parameters; test-bed modeling techniques of radiative effect of clouds; radiative dynamical interactions in cloudy atmospheres.

228B. Radar Meteorology. Lecture, three hours. Radar detection of spherical and nonspherical particles; use of radar in studying size distributions of cloud and precipitation particles. Precipitation intensity and amount, updraft velocities, horizontal wind speed, and turbulence; radiative transfer in convective clouds, thunderstorms, tornadoes, hurricanes, squall lines, and fronts; clear air echoes.

Radiation


236. Scattering Processes in the Atmosphere. Lecture, three hours. Prerequisite: course 153. Equation of transfer in a scattering medium. Stokes formalism; Rayleigh and Mie theories; polarization of skylight; scattering in a turbid atmosphere, aerosols and their effects on the radiation balance of the atmosphere. Experimental methods of determining aerosol parameters and their significance to meteorology.

238. Radiative Transfer in the Earth's Atmosphere. Lecture, three hours. Prerequisite: course 153. Critical review of methods available to calculate the transfer of radiation (visible, ultraviolet, and infrared) through the atmosphere. Computations of fluxes and heating rates using various methods. Familiarity with the available techniques in the literature is provided.

Upper Atmospheric and Space Physics

240A. Solar System Magnetohydrodynamics. Lecture, three hours. Prerequisite: course M154 or consent of instructor. Derivation of the MHD equations with two fluid aspects, generalized Ohm's law, small amplitude waves, discontinuities, shock waves, instabilities of the statics and dynamics of the solar wind and planetary magnetospheres and to solar wind-magnetosphere-ionosphere coupling. Mr. Siscoe

240B. Solar System Microscopic Plasma Processes. Lecture, three hours. Prerequisite: course M154 or consent of instructor. Adiabatic charged particle dynamics; incoherent radiation processes; collective effects in a plasma: propagation characteristics of electrostatic and electromagnetic waves; introduction to resonant interaction between charged particles and plasma waves. Mr. Thorne

240C. Ionospheric Plasmas. Lecture, three hours. Prerequisites: courses M154, 240B. Formation of planetary ionospheric layers; transport processes; currents and electric fields; ionospheric plasma instabilities; nonlinear effects and artificial modification. Mr. Venkateswaran

246. Physics of the Ionosphere. Lecture, three hours. Prerequisites: Physics 110A and 110B, or consent of instructor. Structure, composition, and dynamics of ionospheric layers. Mr. Venkateswaran

247. Radiation Belt Plasma Physics. Prerequisite: course 240B or consent of instructor. Turbulent plasma instabilities and their relation to satellite observations and magnetospheric structure. Processes responsible for the source, loss, and transport of energetic radiation belt particles. Mr. Thorne

248. Advanced Topics in Interaction between Lower and Upper Atmospheres. Lecture, three hours. Content varies from year to year. Mr. Venkateswaran

249. Special Topics in Solar Planetary Relations (2 to 4 units). Selected topics of current research interest in solar wind, magnetospheric, or ionospheric physics.


255. Dynamics of the Stratosphere and the Mesosphere. Lecture, three hours. Prerequisite: course 210A. Photochemistry and radiation regime of the middle atmosphere; propagation of waves of tropospheric origin; radiative and photochemical damping effects; excitation and propagation of atmospheric tides; wave‐zonal interaction; internal instabilities; theories of circulation features, including annual, semiannual, and quasi‐biennial oscillations and the buildup and breakdown of the polar vortex.

256. Dynamics of the Atmosphere. Lecture, three hours. Prerequisite: course 210A. Physics of the stratosphere and mesosphere. Mr. Venkateswaran

257. Radiations, Pollution, and Climate. Lecture, three hours. A breadth requirement for graduate students; specific background in radiation is not assumed. External and feedback influences of radiation and climate on carbon dioxide and climate change problems. Effects of photochemical, thermal, and particulate pollution on urban and global climates. Climate modeling.

Special Studies

260. Seminar in Meteorology (2 units).
261. Seminar in Atmospheric Dynamics (2 units).
262. Seminar in Cloud and Precipitation Physics (2 units).
263. Seminar in Atmospheric Radiation (2 units).
264. Seminar in Physics of the Upper Atmosphere (2 units).

Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

596. Directed Studies for Graduate Students (2 to 8 units).
598. Preparation for Comprehensive Examinations (2 to 8 units).
599. Research and Preparation of M.S. Thesis (2 to 8 units).
609. Research for Ph.D. Dissertation (2 to 8 units).

Related Courses in Other Departments

Astronomy 81, 82, 180
Biometeorology 202

Chemical Engineering 137A, 137E, 240
Civil Engineering 181A
Computer Science 10C
Earth and Space Sciences 101, M140, M154, 202, 203, M211, 214, 225, 250, 261, 265
Electrical Engineering 117A, 117B, M118, 124A

Biochemistry

See Biological Chemistry (School of Medicine), Biology, and Chemistry and Biochemistry

Biology

2203 Life Sciences, 825-3481

Professors
Albert A. Barber, Ph.D. (Cell Biology)
George A. Bartholomew, Ph.D. (Zoology)
Joseph Casparano, Ph.D. (Cell Biology)
David J. Chapman, Ph.D.
William R. Clark, Ph.D. (Cell Biology)
Martin L. Cody, Ph.D.
Wilbur T. Ebersoldt, Ph.D.
Roger E. Eckert, Ph.D. (Neurobiology)
Franz Engelmann, Ph.D.
John H. Fesslers, Ph.D. (Molecular Biology)
Robert Goldberg, Ph.D.
Malcolm S. Gordon, Ph.D.
Michael Grunstein, Ph.D.
Thomas R. Howell, Ph.D. (Zoology)
Thomas W. James, Ph.D. (Cell Biology)
Harumi Kasamatsu, Ph.D.
J. Lee Kavanau, Ph.D.
James A. Lake, Ph.D. (Molecular Biology)
George G. Lattie, Ph.D. (Plant Physiology)
O. Raynal Lunt, Ph.D.
Austin J. Macnlin, Ph.D. (Cell Biology)
Jeffrey Miller, Ph.D. (Genetics)
James G. Morin, Ph.D. (Zoology)
Leonard Mordente, Ph.D.
Kenneth A. Naga, Ph.D. in Residence
Park S. Nobel, Ph.D.
John D. O'Connor, Ph.D. (Developmental Biology)
Bernard O. Prinney, Ph.D.
Dan S. Ray, Ph.D. (Molecular Biology)
Philip W. Rundel, Ph.D.
Winston A. Salser, Ph.D. (Molecular Biology)
Richard W. Siegel, Ph.D.
Larry Simpson, Ph.D. (Cell Biology)
J. Philip Thornton, Ph.D. (Plant Biochemistry), Chair
Peter P. Vaughn, Ph.D. (Zoology)
Emeritus Professors
David Appleman, Ph.D.
Jacob B. Biale, Ph.D.
Nicholas E. Colias, Ph.D.
Frederick Crescitelli, Ph.D.
Eric B. Edney, Ph.D.
Karl C. Hammer, Ph.D.
Arthur W. Haupt, Ph.D.
F. Harlan Lewis, Ph.D.
Mildred E. Mathias, Ph.D.
Everett C. Olson, Ph.D.
Charles A. Schroeder, Ph.D.
F. Harlan Lewis, Ph.D.
Karl C. Hamner, Ph.D.
Karl C. Hamner, Ph.D.
Charles A. Schroeder, Ph.D.

Associate Professors
Clifford F. Brunk, Ph.D. (Cell and Molecular Biology)
Arthur C. Gibson, Ph.D. (Botany)
Elma Gonzalez, Ph.D. (Cell Biology)
Henry A. Hesperthede, Ph.D.
Judith A. Lengyel, Ph.D.
John R. Merriam, Ph.D. (Genetics)
Peter M. Narins, Ph.D.
Paul H. O'Lague, Ph.D.
Charles C. Taylor, Ph.D.
Allan J. Tobin, Ph.D.
Richard K. Vance, Ph.D.

Assistant Professors
J. Chloé Bulinski, Ph.D. (Cell Biology)
Donald G. Buth, Ph.D.
Michael Greenfield, Ph.D.
Meyer B. Jackson, Ph.D.
Laurie Vitt, Ph.D.

Adjunct Professor
William M. Hamner, Ph.D.

Visiting Lecturers
Kathleen Diamond, Ph.D.
Catherine Jacobs, Ph.D.
Eric Mundahl, Ph.D.
Steve Strand, Ph.D.

Scope and Objectives
Studies in biology touch every aspect of human existence, and answers to human problems are a challenge to modern biology. To meet this challenge, the Biology Department offers a wide spectrum of undergraduate and graduate programs which fall under the broad categories of population, organismic, developmental, cell, and molecular biology. These all have their counterparts in areas of modern life from environmental problems to viruses and cancer.

Each of these disciplines, as well as fundamental backgrounds in mathematics, physics, and chemistry, is part of a general Bachelor of Science degree in Biology. The department also offers bachelor’s degrees with specializations in animal physiology, cellular and developmental biology, ecology, genetics, marine biology, molecular biology, neurobiology, and plant biology designed for students motivated to enter special advanced studies quickly.

Advanced studies in biology are provided through the Master of Arts and Ph.D. degrees, which may be acquired only through concentrated study and independent innovative research culminating in the presentation of a thesis. Candidates for a higher degree may avail themselves of a program of rotation through various laboratories in the design of their degree program.

Bachelor of Science Degree

Pre-Biology Major
Students who have not completed all the courses required as "Preparation for the Major" are pre-biology majors. After completing these courses with a grade of C- or better in each, students should petition to enter the biology major in the Undergraduate Affairs Office.

In order to be admitted as pre-biology majors, transfer students who have 80 units or more must have completed one year of general chemistry with laboratory, Biology 5 and 7, or the equivalent, and at least one of the following sequences: (1) one year of calculus, (2) one year of calculus-based physics, or (3) two courses in organic chemistry with laboratory.

Preparation for the Major
The following courses are required:
(1) Biology 5, 5L, 6, 7, 8, 8L
(2) Chemistry 11A, 11B/11BL, 11C/11CL, 21, 23, 25
(3) Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; courses 31A, 31B, 32A are strongly recommended for students intending to study ecology, evolution, or population genetics.
(4) Physics 6A, 6B, 6C

The Major
The following courses are required:
(1) Three courses from the core list (one from each of the following groups):
   (a) Morphology Systematics: Biology 100, 101, 105, 110, 153, Microbiology 101
   (b) Developmental and Molecular Biology: Biology 138, 141, 143, 144, 146
   (c) Physiology: Biology 158, 162, 166, 167
(2) Two additional upper division biology courses
(3) Four courses which may be selected from upper division biology or any upper division course in microbiology, chemistry, mathematics (except Mathematics 101A through 106), physics, or from the approved list which may be obtained in the Undergraduate Affairs Office. A maximum of four units of Biology 199 may be applied toward the major. Credit for 199 courses from other departments may not be applied.

Additional Requirements
(1) Six-unit courses count as only one course on requirements for the major.
(2) A maximum of eight units of Biology 190 or four units of Biology 199 may be applied toward the major.
(3) Courses applied toward requirements for "Preparation for the Major" and the major must be taken for a letter grade.
(4) Biology majors must earn a C- or better in each core course, a 2.0 average in all upper division biology courses, and a 2.0 average in the nine courses comprising the major.

Concentration in Molecular, Cellular, and Developmental (MCD) Biology

Preparation for the Major: Biology 5, 5L, 8L, Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Chemistry 11A, 11B/11BL, 11C/11CL, 21, 23, 25; Physics 6A, 6B, 6C.

The Major: Biology 138 or 141, 143, 144, and 158 or 162 or 166 (alternative upper division laboratory courses to 158 or 162 or 166 include, but are not limited to, the following sets: courses M185 and M186/M187, 142A and 157, 171 and 172A); two upper division electives from courses 110, 149, 155, CM156, 177, Microbiology 101, or from the following, if not already used to satisfy another requirement: Biology 138, 141, 145A, 157, 158, 162, 166, 171, M185 (courses offered by other departments may be substituted by consent of the undergraduate adviser); Chemistry 110A, 133A, 156, 157A.

Honors
An overall GPA 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 GPA in the major at graduation and who have successfully completed Biology 190A-190B.

Graduate Study
The department offers M.A. and Ph.D. degrees in Biology, with specialization in a wide spectrum of fields. Students who plan to enter graduate school are urged to seek the advice of staff members in their field of interest.

Admission
The department encourages applications from students in all areas of science, but expects successful applicants to have or to acquire a background comparable to the requirements for the bachelor’s degree in biology at UCLA. A background in chemistry, physics, and mathematics is desirable. Deficiencies in these or other subjects must be made up at the earliest opportunity. Undergraduates who are prospec-
live applicants should remedy their deficiencies by preparatory study at an appropriate institution. The Graduate Division or the department may initially restrict applicants with less distinguished accomplishments. All applicants must take the Aptitude Test (verbal, quantitative, and analytical) of the Graduate Record Examination (GRE). The Advanced Test in Biology is not required.

Three letters of recommendation are required. These should be from professors, supervisors, or others who may provide an evaluation of accomplishments or potential in research, scholarly activities, teaching, and related academic functions.

You also are required to complete the departmental written qualifying examination, given in the Fall and Spring Quarters, at an early point in your graduate career. The exact timing and content of the examination vary between the divisions.

Applications, departmental brochures, and additional information may be obtained from the Graduate Affairs Office, Department of Biology, 2316 Life Sciences, UCLA, Los Angeles, CA 90024.

Teaching Credentials
Teaching credentials and Ph.D. degrees in Education (with specialization in biology) are obtained through the Graduate School of Education with assistance from the graduate advisor in the Biology Department. The cognate requirement in biology may be satisfied by completing the equivalent of the master's degree in biology.

Program of Study
The department is organized for administrative purposes into two divisions based on mutual interest. Applications should be directed to either Division I (molecular, cell, and developmental biology) or Division II (organismic and population biology). The major fields and subdisciplines are listed under faculty interests in the departmental brochure.

Study consists of coursework and research within the department and within related programs in biochemistry, geology, microbiology, and molecular biology on campus. Opportunities are also available off campus for intensive study of marine biology at the Catalina Marine Science Center in the Fall Quarter (CMFBQ) and of field biology in the Spring Quarter (FBQ).

Foreign Language Requirement
No foreign language is prerequisite to admission to the M.A. or Ph.D. program, and there is no uniform language requirement for obtaining the Ph.D. However, in the pursuit of certain subspecialties of biology, you may be required to gain proficiency in one or more foreign languages.

Master of Arts Degree

Admission
Applications are evaluated by the appropriate divisional admissions committee.

Course Requirements
The program consists of at least nine courses completed in graduate standing, of which at least five must be graduate (200 series) courses. The remainder may be courses in the 100, 200, or 500 series as noted below. No more than two 596 courses (eight units) may be applied toward the nine courses required for the degree; only one 596 course (four units) may be applied toward the minimum graduate course requirement. Courses graded S/U may not be applied toward the minimum requirement, except that an S/U-graded course outside the major and applicable to the degree may be applied, provided that no more than one such course is taken per quarter.

Specific course requirements are established for you by your guidance committee.

Thesis Plan
A thesis reporting the results of an original investigation, written to conform to the requirements of the Graduate Division, is presented to and approved by the master's thesis committee of three faculty members. Before beginning work on the thesis, you must obtain approval of the subject and general plan from the faculty members concerned and from the thesis committee.

Comprehensive Examination Plan
If you select this plan, you must take a three-hour examination prepared and graded by your committee or committee chair and approved by the graduate adviser. The examination is graded pass or fail. If you fail, recommendation for or against a second examination must be made by the graduate adviser.

Ph.D. Degree

Admission
Each division determines admission of students to the Ph.D. program separately. Ph.D. students in Division I (molecular, cell, and developmental biology) are admitted in the Fall Quarter. Applications to Division II (organismic and population biology) are reviewed by the division's admissions committee which advises prospective sponsors about the desirability of admission.

Course Requirements
There are no formal course requirements for the Ph.D., although specific requirements may be established individually by your guidance committee. You must enroll for full-time study, as defined by the Graduate Division.

You are strongly encouraged to rotate laboratory and/or course experience with several faculty members during the first year of study as an aid to choosing a permanent adviser.

Teaching Experience
Each student is required to complete one academic year as a teaching assistant.

Oral Qualifying Examination
The University Oral Qualifying Examination is conducted by the doctoral committee as prescribed by the Graduate Division. It includes your preparation, presentation, and defense of an original written research proposal. The examination is graded pass, fail, or repeat. A failure requires dismissal. The second attempt at the examination is graded pass/fail. The examination must be completed by the end of the third year following first registration. You are advanced to candidacy following successful completion of this examination.

Candidate in Philosophy Degree
Requirements for the C.Phil. degree are identical to those for advancement to candidacy for the Ph.D., except that only four quarters of academic residence are required, including three quarters in continuous residence at UCLA. The C.Phil. is not given as a terminal degree.

Final Oral Examination
Final approval of the dissertation in the department is accomplished when the committee approves the written form and is satisfied with the final oral examination.

Lower Division Courses
2. Principles of Biology. Lecture, three hours; laboratory, 90 minutes. Designed for nonmajors. Not open to students with credit for course 5 or 7. Lectures include the structure and chemical composition of cells, animal structure and diversity, cellular respiration, photosynthesis, major organ systems with emphasis on human cell division, reproduction, development, ecology, population growth, genetics, evolution. Laboratory includes structure and function of cells, morphology of plants and animals, circulation and nervous systems, embryology, plant diversity and adaptation, human genetics.

5. Biology of Organisms. Lecture, three hours; discussion/demonstration, two hours. Comparative morphology and embryology of the major plant and animal phyla; function of organ systems, including gas exchange, transport, regulation of the internal environment, hormones, coordination, and the nervous system.

5L. Organismic and Environmental Biology Laboratory (2 units). (Formerly numbered 6L.) Lecture, one hour; laboratory, three hours. Prerequisite: course 5. Introductory biology laboratory, including basic cell and microorganism organization, morphology and diversity of organisms, population biology, evolution, and community ecology.

6. Ecology, Evolution, and Behavior. Lecture, three hours; discussion, two hours. Prerequisites: course 5 and Mathematics 3A or 31A. A survey of the principles of population growth and ecology, competition, predation, community ecology, environmental physiology, population genetics, natural selection, and speciation.
Upper Division Courses

Course 5L is prerequisite to all upper division laboratory courses.

100. Biology of Lower Plants (6 units). Lecture, four hours; laboratory, six hours. Prerequisite: course 5 or equivalent or consent of instructor. An introduction to the biology of algae, fungi, and bryophytes, with emphasis on form, development, reproduction, and the role of lower plants in the environment. Students are strongly encouraged to take both courses 100 and 101 since these represent a core course sequence surveying the entire plant world as appropriate background for upper division courses in plant biology.
Mr. Chapman

101. Biology of Vascular Plants (6 units). Lecture, three hours; laboratory, six hours. Prerequisite: course 5 or equivalent or consent of instructor. An introduction to the diversity in form and reproduction of vascular plants, with emphasis on development, evolution, and function. Students are strongly encouraged to take both courses 100 and 101 since these represent a core course sequence surveying the entire plant world as appropriate background for upper division courses in plant biology.

102. Biology of Marine Invertebrates. Five-week intensive course. Lecture, five hours; laboratory, fifteen hours. Prerequisite: completion of "The Major" courses or consent of instructor. Morphology, systematics, life histories and natural history, ecology, behavior, and physiology of marine invertebrates; emphasis on local invertebrates of Southern California and the Catalina Marine Science Center.
Mr. Morin, Mr. Muscatine

103. Taxonomy of Flowering Plants (4 or 8 units). The course is offered either as a quarter-long course for four units or as an eight-unit course as part of the field biology quarter. The four-unit course has lecture, two hours; laboratory, four hours. The evolution, systematics, morphology, principles of taxonomy, phylogenetic systematics, nomenclature, and modern methods of investigation are covered. The eight-unit course covers the same basic lecture and laboratory material in five intensive weeks. This is followed by an extended field trip where students do individual field projects.
Mr. Gibson

105. Biology of Invertebrates (6 units). Lecture, three hours; laboratory/field trips, six hours. Prerequisite: completion of "Preparation for the Major" courses. Introduction to the systematics, evolution, natural history, morphology, and physiology of the invertebrates.
Mr. Morin, Mr. Muscatine

106A-106B. Experimental Marine Invertebrate Zoology (6 units each). Lecture, two hours; laboratory, twelve hours. Prerequisites: courses 105 and 186 (latter may be taken concurrently with 106A), or equivalent, consent of instructor. Course 106A is prerequisite to 106B. An advanced course of natural history, physiology, biochemistry of invertebrates, with emphasis on independent laboratory and field investigations.
Mr. Morin, Mr. Muscatine

107. Entomology (6 or 8 units). Prerequisites: courses 5, 6. The course is offered either as a quarter-long course for six units or as an eight-unit course as part of the field biology quarter. The six-unit course has lecture, three hours; laboratory, six hours; additional field trips. The morphology, physiology, development, systematics, behavior, and ecology of insects are covered. The eight-unit course covers the same basic lecture and laboratory material in two and one-half intensive weeks. This is followed by an extended field trip where students do individual field projects in insect biology.
Mr. Greenfield

110. Vertebrate Paleontology. Lecture, three hours; laboratory, four hours. Prerequisites: courses 5, 5L, 6. A study of vertebrate morphology and evolution from the viewpoint of comparative anatomy of adult forms, developmental anatomy, and paleontology. Laboratory study of selected vertebrates.
Mr. Vaughn (F,W)

111. Biology of Vertebrates. Lecture, three hours; demonstration/field trips, discussion, three hours. Prerequisites: courses 5, 5L, 6. The adaptations, behavior, and ecology of vertebrates.
Mr. Bartholomew, Mr. Howell, Mr. Vitt

112. Ichthyology. Lecture, two hours; laboratory, six hours; field trips. Prerequisites: courses 5, 5L, 6, and 111, or consent of instructor. Limited to 24 students. The biology of freshwater and marine fishes, with emphasis on their evolution, systematics, morphology, zoogeography, and ecology. Field trips in California and the Pacific Northwest.
Mr. Bartholomew, Mr. Howell, Mr. Vitt

113. Herpetology (4 or 8 units). Prerequisites: course 111, 120, or 122, consent of instructor. The course is offered alternately as a four-unit course to be introduced in course 121, as a six-unit course as part of an eight-unit course as part of the field biology quarter. The four-unit course has lecture, three hours; laboratory, six hours; approximately four weekend field trips or in Progress (credit to be given only on completion of course 116B) grading.

114. Ornithology. Lecture, two hours; laboratory/discussion/field trips. Six hours. Prerequisites: course 111, consent of instructor. Limited enrollment. The systematic classification, distribution, physiology, behavior, and ecology of birds.
Mr. Howell

115. Mammalogy. Lecture, two hours; laboratory, six hours; field trips. Prerequisites: course 111 or equivalent, consent of instructor. The evolution, ecology, behavior, and medical and veterinary roles of mammals.

116A-H. Honors Seminar in Organismic and Evolutionary Biology (2 units). Prerequisites: course 5 and honors program standing, or consent of instructor. Reading and group discussion of organismic topics. Students are expected to participate in the honors program and continue into course 116BH. P/NP (for students unable to take course 116BH due to academic or scheduling problems) or in Progress (credit to be given only on completion of course 116B) grading.

116BH. Honors Seminar in Organismic and Evolutionary Biology (2 units). Prerequisites: courses 6, 116A-H. Reading and group discussion of evolutionary and ecological topics. Students are expected to participate in the honors program and must have taken course 116AH the previous quarter.

117. Vertebrate Paleontology. (Formerly numbered M117). Lecture, three hours; laboratory, three hours. Prerequisite: course 111. Recommended for a course in general geology. Limited enrollment. The fossil record of the evolution of the vertebrates, with emphasis on the morphology of primitive forms in the series from fish to mammal.
Mr. Vaught (S), Mr. Schopf (W), Mr. Mace (Sp

M118. Paleobotany. (Same as Earth and Space Sciences M118). Lecture, three hours; laboratory, three hours. Prerequisite course 111. Recommended for a course in general geology. Limited enrollment. The fossil record of the evolution of the vertebrates, with emphasis on the morphology of primitive forms in the series from fish to mammal.
Mr. Vaught (S), Mr. Schopf (W), Mr. Mace (Sp

119. Mathematical Ecology. Lecture, three hours. Prerequisites: course 6 and Mathematics 32A, or consent of instructor. Recommended: Earth and Space Sciences 2 or equivalents. Survey of mathematical models of morphology, paleobiology, and evolution of vascular and nonvascular plants during geologic time, with particular emphasis on major evolutionary events.
Mr. Schopf

120. Mathematical Geology. Lecture, three hours. Prerequisites: course 6 and Mathematics 32A, or consent of instructor. Recommended: Earth and Space Sciences 2 or equivalents. Survey of mathematical models of morphology, paleobiology, and evolution of vascular and nonvascular plants during geologic time, with particular emphasis on major evolutionary events.
Mr. Schopf
120. Evolutionary Biology. Lecture, three hours; laboratory, two hours. Prerequisite: completion of “Preparation for the Major” courses. Highly recommended: Mathematics 31A, 31B, 32A. Recommended for biology majors specializing in environmental and population biology. Introduction to the mechanics and processes of evolution, with emphasis on natural selection, population genetics, speciation, evolutionary rates, and patterns of adaptation.

Mr. Cody, Mr. Hespenheide (W)

121. Seminar in Ecology (2 units). Prerequisites: course 120 or 122, consent of instructor. Undergraduate seminar in ecology; reading and discussion of current research, including preparation of review papers. Letter-graded. Mr. Hespenheide

122. Ecology. Lecture, three hours; laboratory, three hours. Prerequisite: completion of “Preparation for the Major” courses. Highly recommended: Mathematics 31A, 31B, 32A. Recommended for biology majors specializing in environmental and population biology. Evolutionary Biology: the study of evolution, with emphasis on natural selection, variation, and processes of adaptation. Mr. Cody, Mr. Hespenheide

123. Environmental Biology. Lecture, three hours; laboratory, eight hours. Prerequisites: courses 120 or 122, consent of instructor. The course is offered either as a quarter-long course with weekend field trips or as a single fall quarter course selecting between quarters, followed by lectures and tutorials for three weeks. When the course is given as part of the field biology quarter, it is eight units and lasts for five weeks. Field and laboratory research in ecology, the collection, analysis, and write-up of numerical data, with emphasis on design and execution of field studies.

Mr. Vance

124. Field Ecology (4 or 8 units). Lecture, two hours; laboratory or field trip, ten hours. Prerequisites: course 120 or 122, consent of instructor. The course is offered either as a quarter-long course with weekend field trips or as a single fall quarter course selecting between quarters, followed by lectures and tutorials for three weeks. When the course is given as part of the field biology quarter, it is eight units and lasts for five weeks. Field and laboratory research in ecology, the collection, analysis, and write-up of numerical data, with emphasis on design and execution of field studies. Mr. Collias

125. Population Ecology (4 or 6 units). Lecture, two hours; laboratory or field trip, ten hours. Prerequisites: course 120, consent of instructor. The course is offered either as a quarter-long course for four units or in the field biology quarter as a concentrated five-week course for eight units. A study of ecological organization, structure, distribution, and reproductive biology of plant populations, emphasizing field studies of selected populations and ecosystems. Mr. Cody

126. Behavioral Ecology (4 or 8 units). Prerequisites: courses 5, 6. The course is offered either as a quarter-long course for four units or as an eight-unit course as part of the field biology quarter. The quarter-long course has lectures; three hours, discussion; three hours, laboratory. Animal communication behavior, island biogeography, and evolution of social behavior are covered. The eight-unit course covers the same basic lecture material in five intensive weeks. This is followed by an extended field trip where students do individual projects in behavioral ecology.

Mr. Narins

127. Soils, Plants, and Society. (Same as Geography 113.) Lecture; three hours; field trip. Prerequisites: Chemistry 11A, 11B, and 11C, or equivalent, or consent of instructor. A general treatment of soil development and morphology and the physical and chemical properties of soils as they relate to plant growth and distribution; soil resources, management, utilization, and cultural aspects. Soil profiles examined on the field trip are used to explain developmental phenomena.

Mr. Lunt

128. Plant Physiological Ecology (4 or 8 units). Lecture, three hours; laboratory/field, three hours. A study of plant-environmental interactions under natural conditions. Emphasis on transpiration and photosynthesis, leaf temperatures, and water movement in the soil-plant-atmosphere continuum. Individual student projects. When the course is given as part of the field biology quarter, it is eight units, and the individual research project is correspondingly expanded.

Mr. Cody, Mr. Hespenheide (W)

129. The Behavior of Animals. Lecture, three hours; discussion, three hours. Prerequisite: course 111 or consent of instructor. Ecological significance, underlying mechanisms, and evolution of behavior, with special emphasis on animal sociability under natural conditions. Mr. Collias

130. Biology Research Problems. Lecture, three hours; laboratory, two hours. Prerequisites: courses 5, 6. consent of instructor. Systems and noninvasive sensing procedures for behavior studies in the laboratory and field. Rationale, design, and limitations of laboratory studies of behavior. Mr. Kavanau

131. Insect Ecology (4 or 8 units). Lecture, two hours; laboratory or field trip, eight hours. Prerequisites: course 120 or 122, consent of instructor. The course is offered either as a quarter-long course with weekend field trips or as a single field biology quarter. Analysis of the ecological roles of insects in terrestrial communities, with emphasis on interactions between plants and vertebrates. Students perform group and individual field projects.

Mr. Greenfield, Mr. Hespenheide

132. Field Behavioral Ecology (8 units). Lecture, two hours; laboratory/field trip, ten hours. Prerequisites: courses 5, 6, consent of instructor. The five-week course is offered only as part of the field biology quarter laboratory/field trip, ten hours. The course covers the ecological roles of insects in terrestrial communities, with emphasis on interactions between plants and vertebrates. Students perform group and individual field projects during an extended field trip are stressed.

Mr. Greenfield, Mr. Narins

133. Physiological Ecology of Desert Animals (2 units). Prerequisites: courses 111, and 166 or 167. A physicochemical analysis of the physiology of cells or tissues. Mr. Taylor

134. Population Genetics. Lecture, three hours; discussion, one hour. Prerequisite: course 8. Highly recommended: course 111, 31A, 31B. Basic principles of genetics of population, dealing with the genetic structure of populations, adaptation to the environment, and the forces affecting the evolution of populations. Mr. Bartholomew, Mr. Nagy

135A-135B. Population Genetics Laboratory. Laboratory, two hours; discussion, one hour. Prerequisite: course 111. Highly recommended: course 31A, 31B. Basic principles of genetics of population, dealing with the genetic structure of populations, adaptation to the environment, and the forces acting on evolution. Mr. Greenfield, Mr. Narins

136A. Seminar in Genetics (2 units each). Prerequisite: course 8. Consent of instructor. Undergraduate seminar in genetics; reading and group discussion of current research in genetics.

Mr. Siegel (F, W, Sp)

138. Developmental Biology. Lecture, three hours; discussion, one hour. Prerequisite: completion of "Preparation for the Major" courses. Synopsis of fundamental concepts in embryology and a survey of current topics in developmental biology.

Ms. Lengyel, Mr. O'Connor, Mr. Tobin

139. Introductory Laboratory in Developmental Biology. Lecture, two hours; laboratory, six hours. Prerequisites: course 138, consent of instructor. Introduction to the laboratory study of developmental biology, including cell and organ culture and biochemical analysis of developing systems.

Mr. Chapman, Mr. Goldberg, Ms. Tobin (Sp)

140. Plant Developmental Biology. Lecture, three hours; discussion, one hour. Prerequisites: courses 5, 7, 8. An in-depth study of the basic processes of development and the molecular aspects of the developmental process as it relates to the plant kingdom. A variety of developing systems is studied (protoplasm, fungi, lower and higher plants), with the goal of developing a unified concept of differentiation.

Mr. Thornber

142A-142B. Seminar on Topics in Developmental Biology (2 units each). Prerequisite: course 138, consent of instructor. Undergraduate seminar in topics in developmental biology. Reading and group discussion of current research.

Ms. Lengyel, Mr. O'Conner, Mr. Tobin (F, W, Sp)

143. Molecular Cell Biology. Lecture, three hours; discussion, one hour. Prerequisites: courses 5, 7, 8. Chemistry courses through Chemistry 25. Molecular biology as it relates to cell biology and molecular biology emphasizing the synthesis, structure, function, and interactions of biological macromolecules.

Mr. Goldberg, Ms. Tobin

144. Molecular Biology. Lecture, three hours; discussion, one hour. Prerequisites: courses 7, 8. Strongly recommended: Chemistry 25. A course in molecular biology emphasizing the synthesis, structure, function, and interactions of biological macromolecules.

Mr. Narins

145A-145B. Molecular Cell Biology Laboratory. Lecture, twelve hours. Prerequisite: consent of instructor. Highly recommended: course 143. A course in experimental molecular biology in which the student carries out research under supervision. Space is limited, and arrangements must be made in advance with the instructor. Mr. Salser (F, W, Sp)

146. Physiological Ecology. Lecture, three hours; discussion, one hour. Prerequisites: courses 5 and 7, or consent of instructor, and Physics 6C or equivalent. A physiological analysis of the physiology of cells and organelles, with emphasis on membranes, thermodynamics of solute and water movement, light absorption, and subcellular energy transduction.

Mr. Nobel (F)

147. Biological Oceanography. Five-week intensive course. Lecture, five hours; laboratory, fifteen hours. Prerequisite: completion of "Preparation for the Major" courses or consent of instructor. Lectures include physical, chemical, and biological factors affecting the composition and distribution of plankton. Natural history of major phytoplankton and zooplankton taxa; physiological and morphological adaptations to life in nutrient-sparse habitats. Laboratory includes systematic, morphological, and structural sections and field studies of local marine plankton, with emphasis on measurement of feeding, primary and secondary productivity, and nutrient flux. Course is offered at the Catalina Marine Science Center. Mr. Muscatine

148. Biology of Marine Plants. Five-week intensive course. Lecture, five hours; laboratory, fifteen hours. Prerequisite: completion of "Preparation for the Major" courses or consent of instructor. An introduction to the general biology of marine algae, including basics of structure reproduction, life histories, systematics, and an introduction to the physiology and ecology of marine algae. Techniques in culture and laboratory investigation and utilization of algae. Course is given at the Catalina Marine Science Center. Mr. Muscatine

149. Plant Biochemistry and Photosynthesis. Prerequisite: completion of "Preparation for the Major" courses. A survey course emphasizing plant-specific biochemistry, including photosynthesis; nitrogen fixation and metabolism; sulfur metabolism; respiration; plant pigments, lipids, proteins, and nucleic acids; the cell wall; terpenes; alkaloids and flavonoids.
152. Functional Plant Anatomy. Lecture, three hours; laboratory, six hours. Prerequisite: courses 5, 7, or equivalent, or consent of instructor. The structure and functional significance of the various cell and tissue types in higher plants, plus the patterns of growth and differentiation in roots, stems, leaves, flowers, and fruits.

153. Functional Histology. Lecture, three hours; laboratory, four hours. Prerequisite: completion of "Preparation for the Major" courses. Correspondence of function and structure in vertebrate organs and tissues at cellular and subcellular levels. Mr. Cascaran, Mr. James

154. Functional Ultrastructure of Cells and Tissues. Lecture, three hours; discussion, one hour. Prerequisites: course 5 or 7, Chemistry 21, 23, 25, or equivalent. Basic life processes at the supramolecular and molecular levels of cells. Functional significance of membrane structure, molecular basis of absorption, secretion, and muscle contraction. Conventional and advanced methods in ultrastructural analysis, electron microscopy. Interpretations of structural information. Mr. Sjostand

155. Analytical Microscopy and Cytology. Lecture, three hours; laboratory, three hours. Prerequisites: Physics 5, Chemistry 5L, 6B, and equivalent, or consent of instructor. Designed for students in the biological sciences to acquaint them with quantitative cytology, with emphasis on bright field, dark field, phase contrast, interference, polarization analysis, fluorescence microscopy, and epoxy-illumination.

Prerequisite: course 155 or 156.

CM156. Human Genetics. (Formerly numbered M134.) (Same as Biomatics CM156.) Lecture, three hours; discussion, one hour. Prerequisites: course 5 or 7, Chemistry 21, 23, 25, or equivalent, or consent of instructor. An introduction to the instrumentation used in human genetics and the methodologies appropriate to answer such questions. Concurrently scheduled with course CM256.

Mr. Merriam, Ms. Spence (Sp)

157. Gene Manipulation. Genetic Engineering. Lecture, three hours; discussion, two hours. Prerequisite: course 138 or 144 or consent of instructor. A survey of the methods and applications of recombinant DNA research as applied to both basic scientific research and the biotechnology industry.

Mr. Salser

158. Cell Biology. (6 units). Lecture, three hours; laboratory, six hours. Prerequisite: completion of "Preparation for the Major" courses. The cell biology of eukaryotic cells, emphasis on the correlation of structure and function at the molecular, organellar, and cellular levels.

Mr. Cascaran, Mr. James, Mr. Simpson


Mr. Laties (F)

163. Plant Physiology Laboratory. Lecture, one hour; discussion, one hour; laboratory, eight hours. Prerequisite: course 162. Limited enrollment. Students are introduced to the instrumentation used in plant physiology and to the interpretation of data generated by laboratory experiments based on the lecture material in course 162. Subsequently, students working singly or in groups undertake a research project of their own design.

164. Field Biology of Marine Fishes. Five-week intensive course. Lecture, five hours; laboratory, fifteen hours. Prerequisite: completion of "Preparation for the Major" courses or consent of instructor. Selected aspects of the natural history, ecology, and behavior of marine fishes and invertebrates. Fieldwork is strongly emphasized. Course is given at the Catalina Marine Science Center.

Mr. Buth

155. Ecological Physiology of Marine Vertebrates. Five-week intensive course. Lecture, five hours; laboratory, ten hours. Prerequisite: completion of "Preparation for the Major" courses or consent of instructor. Introduction to the physiological adaptations of marine vertebrates to the major physico-chemical variables in the oceans of the world and to the major marine habitats. Laboratory work emphasizes marine vertebrates of Southern California waters. Course is given at the Catalina Marine Science Center.

Mr. Gordon

156. Animal Physiology (6 units). Lecture, three hours; laboratory, five hours. Prerequisites: courses 5L, 6, 7. Students with credit for course 166 will not receive credit for this course. An introduction to the major systems of the body. Emphasis on animal systems.

Mr. Engellman

167. Regulatory Physiology (6 units). Lecture, three hours; laboratory, five hours. Prerequisites: courses 5L, 6, 7. Students with credit for course 166 will not receive credit for this course. An introduction to the major systems of the body. Emphasis on animal systems.

Mr. Engellman

166. Animal Physiology. Lecture, three hours; laboratory, five hours. Prerequisites: courses 5L, 6, 7. Students with credit for course 166 will not receive credit for this course. An introduction to the major systems of the body. Emphasis on animal systems.

Mr. Engellman

168. Comparative Physiology. Lecture, three hours; laboratory, four hours. Prerequisites: courses 158 or equivalent. The course emphasizes the use of molluscs in the study of organ systems.

Mr. Engellman

169. Comparative Physiology Laboratory. Lecture, eight hours. Prerequisite: consent of instructor. Investigations and presentations of selected papers from the immunology literature. Designed to serve as a forum for the critical analysis of research papers.

Mr. Clark, Mr. Sercarz (W)

179. Advanced Topics in General Endocrinology. Lecture, three hours; discussion, one hour. Prerequisite: course 177 or consent of instructor. Detailed consideration of selected mechanisms in endocrine control of growth and differentiation.

180. Parasitology and Symboisms (6 units). Lecture, three hours; laboratory, four hours. Prerequisite: completion of "Preparation for the Major" courses 5, 7. An introduction to the principles, biology, and evolution of infectiousness, symbiosis, and parasitism, emphasizing protozoan and helminth parasites, including those of man. Mr. Macinnis

182. Experimental Parasitology Laboratory, eight hours. Prerequisite: consent of instructor. Introduction to the use of parasites in experiments concerning basic biological problems and to problems concerning parasitism.

Mr. Macinnis

M185. Immunology. (Same as Microbiology M185 and Microbiology and Immunology M185.) Lecture, three hours; discussion, one hour. Prerequisites: course 8, Chemistry 23, 25. Recommended courses: Chemistry 152 or 156. Introduction to experimental immunobiology and m.immunology.

Mr. Gordon, Ms. Tobin, Mr. James, Mr. Tobe

M186. Experimental Design in Immunology. (Same as Microbiology M186 and Microbiology and Immunology M186.) Lecture, three hours; discussion, one hour. Prerequisites: course M185, consent of instructor. Corequisite: course M187. The course focuses on a limited number of situations designed to train the student in organizing and creating immunological laboratory experiments.

Mr. Clark, Mr. Sercarz (W)

M187. Immunology Seminar (2 units). (Same as Microbiology M187 and Microbiology and Immunology M187.) Prerequisites: course M185, consent of instructor. Prerequisite: completion of course M186. Students may present oral or written papers on current immunological topics. Designed to serve as a forum for the critical analysis of research papers.

Mr. Clark, Mr. Sercarz (W)

188. Seminar on Biology and Society (2 units). Prerequisite: consent of instructor. Investigations and discussions of current socially important issues involving substantial biological considerations, either or both as background for policy and as consequences of policy.

190A-190D. Honors Research in Biology (2 to 4 units each). Prerequisites: senior standing, consent of undergraduate adviser. Individual research designed to broaden and deepen the student's knowledge of some phase of biology. Must be taken for at least two quarters and for a total of at least eight units. In Progress grading (credit to be given only on completion of course 190B). Students may elect to enroll in additional research through courses 190C-190D (letter grading). A report on progress must be presented to the undergraduate adviser each quarter a 190 course is taken. A maximum of eight units may be applied toward the B.S. degree requirements.

(F,W,Sp)

199. Special Studies (2 to 16 units). Prerequisite: consent of instructor and undergraduate adviser. Based on a written proposal outlining the study or research to be undertaken. The proposal should be worked out in consultation with the instructor and submitted for approval to the undergraduate adviser before the day instruction begins in that quarter. At the end of the quarter a report describing the progress of the study or research and signed by the student and the instructor must be presented to the undergraduate adviser. Students who wish to take more than eight units of course 199 in any one quarter must have the written approval of the department head and the appropriate dean. Only one 199 course may be applied toward the biology major.

(F,W,Sp)
Graduate Courses

Consent of instructor is required for admission to all graduate courses. Additional prerequisites are stated in the course descriptions.

201. Topics in Organismic Plant Biology. Lecture, three hours; laboratory, three hours. Topics in organic plant biology, including plant cell and tissue characteristics, plant growth and development, transport of solutes, gas exchange, environmental physiology, and the biology of phytomers. Mr. Phinney

202. Principles of Systematics and Taxonomy. Lecture, three hours; discussion, two hours. Prerequisite: course 120. The concepts, principles, and methods involved in the inference of evolutionary relationships and the application of biological nomenclature. Mr. Buth

203. Marine Botany and Physiology (8 units). Lecture/laboratory. Structure, reproduction, life histories, systematics, and biology of marine algae; techniques in culture and cytological investigation of algal materials. Course is given at the Catalina Marine Science Center.

204A. Advanced Algae. A consideration of current research in experimental physiology. Topics include a discussion of the appropriate aspects of chemical and physical oceanography, cell biology, algal physiology; experimental ecology of benthic and planktonic algae. Mr. Chapman

204B. Advanced Algae. Lecture, three hours; laboratory, six hours. A course designed to introduce students to current topics in algal systematics. The laboratory section is taught to students by practical application to unknowns, to identify algae by appropriate key of algae. Mr. Chapman

205. Marine Invertebrate Biology (8 units). Functional morphology, life histories, and systematics of marine invertebrates of all major and most minor taxa; emphasis on the living animal and its habitat. Course is given at the Catalina Marine Science Center.

206. Advanced Ichthyology. Lecture, three hours; laboratory, three 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 by different. Mr. South

207. Molecular and Cellular Biophysics. Lecture, three hours. Prerequisites: Chemistry 25, 110A, Mathematics 32A or equivalent, and Physics 6, or consent of instructor. Strongly recommended: Chemistry 110B or 156. The course first develops areas of chemistry and physics that are relevant to the study of macromolecules and supramolecular structures, emphasizing quantitative microscopic, high resolution techniques, nucleic acid analysis, and studies on viruses and protein crystals. Mr. Eisenberg, Ms. Kasamatsu, Mr. Rees

208. Experimental Molecular Developmental Biology. Lecture, three hours; discussion, one hour. Advanced study of topics in invertebrate embryology. Emphasis on developmental stages of marine plants and animals; patterns of reproductive biology; larval biology; morphogenesis. Prerequisites: courses 215 and Microbiology 230A. Lecture, three hours; laboratory, ten hours. Corequisite: course M230B. Methods in structural molecular biology, including experiments utilizing single crystal X-ray diffraction, low angle X-ray diffraction, electron diffraction, optical diffraction, and three-dimensional reconstruction from electron micrographs, and model building. Mr. Eisenberg, Mr. Lake (W, alternate years)

222A-222B. Topics in Genetics. Prerequisites: course 8. Intensive study of selected topics. 223A-223B. Advanced Genetics Laboratories. Lecture, nine hours. Prerequisites: courses 8 or equivalent, consent of instructor. Organismal genetics with supervision in eukaryotic genetics. Topics include transmission, development, and behavioral genetics. May not be repeated for credit. Mr. Merriam, Mr. Siegel

224. Developmental Biology of Marine Organisms (8 units). Descriptive and experimental studies of developmental stages of marine plants and animals; patterns of reproductive biology; larval biology; morphogenesis. Course is given at the Catalina Marine Science Center.

225. Special Topics in Development. Lecture, three hours. Variable topics emphasizing the control of eukaryotic gene expression and morphogenesis. Special attention to the role of hormones in the modulation of gene expression during development. Mr. O'Connor

227. Chromosome Structure and Replication. Lecture, three hours. Prerequisite: course 8, Chemistry 157A, 157B, or consent of instructor. A survey of biochemical and molecular biology of plant and animal chromosomes, structure and replication of chromosomal nucleic acids, with emphasis on bacterial and viral systems. Mr. Ray

228. Prokaryotic and Eukaryotic Gene Systems (2 units). A consideration of current experimental approaches in the study of DNA replication, organization, transcription, and translation. Mr. Grunstein, Mr. Ray

229. Structural Macromolecules. Lecture, three hours; discussion, one hour. The comprehensive molecular biology of selected structural proteins and polysaccharides, including cellular structure, structure and physical properties, and integrated biological functions. Mr. Fessler

230A. Structural Molecular Biology (2 units). (Same as Chemistry M230A and Microbiology M230A). Lecture, two hours; discussion, one hour. Prerequisite: consent of instructor based on a written research proposal. Fundamentals of electron microscopy, computer methods of structural analysis, emphasizing quantitative microscopic, high resolution techniques, nucleic acid analysis, and studies on viruses and protein crystals. Mr. Eisenberg, Ms. Kasamatsu, Mr. Lake (W, alternate years)

M230B. Structural Molecular Biology Laboratories. (Same as Chemistry M230C and Microbiology M230C). Lecture, ten hours. Prerequisite: consent of instructor based on a written research proposal. Practical experience with electron microscopy of macromolecules and supramolecular structures, emphasizing quantitative microscopic, high resolution techniques, nucleic acid analysis, and studies on viruses and protein crystals. Mr. Eisenberg, Ms. Kasamatsu, Mr. Rees

M230C. Structural Molecular Biology Laboratory. (Same as Chemistry M230C and Microbiology M230C). Lecture, ten hours. Prerequisite: consent of instructor based on a written research proposal. Practical experience with electron microscopy of macromolecules and supramolecular structures, emphasizing quantitative microscopic, high resolution techniques, nucleic acid analysis, and studies on viruses and protein crystals. Mr. Eisenberg, Mr. Lake (W, alternate years)

231. Advanced Topics in Molecular Biology. Lecture, three hours; discussion, one hour. Advanced study of current topics in molecular biology through lectures, discussion, and presentations by students. Mr. Brunk

232. Experimental Molecular Developmental Biology. Lecture, three hours; discussion, two hours; laboratory, twelve hours. Prerequisites: courses 138, 144, and/or consent of instructor. A laboratory course in the biochemical expression and regulation of differentiation in eukaryotes. Mr. Lengyel, Mr. Tobin

233A-233B. Electron Microscopy of Cells (8 units each). Lecture, four hours; laboratory, twenty hours; demonstration, three hours. Electron microscopic techniques applied to structure of cells and to molecular structure of cellular components. Intensive training in electron microscopy techniques and in the use of the electron microscope for high resolution electron microscopy. Mr. Sjostrand
234A. Advanced Topics in Developmental Biology. (Formerly numbered 234.) Especially intended for first- and second-year graduate students as an overview of research questions on developmental biology available within the Biology Department and of the significant new advances in the discipline. Fundamental questions in developmental biology are approached with examples from current literature. Topics include differential gene activity, gene localization, maternal effect and homeotic mutations, the determined cell state, cell identification, hormone receptors and hormone-mediated responses, and developmental neurobiology and emphasize the analysis of questions in the development of balance. Students are encouraged to take both courses 234A and 234B, since these represent a survey of modern biology as appropriate preparation for graduate study. S/U or letter grading.

234B. Advanced Topics in Cell Biology. Lecture, two hours; discussion, two hours. Especially intended for first- and second-year graduate students as an overview of research questions on cell biology available within the Biology Department and of the significant new advances in the discipline. Fundamental questions in cell biology are approached with examples from current literature.

236. Experimental Cell Biology. Lecture, three hours; discussion, one hour. Prerequisites: course 138 or equivalent and consent of instructor. Physical properties of animal signals and the physiological mechanisms underlying their generation and reception. Lectures treat signal analysis, signal transmission, and receptor design in light of the constraints placed on each of the sensory modalities. Examples of communication systems using visual, auditory, chemical, electrical, and sensory modalities, with emphasis on biological adaptations for efficiently signaling species-specific information. Mr. Narins

244. Advanced Insect Physiology. Lecture, two hours; laboratory, five hours. Prerequisite: course 168 or consent of instructor. A detailed discussion of current problems in insect physiology, with advanced laboratory. Mr. Engemann

245. Advanced Topics in Cell Biology (2 units). Seminar, one hour; discussion, one hour. Prerequisites: course 138 or equivalent and consent of instructor. Study of one special topic with the aid of current literature and consent of instructor. May be repeated for credit. S/U grading.

247. Advanced Plant Biology. (Formerly numbered 247A-247F.) Lecture, three hours; discussion, two hours. Prerequisite course 141 or equivalent. Open to undergraduates by consent of instructor. Designed to expose first-year graduate students to topics of current interest in plant biology. Subjects include the genetic basis of rice plant leaf development, mitochondrial genetics, chloroplast structure, development and function, and plant-specific metabolic processes (photosynthesis, nitrogen fixation, metabolism of small molecules). S/U or letter grading.

248. Molecular Genetics. (Same as Biological Chemistry M248.) Lecture, three hours; discussion, one hour. Prerequisite: consent of instructor. Basic concepts in modern genetics are presented, drawing examples from both eukaryotic and prokaryotic systems. Emphasis on the use of genetic techniques for addressing fundamental questions in biochemistry and molecular biology. Topics include mutagenesis, mutant selection, recombination, genetic mapping, complementation, transposable elements, gene organization, genetic regulation, and molecular evolution. Ms. Caalone, Mr. McEntee, Mr. Miller, Mr. Shere, Mr. Taylor

249. Biochemistry of Parasitism. Lecture, three hours. Biochemical and physiological aspects of parasite-host relationships. Mr. Macinnis

250B. Advanced Immunology (3 units). (Same as Microbiology M250B and Microbiology and Immunology M258B.) Lecture, 90 minutes; discussion, 90 minutes. Prerequisites: course M185 or Microbiology and Immunology 202A or equivalent and consent of instructor. Approximate 200 units each quarter. May be repeated twice for credit.

250D. Advanced Immunology (3 units). (Same as Microbiology M250D and Microbiology and Immunology M258D.) Lecture, 90 minutes; discussion, 90 minutes. Prerequisites: course M185 or Microbiology and Immunology 202A or equivalent and consent of instructor. A continuation of course M250A which considers the fields of immunology, surface membrane receptors, and lymphokines. S/U or letter grading.

251. Seminar in Systematics (2 units). Mr. Bush, Mr. Gibson


253. Seminar in Plant Structure (2 units). Mr. Phinney

254. Seminar in Invertebrate Zoology (2 units). Mr. Morin, Mr. Muscatine

255. Seminar in Pesticide Biology (2 units). Mr. Phinney

257. Gene Manipulation: Genetic Engineering. Lecture, three hours; discussion, two hours. Prerequisites: course 138 or 144 or consent of instructor. A survey of the methods and applications of recombinant DNA research as applied to basic scientific research and the biotechnology industry.

257. Seminar in Invertebrate Zoology. Discussion, six hours. Prerequisite: course 111 or 112. Student presentations and discussion of specific topics in invertebrate zoology. Theme varies from year to year. May be repeated for credit.

259. Seminar in Herpetology (2 units). Discussion, three hours. Prerequisite: course 113 or 143 or consent of instructor. Seminar in current approaches to herpetology. Main theme varies from year to year in areas such as biogeography, ecology, behavior, environmental physiology, evolution, and systematics.

260. Seminar in Biology of Terrestrial Vertebrates (2 units). Mr. Bartholomew, Mr. Howell

262. Seminar in Vertebrate Paleontology (2 units). Mr. Vaughn

263. Seminar in Population Genetics (2 units). Seminar on topics of current interest in population genetics. Laboratory, discussion, seminar, and computer analysis. S/U or letter grading.

264. Seminar in Evolutionary Biology. Seminar on topics of current interest in evolutionary biology. Laboratory, discussion, seminar, and computer analysis. S/U or letter grading.
Chemistry and Biochemistry

3010 Young Hall, 825-4219

**Professors**
Frank A. L. Anet, Ph.D. (Organic Chemistry)
Daniel E. Atkinson, Ph.D. (Biochemistry)
Mano E. Baur, Ph.D. (Physical Chemistry)
Kyle D. Bayes, Ph.D. (Physical Chemistry)
Richard B. Bernstein, Ph.D. (Physical Chemistry)
Paul D. Boyer, Ph.D. (Biochemistry)
Orrille L. Chapman, Ph.D. (Organic Chemistry)
Donald J. Crain, Ph.D. (Saul Winstein Professor of Organic Chemistry)
Orville L. Chapman, Ph.D.

**Professors Emeritus**
E. Russell Hardwick, Ph.D., D.Sc., Emeritus
Francis E. Blacet, Emeritus
Seymour Siegel, Ph.D., Emeritus

**Associate Professors**
Steven G. Clarke, Ph.D. (Biochemistry)
Jay D. Gralla, Ph.D. (Biochemistry)
John M. Jordan, Ph.D. (Biochemistry)
Harold G. Martinson, Ph.D. (Biochemistry and Molecular Biology)
Richard L. Weiss, Ph.D. (Biochemistry)
R. Stanley Williams, Ph.D. (Physical Chemistry)

**Assistant Professors**
David Farrell, Ph.D. (Theoretical Chemistry)
William H. Hersh, Ph.D. (Organic and Organometallic Chemistry)
Douglas C. Rees, Ph.D. (Biochemistry)

**Lecturers**
Sandra I. Lamb, Ph.D. (Chemistry)
Lawrence H. Levine, Ph.D. (Chemistry)
Arlene A. Russell, Ph.D. (Chemistry)

**Adjunct Professor**
Seymour Siegel, Ph.D. (Physical Chemistry)

**Scope and Objectives**
Chemistry is concerned with the composition, structure, and properties of substances, the transformations of these substances into others by reactions, and the kinds of energy changes that accompany these reactions. The department is organized in four interrelated and overlapping subdisciplines that deal primarily with the chemistry of inorganic substances (inorganic chemistry), the chemistry of carbon compounds (organic chemistry), the chemistry of living systems (biochemistry), and the physical behavior of substances in relation to their structures and chemical properties (physical chemistry).

The department offers three undergraduate majors: one in chemistry with an emphasis on inorganic, organic, or physical chemistry and a second major in biochemistry which requires studies in chemistry, biochemistry, and biology. Both majors are designed to prepare students for graduate studies in the fields of chemistry and biochemistry, 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 third major, in general chemistry, is intended for students who wish to acquire considerable chemical background in preparation for careers outside chemistry.

Graduate research and training programs leading to the M.S. and Ph.D. degrees in Chemistry and in Biochemistry are also offered. There is close cooperation between the Department of Chemistry and Biochemistry in the College of Letters and Science and the Department of Biological Chemistry in the School of Medicine, but students must be formally admitted into the program of one department or the other.

**Undergraduate Study**

**Admission**
Regular and transfer students who have the prerequisites for the various courses are not thereby assured of admission to those courses. The department may deny admission to any course if a grade of D was received in a prerequisite, or if in the opinion of the department the student shows other evidence of inadequate preparation.

Transfer students with more than 84 quarter units will be accepted into the departmental majors only if they have completed the following courses or their equivalents: the entire Chemistry 11 series, Mathematics 31A, 31B, 32A, Physics 8A, 8B/8BL, 8C/8CL (or a year of calculus-based physics). Biochemistry majors also should have completed a course in the biology of organisms; chemistry majors should have completed 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 21. Transfer students should consult the department's Undergraduate Office for assistance in planning their programs.

You may not repeat a chemistry or biochemistry course if you have credit for a more advanced course which has the first course as a prerequisite.

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., 190, 199) may not be applied toward the requirements for the majors.

Each of the major programs is outlined below. Students may contact Dorothy Seymour, Undergraduate Counselor, for help and advice (4016 Young Hall).

**Preliminary Examination for Chemistry 11A**
If you wish to enroll in Chemistry 11A or 11AH, you must take the Chemistry/Mathematics Preliminary Examination in Chemistry during the enrollment period for the quarter in which you intend to take these courses. Enrollment usually will be limited to students who have passed the examination. It will be given in 2250 Young Hall on Tuesday, September 24, 1985; Tuesday, November 12, 1985; Wednesday, January 8, 1986; Tuesday, February 25, 1986; Wednesday, April 2, 1986; and Saturday, May 31, 1986.

**Bachelor of Science in Chemistry**
For students who intend to pursue a career in chemistry.

**Preparation for the Major**

Required: Chemistry 11A, 11B/11BL, 11C/11CL 1, 21, 23, Biochemistry 25; Physics 8A, 8B/8BL, 8C/8CL (8D/8DL strongly recommended); Mathematics 31A, 31B, 32A, 32B, 33A. No specific foreign language is required; however, reading knowledge of German (at least at the level of German 3) is strongly recommended if you are planning to pursue graduate work in chemistry.
Bachelor of Science in Biochemistry

For students preparing for careers in biochemistry or other fields requiring extensive preparation in both chemistry and biology.

Preparation for the Major

Required: Chemistry 110A, 110B, 113A, 114 or 114H, 133A, 133B, 133C, 173, and two other upper division or graduate courses in the department, including at least one laboratory course from 136, 144, 154, 174, 184.

Graduate Study

The department offers programs of study and research leading to the M.S. and Ph.D. degrees in both Chemistry and Biochemistry. Candidates for advanced degrees may specialize in the following fields: inorganic, organic, or physical chemistry.

If you are planning to work toward the Ph.D., you should not seek an M.S. degree first, but should apply directly to the Ph.D. program. Application materials may be obtained by writing to Phyllis Jergenson, Graduate Office, Department of Chemistry and Biochemistry, 4006 Young Hall, UCLA, Los Angeles, CA 90024.

Admission

An excellent undergraduate record is required in addition to the University minimum requirements. Graduate Record Examination (GRE) Aptitude and Advanced Tests are recommended.

Each student admitted to graduate standing is given orientation examinations at the beginning of the first quarter in physical, organic, analytical, and inorganic chemistry or biochemistry. The main purpose of the orientation requirement is to help you and your adviser plan your course program. The examinations include material covered in upper division courses in physical, organic, and inorganic chemistry and biochemistry. All courses suggested because of deficiencies in undergraduate preparation are normally to be completed by the end of the first year.

You are encouraged to become familiar with research activities of all faculty in your area of interest and to join a research group as soon as possible. Biochemistry students will rotate through at least two research groups during the Fall and Winter Quarters, with a final selection made during the Spring Quarter.

Foreign Language Requirement

Language requirements for the different areas of specialization are as follows: biochemistry — none; organic — German; physical — German or French or, with consent of the research director, a substitute coordinated course in computer programming; inorganic — German or a coordinated course in computer programming. (A foreign student in the M.S. program may use English as the required foreign language.) Either the Educational Testing Service (ETS) examination (with a score of 500) or the departmental examination is acceptable. The substitute course program should consist of ten units of coordinated upper division or graduate courses forming a minor field of concentration. These courses may be taken on an S/U grading basis but may not be applied toward the departmental requirements.

Master of Science Degrees

Course Requirements

Chemistry M.S.: At least nine courses (36 units) are required, of which at least five (20 units) must be graduate courses and the remainder upper division courses. You must take a minimum of two courses in your major area and one course in an outside area. Choices may be made from the following:


Inorganic — Chemistry 174, 207, C275, C276A, C276B, 277, 279

Substitutions may be made with consent of the area adviser. With the consent of the graduate adviser, courses of directed individual study, but not research courses, may replace any of the courses listed above.

Up to 24 units of course 596 or 598 may be applied toward the total course requirement; up to 20 units may be applied toward the minimum graduate course requirement.

Plan I (thesis plan) is the preferred method of obtaining the M.S. in Chemistry. However, in exceptional cases where Plan II (comprehensive examination plan) is used, an additional six units of course 597 and six units of course 228, 248, or 276 may be applied toward the graduate course requirement and the total course requirement.

Biochemistry M.S.: The M.S. in Biochemistry may be obtained by the thesis plan or the comprehensive examination plan. Course requirements vary for each plan, as follows.

Plan I (Thesis Plan): A total of 36 units is required. Of these, 20 must be at the graduate level and include a minimum of 12 units from Chemistry M253, M255, M263, M267. Registration in course 268 is required for three quarters but is not applicable to the 36-unit requirement.

Up to 22 units of course 596 or 598 may be applied toward the total course requirement; up to eight units may be applied toward the graduate course requirement.

After completion of course requirements, you should consult your research adviser to form a thesis committee.
Plan II (Comprehensive Examination Plan): A total of 36 units is required. Of these, 20 must be at the graduate level and include a minimum of 12 units from Chemistry M253, M255, M263, M267. You may apply six units of course 268 and six units of course 597 to the graduate course requirement and the total course requirement. With the exception of Chemistry 268 and 597, all courses must be taken for a letter grade.

**Ph.D. Degrees**

**Course Requirements**

Chemistry Ph.D.: Candidates in each area of specialization should normally complete as a minimum the coursework indicated below. Some of these requirements can be met on the basis of orientation examinations and courses taken prior to entry into the graduate program. If your projected research falls in an area which differs appreciably from that anticipated by the field requirements listed below, you may be permitted appropriate modifications. Required coursework must be completed prior to advancement to candidacy.

**Inorganic Chemistry**

(1) Required background material: Chemistry 173; (2) two courses from C276A, C276B, C277; (3) two courses from 174, 207, 271A through 271Z, C275, 279; (4) two courses from physical chemistry (C213B, C215A, C215B, C216D, C223A) or organic chemistry (232, 236, 241A through 241Z, 242, C243A, C243B, C244, C245, C246) or biochemistry (157A); (5) Chemistry 278.

**Organic Chemistry**

(1) Required background material: Chemistry 133A, 133B, 133C, 136, 144; (2) Chemistry C243A, C243B; (3) one course from C213B, C245, C276A; (4) one additional course from physical chemistry (C215A, 221A through 221Z, C223A) or inorganic chemistry (173, 174, C275, C276A) or biochemistry (157A, 157B); (5) two courses from 207, 232, 236, 241A through 241Z, 242, 244, 245, 246; (6) Chemistry 248.

**Physical Chemistry**

(1) Required background material: Chemistry 110A, 110B, 113A; (2) Chemistry C215A, C215B, C223A, C223B; (3) two courses from 215C, 215D, C221A through 221F, 223C, 225. Physics 131, 132 (or approved substitutions); (4) two additional courses from upper division or graduate offerings in chemistry or physics; (5) Chemistry 218.

**Biochemistry Ph.D.:** Candidates should normally complete as a minimum the coursework indicated below. Some of these requirements can be met on the basis of orientation examinations and courses taken prior to entry into the graduate program. Required coursework must be completed prior to advancement to candidacy.

(1) Required background material: Chemistry 110A, 133A, 133B, 133C, 156, 157A, 157B, some coursework in the life sciences, and some biochemistry laboratory experience. Deficiencies in background may be made up after admission.

(2) Core courses M253, M255, M263, M267 (18 units).

(3) An additional 12 units of upper division or graduate courses subject to the consent of the graduate adviser. It is recommended that eight of these units be from other than biochemistry offerings. Advanced courses taken elsewhere or as an undergraduate may be substituted for some of these units in appropriate cases. Seminar courses will normally not be applicable.

(4) Chemistry 258 for three quarters.

**Teaching Experience**

One year of teaching experience is required.

**Qualifying Examinations**

Rather than a single comprehensive examination, the department gives all Ph.D. candidates a series of written tests called cumulative examinations. These are designed to encourage and test the continued growth of professional competency through coursework, study of the literature, departmental seminars, and informal discussions with colleagues. Three examinations are given per quarter at approximately monthly intervals. If you enter directly into the Ph.D. program and perform satisfactorily on the orientation examination in your special area, you may begin writing the examinations immediately. You must begin by the start of your second quarter in residence and must continue until you have passed five. To remain in good standing, you should pass at least one of the first six examinations attempted and three out of nine. Fifteen attempts will normally be the maximum.

At the end of the first and second year, your overall progress will be evaluated by the graduate study committee, taking into account performance in courses, cumulative examinations, and research. The committee may recommend that you (1) proceed to the oral examination, (2) be redirected to the M.S. program, or (3) be terminated. The University Oral Qualifying Examination is based on your research proposal which should represent independent work and should offer the doctoral committee an opportunity to judge your ability to think creatively and to formulate significant ideas for research. The examination is to be attempted by the end of the seventh quarter (sixth quarter for biochemistry). Failure to comply with this time schedule may result in disqualification from the Ph.D. program unless permission has been given by the area adviser. The committee's decision to advance you to candidacy, to allow you to repeat the oral, or to disqualify you will be based on the quality of the written proposal, the adequacy of the oral presentation, your overall record at UCLA as reflected in coursework and examinations, and your research ability.

When a satisfactory report on the completion of the written and oral qualifying examinations, course requirements, and the departmental language requirement has been submitted, you will be eligible for formal advancement to candidacy for the Ph.D.

**Candidate in Philosophy Degree**

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

**Final Oral Examination**

The final oral examination is optional with the doctoral committee.

**Lower Division Courses**

A. Introduction to Chemical Problem Solving (No credit). Lecture, two hours; discussion/laboratory, two hours. Chemistry A displaces four units on the student's Study List but yields no credit toward a degree. Prerequisite: either Mathematics A (grade of B or better) or 1 (grade of C or better) or two years of high school mathematics (grades of B or better) or three years of high school mathematics (grades of C or better). May be limited to students who have taken the Chemistry/Mathematics Preliminary Examination. An introduction to concepts and problem-solving techniques required for the study of general chemistry, including elementary aspects of the atomic picture of matter (nomenclature, atomic structure, periodic table); logarithms, exponential notation, functions and word problems arising in chemical applications. This is not an introductory course in general chemistry. P/NP grading.

2. Introductory Chemistry C11A. Lecture, two hours; discussion, two hours. Not open to students with credit for course 11A. Designed to meet part of the Letters and Science requirements for nonscience majors and similar requirements in other colleges. The course deals with the concept of the submicroscopic world of chemistry and ranges from protons to proteins in subject matter. Refer to "Requirements for the Bachelor's Degrees" in the College of Letters and Science section of this catalog for other credit limitations on this course. Mr. Farrington, Mr. Hardwick (F,W,Sp)

11A. General Chemistry. Lecture, four hours; discussion, one hour. Prerequisites: high school chemistry or equivalent background and three and one-half years of high school mathematics. Recommended: high school physics. Required of all majors in chemistry and biochemistry. (Students lacking the prerequisites may qualify for admission by exceptional performance on the Chemistry/Mathematics Preliminary Examination.) All students who intend to take this course must take the Chemistry/Mathematics Preliminary Examination (enrollment is usually limited to students who have passed the examination). Atomic theory and stoichiometry; states of matter and phase equilibrium; gases; liquids and solutions; acids, bases, and salts; equilibrium in gases and solutions; solubility and solubility equilibria; oxidation and reduction.

Mr. Baur, Mr. Farrington, Mr. Trueblood (F,W,Sp)
11A. General Chemistry (Honors). Lecture, four hours; discussion, one hour. Prerequisites: high school chemistry or equivalent background and three and one-half years of high school mathematics. Recommended: high school physics (students lacking high school physics may qualify for admission by exceptional performance on the Chemistry/Mathematics Preliminary Examination). Students intending to take this course must take the Chemistry/Mathematics Preliminary Examination (enrollment is usually limited to students who have passed the examination). An honors course parallel to course 11A.

Mr. Reissler, Mr. Gelbart, Mr. Scott (F, Sp)

11B. General Chemistry. Lecture, three hours; discussion, one hour. Prerequisite: course 11A or 11AH with a grade of C- or better or consent of instructor. Corequisites: course 11AH with a grade of C- or better or consent of instructor. Required: course 11AH with a grade of C- or better or consent of instructor. Consent of instructor. An honors course parallel to course 11B.

Mr. Baur, Mr. Nicol (W)

11BL General Chemistry Laboratory (1 unit). Laboratory, four hours; discussion, one hour. Prerequisite: course 11B with a grade of C- or better or consent of instructor. Corequisite: course 11B (must already have been passed with a grade of C- or better). Enrollment priority, if needed, is given to those taking course 11B concurrently with those taking the course. Bonding and molecular structure; descriptive inorganic chemistry presented in terms of the principles discussed in courses 11A and 11B.

Mr. Merrington, Mr. Hawthorne, Ms. Valentine

11CH. General Chemistry (Honors) (3 units). Lecture, two hours; discussion, one hour; laboratory, three hours. Prerequisite: course 11B with a grade of C- or better or course 11BH with a grade of C- or better or consent of instructor. An honors course parallel to course 11CH.

Mr. El-Sayed, Mr. McMillan (Sp)

11CL General Chemistry Laboratory (2 units). Laboratory, eight hours. Prerequisite: course 11B with a grade of C- or better or course 11CL with a grade of C- or better or consent of instructor. Consent of instructor. An honors course parallel to course 11CL.

Mr. Harris, Mr. McMillan, Mr. Milam (F, W, Sp)

11C. General Chemistry. (3 units). Lecture, two hours; discussion, one hour; laboratory, three hours; discussion, one hour; laboratory, three hours. Prerequisites: course 11B with a grade of C- or better or course 11CH with a grade of C- or better or consent of instructor. Corequisites: course 11B (must already have been passed with a grade of C- or better). Enrollment priority, if needed, is given to those taking course 11C concurrently. Rates of reactions; quantitative volumetric analysis; qualitative inorganic analysis; inorganic synthesis; column chromatography; colorimetric analysis.

15. Organic Chemistry and Biochemistry for Pre- nursing and Kinesiology. Prerequisite: course 11A with a grade of C- or better. Not open to students with credit for course 21. Recommended: for students in certain areas of kinesiology and in the prenursing, prephysical therapy, and predental hygiene curricula. This course does not meet requirements for admission to medical or dental schools. An introduction to the structures and reactions of organic compounds, particularly with respect to their roles and their transformations in living systems.

Ms. Lamb (F, W)

15L. Chemistry Laboratory for Prenursing and Ki- nesiology (1 unit). Laboratory, four hours. Corequisite: course 15 (or must already have been passed with a grade of C- or better). This course does not meet requirements for admission to medical or dental schools. An introduction to quantitative work with aqueous solutions and to the preparation, isolation, and characterization of organic compounds, particularly some of those important in living systems.

Ms. Lamb (F, W)
125. Computers in Chemistry. Lecture, three hours. Prerequisites: courses 110A, 110B, 113A, a working knowledge of Fortran IV or PL/1. Discussion of computer techniques, including matrix manipulation, solution of differential equations, data acquisition, and instrumental control; and their applications to chemical problems in quantum mechanics, thermodynamics, and kinetics. Mr. Levine (F)

133A. Intermediate Organic Chemistry. Prerequisites: courses 21, 23, 25 (may be taken concurrently), with grades of C or better, or consent of instructor. Structure, reactivity, and spectroscopic properties of organic compounds. Mr. Anet, Mr. Foote (F,Sp)

133B. Intermediate Organic Chemistry. Lecture, three hours; laboratory, four hours. Prerequisite: course 133A with a grade of C – or better. Lectures include reactions, mechanisms, and synthesis in organic chemistry; common classes of compounds and reactions. Laboratory includes methods of organic reactions, synthesis, isolation, and characterization. Mr. Anet, Mr. Foote (F,W)

133BG. Intermediate Organic Chemistry (2 units). Lecture/quiz, three hours. Open only by consent of graduate adviser (Chemistry) to graduate students who have not taken course 133B at UCLA. Mr. Anet, Mr. Foote (F,W)

133C. Intermediate Organic Chemistry. Lecture, two hours; laboratory, eight hours. Prerequisite: course 133B with a grade of C – or better. Lectures include reactions, mechanisms, and synthesis in organic chemistry; complex molecules and natural products; polymers. Laboratory includes methods of organic reactions, synthesis, isolation, and characterization. Mr. Anet, Mr. Foote (W,Sp)

133C'. Intermediate Organic Chemistry (Chemistry 133G) Lecture/quiz, three hours. Open only by consent of graduate adviser (Chemistry) to graduate students who have not taken course 133C at UCLA. Mr. Anet, Mr. Foote (W,Sp)

136. Organic Structural Analysis. Lecture, two hours; laboratory, eight hours. Prerequisites: courses 133A, 133B, 133C, or equivalent, with grades of C – or better, or consent of instructor. A laboratory course in organic structure determination by chemical and spectroscopic methods; microtechniques. Mr. Foote (F)

C143A. Structure and Mechanism in Organic Chemistry. Lecture, three hours; discussion, one hour. Prerequisites: courses 110B, 113A, 133C (may be taken concurrently), or consent of instructor. Bonding in organic compounds; chemical structure and bonding in inorganic compounds; mechanisms of reactions. May be concurrently scheduled with course C243A. Mr. Chapman

C143B. Mechanism and Structure in Organic Chemistry. Lecture, three hours; discussion, one hour. Prerequisite: course C143A with a grade of C – or better or consent of instructor. Mechanisms of organic reactions; structure and detection of reactive intermediates. May be concurrently scheduled with course C243B. Mr. Chapman

C144. Laboratory Methods in Organic Analysis. Lecture, two hours; laboratory, eight hours. Prerequisite: course 133C or equivalent instruction, including spectroscopic methods of organic chemistry, with a grade of C – or better, or consent of instructor. Laboratory methods of synthetic organic chemistry, including reactions under inert atmosphere, semimicroscale reaction techniques, synthesis of natural products, and molecules of theoretical interest. Mr. Young (Sp)

144G. Laboratory Methods in Organic Synthesis (2 units). Consists of the lecture portion only of course 144. Open only by consent of graduate adviser to graduate students who have not taken course 144. A laboratory course in the laboratory portion of course 144. Mr. Jung

152. Biochemistry. Lecture, four hours; discussion, one hour. Prerequisite: course 25. Not open to students with credit for course 157A. Survey of biochemistry. May not be applied toward the chemistry or biochemistry major. Mr. Boyer, Mr. Smith (F)

154. Biochemical Methods. Lecture, two hours; laboratory, eight hours. Prerequisite: course 25. Recommended: course 152 or 157A. Applications of biochemical procedures to metabolic reactions; properties of living systems; enzymes; proteins; nucleic acids and other tissue constituents. Mr. Clarke, Mr. Gajala, Mr. Martinson (F,Sp)

156. Biophysical Chemistry. Lecture, four hours; discussion, one hour. Prerequisite: course 110A. Solution thermodynamics of biochemical systems; biochemical kinetics; energy levels, spectroscopy, and bonding; topics from structural, hydrodynamic, statistical, and electrochemical methods of biochemistry. Mr. Eisenberg, Mr. Rees, Mr. Schumaker (F,Sp)

157A. Biochemistry. Lecture, four hours; discussion, and high-pressure techniques. Schnick, two hours (may be taken concurrently). Enzymes; metabolic pathways and their integration and regulation; biological energetics. Mr. Atkinson, Mr. Clarke, Mr. West (W)

157B. Biochemistry. Lecture, four hours; discussion, one hour. Prerequisite: course 157A. Biosynthetic metabolism; synthesis of nucleic acids and proteins and control of these processes. Mr. Jordan (Sp)

173. Structural Inorganic Chemistry. Lecture, three hours; discussion, one hour. Prerequisite or corequisite: course 110A. Recommended: courses 113A or 136, and 133B. Introductory survey of structure and bonding in inorganic chemistry; donor-acceptor interactions; coordination compounds of the transition metals; elements of crystal-field and ligand-field theory. Mr. Hawthorne, Mr. Kaesz, Mr. Zink (F,Sp)

174. Inorganic and Metalorganic Laboratory Methods. Lecture, two hours; laboratory, eight hours. Prerequisites: courses 133A, 133B, and 173, or consent of instructor. Synthesis of inorganic compounds, including air-sensitive materials; dry-box, vacuum line, preparative extraction, and separation techniques; chromatographic and ion exchange separations. Mr. Hawthorne, Mr. Kaesz (W)

C175. Inorganic Reaction Mechanism. Lecture/discussion. Prerequisites: courses 110A, 110B, 113A, 133A, or equivalent. Synthetic organic reactions: coordination chemistry; donor-acceptor interactions; organic reactions of inorganic species. May be concurrently scheduled with course C275. Mr. Hawthorne, Mr. Valentine (F)

C176. Group Theory and Applications to Inorganic Chemistry. Lecture, three hours; discussion, one hour. Prerequisites: courses 113A, 173, or equivalent. Group theoretical methods; molecular orbital theory; ligand-field theory; electronic spectroscopy; vibrational spectroscopy. May be concurrently scheduled with course C276A. Mr. Strouse, Mr. Zink (F)

184. Chemical Instrumentation. Lecture, two hours; laboratory, eight hours. Prerequisite: course 110A. 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. Mr. Strouse, Mr. Wasson, Mr. Williams (F,Sp)

190. Undergraduate Thesis Research. Prerequisites: two quarters of course 199 on related material, consent of undergraduate adviser and research director. Final quarter of an integrated one-year research project. May consist of experimental and/or theoretical research, or a review and critical evaluation of a given area. A thesis embodying the totality of the work's year's work to be submitted and an oral presentation made. The course is suggested, but not required, for those seeking department honors at graduation. (F,Sp)

196. Special Courses in Chemistry (1 to 4 units). Hours to be arranged. Prerequisite: consent of undergraduate adviser (Chemistry). (F,Sp)

199A-199ZZ. Directed Individual Study or Research for Undergraduate Students (2 to 8 units). To be arranged with faculty member who will direct the research. Prerequisites: advanced junior standing with a 3.0 GPA or senior standing in the major, consent of department Chair. A proposal must be received one week prior to the first day of the quarter. Additional details on requirements and application may be obtained from the undergraduate counselor. P/NP grading. (F, W, Sp)

Graduate Courses

207. Organometallic Chemistry. Lecture/discussion, three hours. Prerequisite or corequisite: course 212A. Survey of organometallic compound syntheses, structure, and reactivity (emphasizing a mechanistic approach) of compounds containing carbon bonded to elements selected from the main group metals, the metalloids, and the transition metals, including olefin complexes and metal carbonyls; applications in catalysis and organic synthesis. Mr. Hawthorne (Sp)

C213B. Physical Chemistry: Molecular Spectroscopy. Lecture, five hours. Prerequisite: course 113A. Spectroscopic applications of basic quantum chemistry, including light-matter interaction, origin of selection rules, rotation-vibration spectra, anharmonic effects, electronic spectra, Franck-Condon principle, and topics from Raman, microwave, ESR, NMR, laser spectroscopy, and radiolysis. May be concurrently scheduled with course C113B. An independent study project is required of graduate students. Mr. Bayes, Mr. Williams (W)

C215A-C215B. Quantum Chemistry: Methods. Lecture, four hours; discussion, one hour. Prerequisites: course 113A, Mathematics 31A, 31B, 32A, 32B, 33A, 33B; knowledge of differential equations equivalent to Mathematics 135A or Physics 131C and of analytic mechanics equivalent to Physics 105A. Course C215A or Physics 115B is prerequisite to C215B. Students entering course C215A are normally expected to take course C215B the following quarter. Designed for chemistry students with a serious interest in quantum chemistry. Postulates and systematic development of nonrelativistic quantum mechanics; expansion theorems; wave functions, angular momentum; hydrogen atom; matrix techniques; approximation methods; time dependent problems; atoms; spectroscopy; magnetic resonance; chemical bonding. May be concurrently scheduled with courses C115A-C115B. Mr. Farrell, Mr. Gelbart (W, C215A; Sp, C215B)

215C. Advanced Quantum Chemistry: Applications. Prerequisites: course C215B, Physics 131, or equivalent. Spectroscopic applications of basic quantum chemistry, including selection rules from molecular structure, collision processes, theory of solids, symmetry and its applications, and theory of electromagnetic radiation. Mr. Bernstein (F)

215D. Molecular Spectra, Diffraction, and Structure. Prerequisites: course C215B, Physics 131, or equivalent. 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. Mr. El-Sayed (W)
218. Physical Chemistry Student Seminar (2 units). Seminars presented by staff, outside speakers, postdoctoral fellows, and graduate students. May be repeated for credit. S/U grading.

219-221Z. Advanced Topics in Physical Chemistry (2 to 4 units each). Prerequisite: consent of instructor. Each course encompasses a recognized specialty in physical chemistry, generally taught by a staff member whose research interests embrace that specialty.

222A-222B. Classical and Statistical Thermodynamics. Lecture, four hours; discussion, one hour. Recommended: course 110B or 156. Recommended: course 113A. Presentation of the fundamentals of classical thermodynamics. Principles of statistical thermodynamics: probability, ensembles, partition functions, independent molecules, and the perfect gas. Applications of classical and statistical thermodynamics selected from diatomic polyatomic gases, the solid and fluid states, phase equilibria, electric and magnetic effects, ortho-para hydrogen, chemical equilibria, reaction rates, the imperfect gas, nonelectrolyte and electrolyte solutions, surface phenomena, high polymers, gravitation. May be concurrently scheduled with courses C123A-C123B.

223C. Statistical Mechanics. Prerequisites: courses C215B, C223B, Physics 131, or equivalent. Fundamentals of statistical mechanics; classical equations of state; Coulomb systems; phase transitions; quantum statistical mechanics; quantum corrections to the equation of state; density matrix; second quantization.

225. Chemical Kinetics. Prerequisites: courses C215B, C223B. Classical experimental and theoretical approaches to the study of rates and mechanisms of chemical reaction. Course 110B or 156. Recommended: course 113A. Application of reaction mechanisms to the development of reaction mechanisms outside the context of specific chemical problems.

228. Chemical Physics Seminar (2 units). Seminars presented by staff, outside speakers, postdoctoral fellows, and graduate students. May be repeated for credit. S/U grading.

M230A. Structural Molecular Biology (2 units). (Same as Biology M230A and Microbiology M230A.) Lecture, two hours; discussion, one hour. Prerequisite: consent of instructor based on a written research proposal. Fundamentals of electron microscopy of macromolecules and supramolecular structures, emphasis on quantifying, higher order, nucleic acid analysis, and studies on viruses and protein crystals.

M230B. Structural Molecular Biology (2 units). (Same as Biology M230B.) Lecture, two hours; discussion, one hour. Prerequisite: Physics 6C, Mathematics 3C, consent of instructor. Selected topics from the principles of biological structure; structures of globular proteins and RNAs; structures of fibrous proteins, nucleic acids, and polysaccharides; harmonic analysis and Fourier transforms; principles of electron, neutron, and X-ray diffraction; optical and computer filtering; three-dimensional reconstruction. May be repeated for credit. S/U grading.

M230C. Structural Molecular Biology Laboratory. (Same as Biology M230C and Microbiology M230C.) Laboratory, ten hours. Prerequisite: consent of instructor based on a written research proposal. Practical experience with electron microscopy of macromolecules and supramolecular structures, emphasizing quantitative microscopy, high resolution techniques, nuclear acid analysis, and studies on viruses and protein crystals.

M230D. Structural Molecular Biology Laboratory. (Same as Biology M230D.) Laboratory, ten hours. Prerequisite: consent of instructor. Methods in structural molecular biology, including experiments utilizing single crystal X-ray diffraction, low angle X-ray diffraction, electron diffraction, optical diffraction, optical filtering, three-dimensional reconstruction from electron micrographs, and model building.

Mr. Eiserling, Mr. Lake (W)

232. Stereochromy and Conformational Analysis. Lecture/discussion, three hours. Prerequisite: course C143A (may be taken concurrently) or consent of instructor. Conformations of organic molecules, including chirality, stereochemistry in vinyl polymers, atropisomerism, diastereomeric interactions in solution, conformations of acyclic and cyclic molecules.

Mr. Jung

236. Spectroscopic Methods of Organic Chemistry. Lecture, three hours. Prerequisite or corequisite: course C243A or consent of instructor. Problem solving using proton and carbon 13 nuclear magnetic resonance, infrared spectroscopy, and mass spectrometry; new techniques in NMR, IR, and MS, with emphasis on Fourier transform NMR.

Mr. Hersh

241A-241Z. Special Topics in Organic Chemistry (2 to 4 units each). Prerequisite or corequisite: course C243A or equivalent for C243B 2 units). Each course encompasses a recognized specialty in organic chemistry, generally taught by a staff member whose research interests embrace that specialty.

242. Organic Photochemistry. Lecture/discussion, three hours. Prerequisite or corequisite: course C243A or consent of instructor. Problems in organic chemistry; interactions of light with organic molecules; mechanistic and preparative photochemistry.

C243A. Organic Chemistry: Structure and Mechanisms. Lecture, three hours; discussion, one hour. Prerequisites: courses C110B, 113A, 133C (may be taken concurrently), or equivalent, with grades of C – or better, or consent of instructor. Mechanisms of organic reactions. Acidic and acid catalysts; linear free energy relationships; isotope effects. Molecular orbital theory; photochemistry; pericyclic reactions. May be concurrently scheduled with course C143A.

Mr. Chapman (F)

C243B. Organic Chemistry: Mechanism and Structure. Lecture, three hours; discussion, one hour. Prerequisite: course C243A or consent of instructor. Mechanisms of organic reactions; structure and detection of reactive intermediates. May be concurrently scheduled with course C143B.

Mr. Chapman (W)

244. Strategy and Design in Organic Synthesis. Lecture/discussion, three hours. Prerequisite or corequisite: course C243A or consent of instructor. The theory behind the planning of syntheses of complex molecules from simpler ones. Organic reactions and their use in the synthetic process. The reasoning and art involved in organic syntheses.

245. Applications of Electronic Theory in Organic Chemistry. Lecture/discussion, three hours. Prerequisite or corequisite: course C243A or consent of instructor. A review of molecular orbital theory; introduction to alternative theoretical methods; aromaticity and homoaromaticity; Hückel and Möbius conjuga-

246. Bioorganic Chemistry. Lecture/discussion, three hours. Prerequisite or corequisite: course C243A or consent of instructor. Organic chemical models for biological processes; synthetic models for enzyme complexity, catalysis, and inhibition; models for transport; solid support chemistry; mechanisms for differential compartimentation, chirality, and protein crystals.

247. Organic Colloquium (2 units). 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 units). Seminars presented by staff, outside speakers, postdoctoral fellows, and graduate students. May be repeated for credit. S/U grading.

249. Problems in Advanced Organic Chemistry (2 units). Problems in organic reaction mechanisms, synthesis, structure determination, stereochemistry, spectroscopy, electronic theory, photochemistry, and organometallic chemistry, with emphasis on current literature. Intended primarily for first- and second-year graduate students as preparation for cumulative examinations. May be repeated for credit.

250. Topics in the Biochemistry and Molecular Biology of Animal Cells. Lecture, three hours. Prerequisites: courses 133A, 133B, or equivalent, 157A, 157B, courses in genetics and molecular biology, consent of instructor. The course considers the structure and organization of animal cells, cell-cell contact, motility of cell and mobility of cellular components, chromosome structure, interactions between cytoplasm and nucleus, genetic analysis in higher eukaryotic cells, biochemistry of tissue development and organization.

Mr. Jordan and Invited Speakers

251A-251Z. Advanced Topics in Biochemistry (2 units each). Prerequisite: consent of instructor. Each course encompasses a recognized specialty in biochemistry, generally taught by a staff member whose research interests embrace that specialty.

M253. Macromolecular Structure (6 units). (Same as Biological Chemistry M253.) Lecture or recitation, five hours; laboratory, one hour. Prerequisites: courses C123A, 156, 157A, or Biological Chemistry 101A-101B or 201A-201B, or equivalent, or consent of instructor. Chemical and physical properties of proteins, nucleic acids, and other macromolecular complexes, with emphasis on theory and methodology: correlation of structure and biological properties; chemical synthesis and properties of polypeptides and polynucleo-

254. Advanced Biochemical Methods. Lecture/quiz, two hours; laboratory, eight hours. Prerequisite: course 156 or consent of instructor. Recommended: courses 157A, 157B. Theoretical and practical basis of metabolic, chromatographic, kinetic, electrophoretic, ultracentrifugal, isotope, and other techniques as applied to biochemical systems.

Mr. Eisenberg, Mr. Shumaker (W)

M255. Biological Catalysis (2 units). (Same as Biological Chemistry M255.) Prerequisites: courses 110A, or Biological Chemistry M253. Lecture or recitation, five hours; laboratory, one hour. Prerequisites: courses C123A or consent of instructor. Reaction mechanisms in molecular bio-

257. Hydrodynamic and Optical Characterization of Biopolymers. Lecture, two hours; laboratory, eight hours. Prerequisite or corequisite: course M257. A laboratory course covering a variety of hydrodynamic and optical techniques for the study of individual protein using sedimentation velocity, sedimentation equilibrium, buoyant density gradient centrifugation, capillary and rotating cylinder viscosimetry, circular dichroism, or intensity fluctuations of scattered laser light.

258. Biochemistry Student Seminar (2 units). Seminars presented by graduate students on topics of current biochemical interest. May be repeated for credit. S/U grading.
The major is recommended for students preparing for graduate study as well as for public service careers. You are encouraged to spend up to one year in either (1) a service agency in the Chicano community or (2) a professional research project on the Chicano experience.

**Preparation for the Major**

**Required:** One course from each of the following departments: Anthropology 5, 6, or 22; Economics 1 or 2; History 6A, 6B, or 6C; Political Science 1; Sociology 1; Spanish 5 or equivalent. You must complete prerequisites for all courses selected.

**The Major**

This consists of three elements, one of which is optional (you must complete prerequisites for all courses in the major):

1. **Major Core** (nine courses): Chicano Studies M102, M105, M145, M157, M159A, M159B, M172T; History 197; Sociology 124* or 155*.

2. **Major Concentration:** Four courses in one discipline, selected from Anthropology 115P, 135P, 135Q, 136P, 138, 140, 150, 154, 166, 185; Economics 110, 120, 121, 150, 151, 152, 172; English M104A, M104B, 105, 171, 172, 173, 174, 188, 189, 190; History 147B, 153, 154B, 160, 162, 163; Library and Information Science 111C, Political Science 115, 142, 149, 172B, 173, 174, 182A, 186, 190, 191; Psychology 127, 130, 134, 135, 136A, 137A, 137C, 143, 175; Sociology 105, 113, 120, 123, 125, 140, 142, M143, and 155* or 124*; Spanish 100A, 100B, 105A, 105B, 107, 115, 118A, 118B, 136A, 136B, 137, 139, 142, 143, 144, M149. You may petition the committee in charge of the major to include in the major concentration area a course not on the approved list. CED courses may be applied by petition.

*Course may not be used for both the major core and major concentration.

3. **Optional Multidisciplinary Senior Thesis** — Prerequisite: senior standing. Chicano studies majors have the option during their senior year to enroll in two 199 courses in their major concentration area, with the intention of producing a Chicano studies undergraduate thesis related to the major concentration. Enrollment in the two 199 courses is with the advice and consent of a faculty member. The first quarter includes thesis conceptualization and formulation, along with preliminary data collection for the thesis. The second quarter entails completion of the data collection, analysis of the data, and termination of the thesis.

**Course Limitations:** No more than two 199 courses may be applied toward the major concentration; 199 courses applied toward the multidisciplinary senior thesis option may not also be applied toward the major concentration area. Registration in 199 courses must be approved in writing by the department Chair and either the Chair or adviser for the Chicano studies major. No more than two CED courses may be applied toward the major concentration.

**Upper Division Courses**

**M102. The Mexican-American and the Schools.** (Same as Education M102.) Prerequisite: consent of instructor. Review of research and teaching strategies, the effects of social policies and practices, and their effect on the development of Mexican-American-Chicano youth and communities.

**M103C. The Origins and Evolution of Chicano Theater.** (Same as Theater Arts M103C.) Lecture, three hours. Prerequisite: upper division standing. A study of recent trends in Chicano theater as reflected in the works of contemporary Chicano dramatists and theater artists.

**M105. The Chicano Experience in Literature.** (Same as English M105.) Prerequisite: satisfaction of Subject A requirement. The study of literature in English by and about Chicanos. The course surveys the development of the Chicano experience in American literature generally and focuses on the development of Chicano literature itself, its cultural backgrounds, and distinctive uses of languages.

**M143. Introduction to Chicano Literature.** (Same as Spanish M145.) Lecture, three hours. Prerequisite: Spanish 25 or 26. Recommended: Spanish 136B. Introduction to texts representative of the Chicano literary heritage. The course seeks to provide a survey of Chicano literature, as well as historical and geographical settings and points of view characteristic of work written by Chicanos during the 20th century. Most of the required reading is in Spanish. Bilingual and English works are included and discussed.

**M147. Contemporary Chicano Drama.** (Same as Theater Arts M147.) Lecture, three hours. Prerequisite: upper division standing. Exploration of the development of Chicano theater from its beginnings in the legends and rituals of ancient Mexico to the work of Luis Valdez (late 1960s).

**M159A. History of the Chicano Peoples.** (Same as History M159A.) A survey lecture course on the historical development of the Mexican-Chicano community and people of Mexican descent (Indio-Mestizo-Mulato) north of the Rio through the 17th, 18th, and 19th centuries, with special focus on labor and politics. Provides an integrated understanding of change over time in the Mexican community by inquiry into the major formative historical forces affecting the community. Deals with social structure, economy, labor, culture, political organization, conflict, and international relations. Emphasis is on social forces, class analysis, social, economic, and labor conflict, ideas, domination and resistance. Developments are related to historical events of significance occurring both in the United States and Mexico. Course involves lectures, special presentations, reading assignments, written examinations, library and field research, and submission of a paper.

Mr. Zamora
Bachelor of Arts degrees are offered in Classical Civilization, in Greek, in Latin, and in the Classics (i.e., Greek and Latin). Other undergraduate degrees include the B.A. in English/Greek and in English/Latin, offered jointly with the English Department. Students considering a major in the department should consult the adviser as soon as possible in their University career, but in no case later than the point at which they are about to take upper division courses. Graduate degrees include the Master of Arts in Classics (Greek and Latin), Greek, and Latin, and the Ph.D. in Classics.

Bachelor of Arts in Classical Civilization

The purpose of the classical civilization major is to provide a balanced, yet focused, view of the ancient civilizations of Greece and Rome, both historically unique and universally typical human creations. The approach to the subject is accordingly both causal and comparative. The areas of study include the elements of culture—religion, mythology, philosophy, art, literature, language, the socioeconomic system, and politics. The requirements of the major encourage both breadth and depth: eight of the 14 required upper division courses (four from this department and four from other departments) must be taken in one of the four areas of concentration listed below; among the remaining six upper division courses taken in this department may be selected to reflect your varied interests in the areas outside your concentration. The culmination of the program will be a senior paper, written during your senior year under professorial supervision. While this major is not designed to qualify you for graduate study in classics, it does not preclude a transition to advanced study in classics or related fields.

Preparation for the Major

Required: Classics 10 and 20.

The Major

Required: (1) Classics 195 and nine upper division courses in this department, of which no more than three may be selected from either Greek 100 through 130 or Latin 100 through 133 and of which four must be selected from the courses listed below under any one of the four areas of concentration; (2) any four related courses in other departments listed below in your chosen area of concentration. Total courses required: 14.

Areas of Concentration


Bachelor of Arts in Greek

Preparation for the Major

Required: Greek 1, 2, 3 and Latin 1, 2, 3, or equivalent.

The Major

Required: (1) Nine upper division courses in Greek, including course 110; (2) one upper division course in Latin; (3) Classics 142 and either 141 or 143; (4) two courses in Greek or Roman history (History 115B-115C, 116A-116B, 117A-117B); (5) two additional courses in one or two of the related areas: classical archaeology (Classics 151A, 151B, 151C, 151D), classical linguistics (Classics 180), classical mythology (Classics 161, 162, 168), Greek and Roman religion (Classics 166A, 166B), ancient philosophy (Classics 145, Philosophy 101A, 101B, 102, Greek 121, 122, 123, 124), Byzantine civilization (Classics M170A, M170B), medieval Latin literature (Latin 131, 133). Total courses required: 16.

Bachelor of Arts in Latin

Preparation for the Major

Required: Greek 1, 2, 3 and Latin 1, 2, 3, or equivalent.

The Major

Required: (1) Nine upper division courses in Latin, including course 110; (2) one upper division course in Greek; (3) Classics 143 and either 141 or 142; (4) two courses in Greek or Roman history (History 115B-115C, 116A-116B, 117A-117B); (5) two additional courses in one or two of the related areas: classical archaeology (Classics 151A, 151B, 151C, 151D), classical linguistics (Classics 180), classical mythology (Classics 161, 162, 168), Greek and Roman religion (Classics 166A, 166B), ancient philosophy (Classics 145, Philosophy 101A, 101B, 102, Greek 121, 122, 123, 124), Byzantine civilization (Classics M170A, M170B), medieval Latin literature (Latin 131, 133). Total courses required: 16.
Bachelor of Arts in Classics (Greek and Latin)

Preparation for the Major
Required: Greek 1, 2, 3 and Latin 1, 2, 3, or equivalent.

The Major
Required: (1) Twelve upper division courses, six in Greek and six in Latin, including Greek 110 and Latin 110; (2) one course from Classics 141, 142, 143; (3) one course in Greek or Roman history (History 115B, 115C, 116A, 116B, 117A, 117B); (4) one additional course in two of the related areas: classical archaeology (Classics 151A, 151B, 151C, 151D), classical linguistics (Classics 180), classical mythology (Classics 161, 162, 168), Greek and Roman religion (Classics 166A, 166B), ancient philosophy (Classics 145, Philosophy 101A, 101B, 102, Greek 121, 122, 123, 124), Byzantine civilization (Classics M170A, M170B), medieval Latin literature (Latin 131, 133). Total courses required: 16.

Master of Arts Degrees

Admission
Requirements for admission to the M.A. programs are a UCLA B.A. degree, or the equivalent, with a major in classics (for the Classics M.A.), Greek (for the Greek M.A.), or Latin (for the Latin M.A.) and a grade-point average of at least 3.0 in the major; a statement of purpose; three letters of recommendation, normally from previous instructors in the classics; and the Graduate Record Examination (while there is no minimum required score, the GRE is used as a criterion in uncertain cases, as well as to assess applications for teaching assistantships and other financial assistance from the department). In cases of deficient preparation or doubtful equivalency to a UCLA B.A., the department may grant provisional admission, requiring additional coursework or a written examination. Applicants for the Classics M.A. program who are deficient in Greek (or Latin) may be admitted to the Latin (or Greek) program, then permitted to transfer into the classics program when the deficiencies have been removed. The department uses the same application form as the Graduate Admissions Office, which may be obtained from the Department of Classics (7349 Bunche Hall, UCLA, Los Angeles, CA 90024) or Graduate Admissions.

Major Fields or Subdisciplines
The department offers M.A. degrees in Classics (Greek and Latin), Greek, and Latin.

Foreign Language Requirement
In addition to taking courses in Greek and/or Latin, you must demonstrate proficiency in German, French, or Italian during your first year of study, either by passing German 5, French 5, or Italian 5 at UCLA (or an equivalent course) with a minimum grade of C, or by examination. For German and French, the examination is the standard Educational Testing Service (ETS) reading examination, with a minimum score of 500; for Italian, a written translation examination is administered by the department.

Course Requirements
For the Classics M.A., nine courses are required. These must include Greek 210 and Latin 210, one course each from the Greek 200A-200B-200C and Latin 200A-200B-200C series, and one course in the 201 through 229 series in each language. The three remaining courses are to be selected in consultation with the graduate adviser from the upper division and graduate courses offered by the department (or exceptionally by other UC departments or programs).

Nine courses are required for the Greek and Latin M.A. degrees. The University requires that at least five be graduate courses. For the Greek M.A., these must include Greek 210, two courses from the Greek 200A-200B-200C series, one course from the Greek 201 through 229 series, three additional upper division or graduate Greek courses, and two additional upper division or graduate courses to be selected in consultation with the graduate adviser. The Latin M.A. course requirements are identical except for the substitution of Latin for Greek courses.

No more than one 596 course may be applied toward the M.A. course requirements.

Comprehensive Examination Plan
The department follows the comprehensive examination plan for the M.A. degrees. Before the examination, you are expected to complete the departmental reading lists in Greek (for the Greek M.A.) or Latin authors (for the Latin M.A.) and the history of Greek and Latin literature (for the Classics and Latin M.A.), and the history of Greek and Latin literature (for the Classics and Latin M.A.). The examinations consist of three two-hour written tests on sight translations from Greek and prepared texts from the Greek reading list (for the Classics and Greek M.A.), sight translations from Latin and prepared passages from the Latin reading list (for the Classics and Latin M.A.), and the history of Greek and Latin literature (for the Greek or Latin M.A.). The three examinations may be taken on three separate days, which need not be during the same quarter. The M.A. examinations are normally given at the beginning of each quarter. All examinations may be repeated once; in exceptional cases and with the consent of the departmental faculty, more than once.

Ph.D. Degree

Admission
In addition to an M.A. degree (see below), the department requires a statement of purpose. Students without a UCLA M.A. must also submit three letters of recommendation, normally from previous instructors in the classics, and the Graduate Record Examination (while there is no minimum required score, the GRE is used as a criterion in uncertain cases, as well as to assess applications for teaching assistantships and other financial assistance from the department). The department uses the same application form as the Graduate Admissions Office, which may be obtained from the department or Graduate Admissions.
A UCLA M.A. degree in Classics (Greek and Latin), Greek, or Latin, with distinction, or an equivalent degree is required. In cases of doubtful equivalency to the UCLA M.A. degree, the department may allow provisional admission.

Major Fields or Subdisciplines
The department offers the Ph.D. degree in Classics with the following areas of specialization: classical literature and philology, classical linguistics, ancient history, ancient philosophy, classical archaeology, patristic and Byzantine studies, medieval Latin studies.

Foreign Language Requirement
New students in the doctoral program will normally have demonstrated proficiency in French, German, or Italian as described in the requirements for the M.A. degree. During the first year of study in the Ph.D. program, you must demonstrate proficiency in either French (Italian may be substituted with the consent of the regular departmental faculty) or German, whichever was not used to satisfy the M.A. requirement. If Italian or French was used to satisfy the M.A. requirement, German must be taken.

Course Requirements
At least one full year of graduate study (normally eight to nine courses) is required as preparation for the University Qualifying Examination. You may choose any of the areas of specialization listed above and, if entering with a UCLA M.A. in Classics or the equivalent, may take courses entirely within the area of specialization; if you specialize in classical literature and philology, you may concentrate on Greek or Latin as research interests dictate. If you enter with a UCLA Greek M.A. or the equivalent, you must take, in addition, Latin 210, one course from the Latin 200A-200B-200C series, and one course from the Latin 201 through 229 series if you have not previously taken these courses. If you enter with a UCLA Latin M.A. or the equivalent, you must satisfy identical course requirements in Greek.

Qualifying Examinations
Before the University Qualifying Examinations, you must complete the departmental Ph.D. reading list in either Greek or Latin authors, which is in addition to the M.A. reading lists and varies somewhat according to the area of specialization. In addition, students entering with the Greek M.A. must complete the Latin M.A. reading list; students entering with the Latin M.A. must complete the Greek M.A. reading list. Students are advanced to candidacy as a result of passing the qualifying examinations (which consist of written examinations covering translation, the reading lists, and your area of specialization) and an oral examination covering both the area of specialization and the general field of classical studies. Each examination may normally be repeated once.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
An oral defense of the dissertation, which is written under the supervision of the individual advisor and must contribute significantly to research on the subject, may be required or waived at the discretion of the doctoral committee.

Classics
Lower Division Courses
10. Survey of Classical Greek Culture. Knowledge of Greek is not required. Lectures, many illustrated, on Greek life and culture from the age of Homer to the Roman Conquest. Discussion of art, literature, philosophy, and mythology.
   Mr. Blank, Mr. Lattimore (F, W)
20. Survey of Roman Civilization. Knowledge of Latin is not required. A study of life and culture of Rome from the time of its foundation to the end of antiquity. A survey of art, literature, and political thought of the Romans. Selections from Latin authors are read in translation.
   Mr. Blank, Mr. Frischer, Mr. Goldberg (F, W)
M70. Survey of Medieval Greek Culture. (Same as History M70.) Classical roots and medieval manifestations of Byzantine civilization: political theory, Roman law, pagan critique of Christianity, literature, theology, and contribution to the Renaissance (including the discovery of America).
   Mr. Dyck

Upper Division Courses
141. A Survey of Greek Literature in English. A study of classical Greek literature, exclusive of the drama, with readings in English.
   Mr. Haslam, Ms. King
142. Ancient Drama. A study of Greek and/or Latin drama in translation.
   Mr. Dyck, Mr. Goldberg, Mr. Haslam, Ms. King
   Mr. Blank, Mr. Dyck, Mr. Frischer, Mr. Goldberg
144. A Survey of Greek and Roman Epic in Translation. Homer's Iliad and Odyssey, Vergil's Aeneid, and Ovid's Metamorphoses are studied in translation.
   Ms. Morgan, Ms. King
145. Ancient Greek and Roman Philosophy. Lecture, two hours; discussion, one hour. A study of some of the major Greek and Roman philosophical texts, including those of the Pre-Socratics, Plato, Aristotle, and Hellenistic philosophers. The course focuses on the historical and cultural setting of the texts, their literary form, interrelations, and contribution to the discussion of basic philosophical issues.
   Mr. Blank
150A. Origins of the Western View of Women: The Female in Greek Thought. (Formerly numbered 150.) Lecture, three hours. An interdisciplinary study of the concept of the female in the various forms of thought developed by the Greeks (e.g., epic, tragedy, comedy, history, political philosophy, gynecology). Special emphasis on how these texts lay the foundation for the Western view of women.
   Ms. Bergren
150B. Origins of the Western View of Women: The Female in Roman and Early Christian Thought. (Formerly numbered 150.) Lecture, three hours. Course number 150A is a prerequisite.
   Mr. Bergren
   Mr. Dyck
151B. Classical Archaeology: Greco-Roman Architecture. Knowledge of Greek and Latin is not required. A general introduction to the study of Aegae, Greek, and Roman architecture.
   Mr. Lattimore
151C. Classical Archaeology: Greco-Roman Sculpture. Knowledge of Greek and Latin is not required. A general introduction to the study of Aegae, Greek, and Roman sculpture.
   Mr. Lattimore
151D. Classical Archaeology: Greco-Roman Painting. Knowledge of Greek and Latin is not required. A general introduction to the study of Aegae, Greek, and Roman painting.
   Mr. Lattimore
152. The Ancient City. A study of urban planning in the ancient world, with particular attention to the cities of classical Greece and Rome, but with consideration also to comparable developments in the ancient Near and Far East. Examination of questions of architectural space and organization, of the form, design, and function of the major municipal areas and buildings, and of the provision of public amenities by detailed reference to significant archaeological sites and contemporary sources.
   Mr. Frischer, Mr. Lattimore
161. Introduction to Classical Mythology. The origins of classical myth, the substance of divine myth and heroic saga: the place of myth in religion; a survey of the development of classical mythology.
   Mr. Lattimore, Mr. Puhl
162. Classical Myth in Literature. The use of myth in the principal authors and genres of Greek and Roman literature, with examples of its influence in later literatures.
165. Ancient Athletics. A study of ancient Greek and Roman athletics and their connections with religion, politics, literature, and art.
   Mr. Lattimore
166A. Greek Religion. A study of the religion of the ancient Greeks.
   Mr. Blank, Mr. Dyck, Mr. Puhl
166B. Roman Religion. A study of the religion of the ancient Romans.
   Mr. Frischer
168. Introduction to Comparative Mythology. Prerequisite: course 161 or consent of instructor. The religious, mythical, and historical traditions of Greece and Rome compared with each other and with those of other ancient Near Eastern and European societies.
   Mr. Puhl
M170A. Byzantine Civilization. (Same as History M122A.) Emphasis on Byzantine theology.
   Mr. Dyck
M170B. Byzantine Civilization. (Same as History M122B.) Literature, relations with Rome, and the Renaissance.
   Mr. Dyck
180. Introduction to Classical Linguistics. Prerequisites: Greek 3, Latin 3. The comparative grammar of Greek and Latin in relation to one another and in the frame of Indo-European linguistics.
   Mr. Dyck
195. Foreign Paper. Limited to seniors in classical civilization. Supervised by individual consultation with an appropriate faculty member, students write a research paper on a topic of their own choosing within their areas of concentration in the major.
199. Special Studies in Classics (2 to 8 units). Prerequisites: senior standing, consent of instructor.
### Graduate Courses

200. History of Classical Scholarship. Mr. Dyck

**200A-200B. Language in Ancient Asia Minor.** Prerequisite: consent of instructor. Survey of the language situation in Anatolia in the 2nd and 1st Millennia B.C. Readings in Hittite, Palaeo-Luwian, Hittite, and Lydian texts. Anatolian-Greek relationships and survivals in classical and Hellenistic times. Ms. Bergren, Mr. Puhvel

240. Etnoskology. Prerequisite: consent of instructor. A survey of scholarly research on Etruscan language and culture, with analysis of epigraphic material. Mr. Puhvel

244. Textual Criticism: Studies in the Preparation of a Critical Edition of Greek and/or Latin Texts. Seminar, three hours. Students learn the different steps that are required in the preparation of a critical edition of an ancient text: localizing the manuscripts; collation; establishing the stemma; choosing the right reading on the basis of knowledge of the context, of the language of the author, and of the sources; emendations; formulation of the apparatus criticus and the apparatus fontium. Mr. Haslam, Mr. Levine, Mr. Lofstedt

246. Greek and Latin Meter. Prerequisite: consent of instructor. A comprehensive study of meter as it functions in classical poetry. Mr. Haslam

251A. Seminar in Classical Archaeology. The Aegean Bronze Age. Mr. Haslam

251B. Seminar in Classical Archaeology. Greco-Roman Architecture. Mr. Frischer, Mr. Lattimore

251C. Seminar in Classical Archaeology. Greco-Roman sculpture. Mr. Lattimore

251D. Seminar in Classical Archaeology. Greco-Roman painting. Mr. Lattimore

252. Topography and Monuments of Athens. Detailed studies in the topography and monuments of Athens, combining the evidence of literature, inscriptions, and actual remains. Mr. Lattimore

253. Topography and Monuments of Rome. Detailed studies in the topography and monuments of ancient Rome, combining the evidence of literature, inscriptions, and actual remains. Mr. Frischer, Mr. Lattimore

260. Topics in Ancient Religion. Seminar, three hours. Prerequisite: consent of instructor. Ms. Bergren, Mr. Frischer, Mr. Lattimore

268. Seminar in Comparative Mythology. Prerequisites: course 168, consent of instructor. Advanced study of selected topics in comparing Greek and Roman traditions with other ancient Near Eastern and European societies. Mr. Puhvel

287. Graduate Colloquium in Classical Literature. (Formerly numbered M287.) Reading, research, and discussion of selected topics from Greek and Roman literature. The course supplements the regular seminars in literature which are devoted to the study of particular authors. Literary topics such as the portrayal of character, the use of myth, narrative methods, genre, and the use of poetic devices are studied in a broader range of classical literature. May be repeated for credit. Ms. Bergren

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research (2 to 8 units).

597. Study for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units).

599. Research for Ph.D. Dissertation (2 to 8 units).

### Greek

#### Lower Division Courses

1. **Elementary Greek.** Lecture, five hours. (F)

2. **Elementary Greek.** Lecture, five hours. Prerequisite: course 1.

3. **Elementary Greek.** Lecture, five hours. Prerequisite: course 2.

40. **The Greek Element in English.** Knowledge of Greek is not required. A study of the derivation and usage of English words of Greek origin: analysis into their component elements directed toward understanding of form and meaning. Mr. Blank

#### Upper Division Courses

Note: Greek 3 is prerequisite to 100, which is prerequisite to 101A through 106 and 110 through 124.

100. **Readings in Greek Prose.** Prerequisite: course 3. Plato's Apology or a text of comparable difficulty is read. Ms. Bergren, Mr. Haslam

101A. **Homer: Odyssey.** Mr. Haslam, Ms. King, Mr. Puhvel

101B. **Homer: Iliad.** Mr. Haslam, Ms. King, Mr. Puhvel

102. **Lyric Poets.** Selections from Archilochus to Bacchylides. Ms. Bergren, Mr. Haslam

103. **Aeschylus.** Ms. Bergren, Mr. Blank, Mr. Haslam

104. **Sophocles.** Ms. Bergren, Mr. Blank, Mr. Haslam

105. **Euripides.** Mr. Frischer, Mr. Haslam, Ms. King

106. **Aristophanes.** Ms. Bergren, Mr. Haslam

110. **The Study of Greek Prose.** Work in sight reading and grammatical analysis of Attic prose texts; writing Attic prose. Mr. Blank, Mr. Haslam

111. **Herodotus.** Mr. Blank, Mr. Lattimore

112. **Thucydides.** Mr. Haslam, Mr. King, Mr. Lattimore

113. **Attic Orators.** Mr. Dyck, Mr. Haslam, Mr. Lattimore

121. **Plato.** Mr. Blank, Mr. Frischer, Ms. King

122. **Plato: Republic.** Ms. Bergren, Mr. Blank, Mr. Haslam

123. **Aristotle: Poetics and Rhetoric.** Mr. Blank, Mr. Haslam

124. **Aristotle: Ethics.** Mr. Blank, Mr. Dyck, Mr. Frischer

130. **Readings in the New Testament.** Prerequisite: course 3. Mr. Dyck, Mr. Haslam

131. **Readings in Later Greek.** Prerequisite: course 100. Topics vary from year to year and include "Longinus," On the Sublime; Marcus Aurelius; "Longinus;" the Second Sophistic; Plutarch; later epic; epigram; epistolography; Aelian.

132. **Survey of Byzantine Literature.** Prerequisite: course 100. Readings are based on (1) Anthology of Byzantine Prose, ed. Nigel Wilson and (2) Oxford Book of Medieval and Modern Greek Verse, ed. C.A. Tripanis, or if this is unavailable, Poeti byzantini, ed. R. Cantarella. In addition, necessary historical and cultural background is provided by readings and lectures. Mr. Dyck

133. **Readings in Byzantine Literature.** Prerequisite: course 132. Topics vary from year to year and include Procopius, Agathias, Michael Psellos, the Alexiad of Anna Comnena, and Digests Akritas.

Mr. Dyck

199. **Special Studies in Greek (2 to 8 units).** Prerequisites: senior standing, consent of instructor.

### Graduate Courses

The 200-series courses which are designated A and B (e.g., 201A-201B) are double courses. Course A is a preseminar and is normally prerequisite to course B, a seminar.

200A-200B. History of Greek Literature. Prerequisite: consent of instructor. Lectures on the history of Greek literature, supplemented on the student by independent reading of Greek texts in the original. Ms. Bergren, Mr. Haslam, Ms. King

201A-201B. Homer: Iliad. Mr. Haslam, Ms. Bergren, Ms. King

202A-202B. Homer: Odyssey and the Epic Cycle. Ms. Bergren, Mr. Haslam, Ms. King

203. Hesiod. Ms. Bergren, Mr. Frischer

204. Homeric Hymns. Ms. Bergren

205. Seminar in Aeschylos. Ms. Bergren, Mr. Blank, Mr. Haslam

206A-206B. Sophocles. Mr. Haslam, Mr. Lattimore

207A-207B. Euripides. Mr. Frischer, Mr. Haslam, Ms. King

208A-208B. Aristophanes. Ms. Bergren

209. Seminar in Hellenistic Poetry. Mr. Frischer, Mr. Goldberg

210. Advanced Greek Prose Composition. Prerequisite: course 110 or equivalent. Mr. Haslam

211A-211B. Herodotus. Mr. Blank

212A-212B. Thucydides. Mr. Haslam, Mr. Lattimore

213. Seminar in Greek Historiography. Mr. Haslam

214. Demosthenes. Mr. Dyck


216. Menander. Prerequisite: reading knowledge of classical Greek. Mr. Frischer, Mr. Goldberg

217A. Greek Lyric Poetry: Archaic Lyric. (Formerly numbered 217) Prerequisite: consent of instructor. A study of lyric poetry of the Archaic period, both choral and monodic, with elegiac and iambic included. Ms. Bergren, Mr. Haslam

217B. Greek Lyric Poetry: Pindar and Bacchylides. (Formerly numbered 217) Prerequisite: consent of instructor. A study of the choral odes of Pindar and Bacchylides, with special attention to the conventions of the epinician. Ms. Bergren, Mr. Haslam

221. Seminar in the Pre-Socratic Philosophers. Mr. Blank, Mr. Frischer

222A-222B. Plato. Ms. Bergren, Mr. Blank

223A-223B. Aristotle. Mr. Blank, Mr. Dyck, Mr. Frischer

224. Seminar in Post-Aristotelian Philosophy. Mr. Blank, Mr. Frischer

231A-231B-231C. Seminar in Later Greek and Byzantine Literature. Prerequisite: consent of instructor. Studies in various aspects of Byzantine Greek language and literature. Topics vary from year to year. Each course may be taken independently and may be repeated for credit with topic change. Mr. Blank, Mr. Dyck

233. Byzantine Poetry. A study of the main representatives of both religious and secular poetry. Mr. Dyck

240A-240B. History of the Greek Language. Prerequisite: consent of instructor. 240A covers the linguistic history of classical Greek. In 240B postclassical, medieval, and modern Greek are discussed. Mr. Dyck
Lower Division Courses

1. Elementary Latin. Lecture, five hours. (F)
2. Elementary Latin. Lecture, five hours. Prerequisite: course 1. (W)
3. Elementary Latin. Lecture, five hours. Prerequisite: course 2.
4. Elementary Latin: Intensive (8 units). The course covers all the declensions of nouns and adjectives, all conjugations in the indicative mood, and the primary uses of the subjunctive mood. Emphasis is placed on the development of ability to read and select proper sentences from classical prose.
5. The Latin Element in English. Knowledge of Latin is not required. A study of the derivation and use of English words of Latin origin, analysis into their component elements directed toward understanding of form and meaning. Mr. Lattimore

Upper Division Courses

Note: Latin 3 is prerequisite to 100, which is normally prerequisite to all other 100-series courses in classical Latin authors.

100. Readings in Latin Prose and Poetry. Lecture, three hours. Prerequisite: course 3 or equivalent. Close study of a prose text supplemented with related readings in poetry. Attention to historical and cultural context. Course is normally prerequisite to other courses in the Latin 100 series. Mr. Blank, Mr. Levine
101. Plautus. Mr. Goldberg, Mr. Löfstedt
102. Terence. Mr. Goldberg, Mr. Löfstedt
103. Lucretius. Mr. Blank, Mr. Frischer, Mr. Levine
104. Ovid. Ms. Bergen
105. Vergil: Selections from Aeneid I-IV. (Formerly numbered 105A). Mr. Haslam, Ms. King, Mr. Levine
106. Catullus. Mr. Haslam, Mr. Levine
107. Horace. Mr. Frischer, Mr. Levine
108. Roman Elegy. Selections from Catullus, Tibullus, and Propertius. Mr. Frischer, Mr. Levine
109. Roman Satire. Selections from the Epistles of Horace, the Satires of Juvenal, and the Epigrams of Martial. Mr. Blank, Mr. Levine
110. The Study of Latin Prose. Work in sight reading and grammatical analysis of classical prose texts; writing of classical prose. Mr. Blank, Mr. Levine
111. Livy. Mr. Frischer, Mr. Löfstedt
112. Tacitus. Mr. Frischer, Mr. Löfstedt
113. Cicero: The Orations. Mr. Dyck, Mr. Frischer
114. Roman Epistemology: Cicero and Pliny. Mr. Blank, Mr. Dyck, Mr. Frischer
115. Caesar. Mr. Dyck
116. Petronius. Mr. Frischer, Mr. Löfstedt
117. Sallust. Mr. Frischer, Mr. Löfstedt
118. Seneca. A selection of Seneca’s works is read in Latin. Mr. Blank, Mr. Löfstedt
120. The Vulgate. Lecture, three hours. Prerequisite: course 3 or consent of instructor. Reading of selected chapters of St. Jerome’s translation of the Bible. Interest is centered on uncritical features of the Latin. Mr. Löfstedt
130. Introduction to Medieval Latin. Prerequisite: course 3 or consent of instructor. Reading of easy prose texts with interest centered on basic language training. Mr. Löfstedt
131. Medieval Latin Prose. Prerequisite: course 130 or consent of instructor. Extensive reading of selected texts in prose; interest is centered on the idiosyncrasies of individual Latin. Mr. Löfstedt
133. Medieval Latin Poetry. Prerequisite: one upper division language course in Latin or consent of instructor. Mr. Löfstedt
199. Special Studies in Latin (2 to 8 units). Prerequisites: senior standing, consent of instructor.

Graduate Courses

The 200-series courses which are designated A and B (e.g., 203A and 203B) are double courses. Course A is a preseminar and is normally prerequisite to course B, a seminar.

200A-200B-200C. History of Latin Literature. Prerequisite: consent of instructor. Lectures on the history of Latin literature, supplemented on the part of the student by independent reading of Latin texts in the original. Mr. Frischer, Mr. Goldberg, Mr. Levine
201. The Roman Epic Tradition. Seminar, three hours. Close study of one epic poet other than Vergil (e.g., Ennius, Lucan, Valerius Flaccus, Statius, Silius Italicus), with attention to the literary tradition of epic. May be repeated for credit with topic change.
202. Seminar in Catullus. A detailed consideration of the entire Catullan corpus. Mr. Levine
203A. Elegiac Poetry. Mr. Frischer, Mr. Levine
203B. Propertius. Mr. Frischer, Mr. Levine
204A-204B. Vergil’s Aeneid. Mr. Frischer
204B. Vergil’s Bucolics. Mr. Haslam, Ms. King
205. Seminar in Vergil’s Bucolics. Mr. Frischer, Ms. King
206. Horace. Mr. Frischer
207. Roman Comedy. Prerequisite: consent of instructor. Survey of the history of Roman comedy. Reading of one comedy by Plautus or Terence, with interest centered on language and meter. Mr. Goldberg, Mr. Löfstedt
208. Ovid. Prerequisite: reading knowledge of classical Latin. A detailed study of the poetic works of Ovid. Readings in the original with discussion of the secondary literature and scholarship. May be repeated for credit with topic change. Ms. Bergen
209. Seminar in Roman Satire. A detailed study of an individual satirist, with attention to his position in the development of the satirical genre in Roman literature. Choice of author varies from year to year. Close study of the text, of the characteristics of the writer as a social critic and artist, and of the contemporary literary and social environment.
210. Advanced Latin Prose Composition. Prerequisite: course 110 or equivalent. Mr. Levine
211A-211B-211C. Seminar in the Roman Historians. A study of considerable portions of the writings of:
211A. Sallust. Mr. Frischer
211B. Livy. Mr. Frischer
211C. Tacitus. Mr. Frischer
215. Seminar in the Roman Novel. Works such as Petronius’ Satyricon and Auletes’ Metamorphoses; study of the literary problems. May be repeated for credit with topic change. Mr. Blank, Mr. Frischer
216. Roman Rhetoric. Seminar, three hours. Close study of one rhetorical text (e.g., Rhetorica ad Herennium, Cicero's De Oratore, Seneca's Controversiae, or Suastorae, Quintilian's Institutio), with attention to its place in the rhetorical tradition. May be repeated with topic change. Mr. Dyck, Mr. Frischer
220. Cicero’s Orations. (Formerly numbered 220B.) Seminar, three hours. Mr. Dyck, Mr. Frischer
221A. Cicero’s Philosophical Works. Mr. Dyck, Mr. Frischer, Mr. Levine
221B. Cicero: De Natura Deorum. Mr. Dyck, Mr. Frischer, Mr. Levine
222. Seminar in Roman Stoicism. Prerequisite: reading knowledge of Greek and Latin. Mr. Blank, Mr. Dyck, Mr. Frischer
223. Lucretius. Mr. Blank, Mr. Frischer
224. Seneca. Seminar, three hours. Detailed study of one work of prose or poetry by the younger Seneca. Emphasis on literary and philological problems, with some attention to philosophical and historical matters as well. May be repeated with topic change. Mr. Goldberg
231A-231B. Seminar in Medieval Latin. Prerequisite: at least one upper division course in Latin or consent of instructor. Studies in various areas of the language and literature of medieval Latin. May be repeated for credit by consent of instructor. Mr. Löfstedt
232. Vulgar Latin. Prerequisite: consent of instructor. History and characteristics of popular Latin, its development into the early forms of the Romance languages. Mr. Löfstedt
240. History of the Latin Language. Prerequisite: consent of instructor. The development of Latin from the earliest monuments until its emergence in the Renaissance. Mr. Löfstedt
242. Italic Dialects and Latin Historical Grammar. Prerequisite: consent of instructor. The linguistic situation in early Italy. Readings in Oscan, Umbrian, and early Latin texts. Latin grammar in the context of Italic and Indo-European linguistics. Mr. Brown, Mr. Frischer
243. Seminar in Latin Palaeography. Studies in the development of the book hand in Latin manuscripts earlier than the invention of printing. Mr. Levine
247. The Teaching of Latin. Prerequisite: graduate standing or consent of instructor. Techniques for teaching; organization of courses; review of the content of the curriculum offered in junior and senior high schools.
495. College Teaching of Latin (2 units). Prerequisites: appointment as a teaching assistant, consent of instructor. Methodology of instruction in conjunction with class practice. May be repeated for credit. S/U grading. Mr. Goldberg
596. Directed Individual Study or Research (2 to 8 units).
597. Study for Ph.D. Qualifying Examinations (2 to 8 units).
599. Research for Ph.D. Dissertation (2 to 8 units).
### Related Courses in Other Departments

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<tr>
<th>Course Titles</th>
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<tr>
<td>Art History (Art, Design, and Art History) 103A. Greek Art</td>
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<td>103C. Roman Art</td>
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<td>117A-117B. History of Rome</td>
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<td>123A-123B. Byzantine History</td>
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<td>216A-216B. Seminar in Byzantine History</td>
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<td>Indo-European Studies 132. European Archaeology: The Bronze Age</td>
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<td>Philosophy 101A. Plato — Earlier Dialogues</td>
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<td>102. Aristotle</td>
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### Scope and Objectives

The major in communication studies is an interdisciplinary program leading to a Bachelor of Arts degree. It seeks to provide students with a comprehensive knowledge of the nature of human communication, the symbol systems by which it functions, the environments in which it occurs, its media, and its effects. Employing critical and empirical approaches, the major draws its resources from the social sciences, humanities, and fine arts. Two areas of specialty are offered: the specialization in mass communication centers on formal and institutional communication systems and the macrocosmic social contexts in which they function; the specialization in interpersonal communication centers on face-to-face communicative interaction in the small group environment.

### Bachelor of Arts Degree

Students selecting the major in communication studies must complete the required lower division prerequisites and a minimum of 16 upper division courses as set forth below. Enrollment in the major is limited. Admission to the major will be by application to the committee in charge. Applications are available in the program office.

### Preparation for the Major

**Required:** Communication Studies 10, Linguistics 1, Psychology 10, Sociology 1. Linguistics 2 is required for students who specialize in interpersonal communication.

### The Major

**Required Core Courses:** Communication Studies 100 and 101 and one course from Anthropology M140, Communication Studies 102, or Linguistics 100.

### Specializations

**Mass Communication:** (1) Theory and method — Communication Studies 140, 152, and either Communication Studies 147 or Sociology 122, and one course from Political Science 141, Psychology 137B, or Sociology 150; (2) modes of mass communication — two courses from Communication Studies 160, 165, 170; (3) media and media history — two courses from Communication Studies 187, Theater Arts 106A, 108, 110A, and either Theater Arts 116 or Communication Studies 175; (4) electives (five courses) — two courses from Communication Studies 115, 120, 130, Psychology 135 or Sociology 154, Psychology 137A or Sociology 152, Sociology 155; three courses from one of the following groups: (a) language theory — Communication Studies 142, 150, Linguistics 100, 170, Philosophy 172, Psychology 123; (b) American studies — English 115A, History 148A, 148B, 148C, 150A, 150B, 156A, 156B, Political Science 114A, 114B; (c) social systematics — Anthropology 133P, 133R, 135P, 142A, 142B, Sociology C144A, C144B, and either Sociology 151 or Anthropology 134.

**Interpersonal Communication:** (1) Theory — Psychology 135 or Sociology 154; Psychology 137A or Sociology 152; (2) methods — three courses from Communication Studies 115, 120, Management 182, Psychology 174; (3) heterogeneous groups communication — three courses from Anthropology 166, Communication Studies 130, Sociology 124, 155; (4) electives (five courses) — two courses from Communication Studies 147 or Sociology 122; Communication Studies 140, 152, 160, 165, 170; three courses from one of the following groups: (a) language theory — Communication Studies 142, 150, Linguistics 100, 170, Philosophy 172, Psychology 123; (b) media and media history — Communication Studies 187, Theater Arts 106A, 108, 110A, and either Communication Studies 175 or Theater Arts 116; (c) social systematics — Anthropology 133P, 133R, 135P, 142A, 142B, Sociology C144A, C144B, and either Anthropology 134 or Sociology 151.

### Lower Division Course

10. Introduction to Communication Studies. An introduction to the fields of mass communication and interpersonal communication. Study of modes, media, and effects of mass communication, interpersonal processes, and communication theory.

- Prof. Cole (F,W,Sp)

### Upper Division Courses

100. Communication Theory. Prerequisite: course 10, Linguistics 1, Sociology 1, or consent of instructor. Analysis of the fundamental nature of human communication; its physical, linguistic, psychological, and sociological bases. Study of theoretical models explicating the process and constituents of the communicative act.

- Prof. French (F,W,Sp)

101. Freedom of Communication. Analysis of legal, political, and philosophical issues entailed in the rights of free expression, access to an audience, and access to information. Study of court decisions governing freedom of communication in the United States.

- Prof. Cowan, Mr. Rosenthal (F.Sp)

102. The Code of Human Communication. Prerequisite: course 10, Sociology 1, Psychology 10, Linguistics 1, or consent of instructor. The structural analysis and description of human communication codes; the development of language; characteristics of the source, channels, and destination in human communication.

- Ms. French, Ms. Weathers

115. Dyadic Communication and Interpersonal Relationships. Prerequisite: course 100. The course emphasizes the developmental approach to the study of communication in dyadic relationships. Differences in the stages of relationships are analyzed in terms of communication rules and verbal, nonverbal messages.

- Ms. Weathers

120. Principles and Types of Group Communication. Prerequisite: course 100 or consent of instructor. Analysis of the purposes, principles, and types of small group communication. Particular emphasis on the organization of and participation in problem-solving discussion.

- Ms. Weathers

### Communication Studies (Interdepartmental)

232 Royce Hall, 825-3303

**Professor**
Donald E. Hargis, Ph.D., Emeritus

**Associate Professors**
Patrick French, Ph.D.
Neil M. Malamuth, Ph.D., Chair
Paul I. Rosenthal, Ph.D.

**Lecturers**
Jeffrey I. Cole
I. Geoffrey Cowan, LL.B.
Diana M. Meehan, Ph.D.
Janet Weathers, Ph.D.
130. Cultural Factors In Interpersonal Communication. Prerequisite: course 100 or consent of instructor. Study of cultural factors as they affect the quality and processes of interpersonal communication; exercises in the participation, analysis, and criticism of interethnic and interracial communications in the small group configuration. Ms. Weathers

140. Theory of Persuasive Communication. Prerequisite: course 100 or consent of instructor. The dynamics of communication designed to influence human conduct; analysis of the structure of persuasive discourse; integration of theoretical materials drawn from relevant disciplines of the humanities and social science. Mr. Rosenthal

142. Rhetorical Theory. Prerequisite: course 100 or consent of instructor. Study of the major classical and neoclassical treatises on rhetoric. Analysis of the theories of Plato, Aristotle, Cicero, Quintilian, St. Augustine, Blair, Whately, Campbell, and other leading works in the theory of rhetoric.

147. Mass Communication and Social Systems. Prerequisite: course 100 or consent of instructor. Comparative analysis of major theories about relationships between mass media and social systems from the interpersonal to the international level; emphasis on empirical research.

150. Analysis of Communication Content. Prerequisite: course 100 or consent of instructor. Study of methodologies for the qualitative and quantitative analysis of the content of communications.

152. Analysis of Communication Effects. Prerequisite: course 100 or consent of instructor. Survey of research on communication effects in the mass media and its impact on audiences.

153. The Media and Aggression Against Women. Lecture, two hours; discussion, two hours. Prerequisite: course 152 or consent of instructor. Study of the growing body of literature on the relationship between the mass media and aggression against women. This research considers both the role of the media as reflecting cultural values and scripts and its potentially powerful role as a socializing agent of the culture. Research on the role of individual differences among members of a culture as mediators of the impact of the media are also analyzed. Mr. Malamuth

155. Communication Technology and Public Policy. Prerequisite: course 10. An introduction to modern communication technology and policy, with special attention to current policy issues, the institutions which make policy decisions, and the social, economic, and technological trends which create policy problems. Communication technologies surveyed include cable television, teletext, videotape, and satellite, microwave cellular, and submarine communication.

160. Political Communication. Prerequisites: courses 100 and 101, or consent of instructor. Study of the nature and function of communication in the political sphere; analysis of contemporary and historical communications within established political institutions; state papers; deliberative discourses; electoral campaigns.

165. Agitational Communication. Prerequisites: courses 100 and 101, or consent of instructor. Theory of agitation; agitation as a force for change in existing institutions and policies in a democratic society. Intensive study of selected agitational movements and the technique and content of their communications.

170. Legal Communication. Prerequisites: courses 100 and 101, or consent of instructor. Study of the trial and appellate processes as systems of communication. Analysis of the elements of the judicial process as they affect the quality of communication content. Study of the rules of evidence, jury behavior, and the structure of legal discourse.

171. Seminar in the Theories of Freedom of Speech and Press. Prerequisites: course 101, consent of instructor. An exploration of the relationship between the freedoms of speech and press and values of liberty, self-realization, self-government, truth, dignity, respect, justice, equality, association, and community. Study of the significance of these values is examined in conjunction with issues such as obscenity, defamation, access to the media, and the control of commercial, corporate, and government speech.

175. Criticism and the Public Arts. Prerequisite: course 10 or consent of instructor. An introduction to methods and problems of criticism in the public arts. Various types of critical methods are studied: formalistic, aesthetic, and critical.

185. Field Studies in Communication (2 to 6 units). (Former number 199F.) Discussion, two hours; interview, seven to fourteen hours (depending on unit value). Prerequisites: Senior standing, consent of instructor. Fieldwork in communication. Students participate in two-hour seminar sessions and spend seven hours in approved community settings each week for each unit of credit. May be taken for a maximum of six units. P/NP grading.

187. Ethical and Policy Issues in the Institutions of Mass Communication. Prerequisites: courses 100 and 101, or consent of instructor. An intensive examination of the ethical and policy issues arising from the interaction of media institutions (print, film, broadcasting, and the new technologies) and societal institutions (Congress, federal agencies, courts, the Presidency, schools, churches, political action groups, and audiences).

189. Special Studies (2 to 8 units). To be arranged with faculty member who will direct the study. Prerequisite: consent of instructor. A course of independent study for seniors who desire an intensive or specialized investigation of selected research topics.

199. Special Studies for Honors Candidates (2 to 8 units). To be arranged with faculty member who will direct the study. Prerequisite: consent of instructor. A course of independent study for seniors who desire an intensive or specialized investigation of selected research topics.

Comparative Literature (Interdepartmental)

334D Royce Hall, 825-7650

Professors

Michael J. B. Allen, Ph.D. (English)
Arnold J. Band, Ph.D. (Hebrew and Comparative Literature)
A. R. Braumuller, Ph.D. (English)
Daniel G. Calder, Ph.D. (English)
Hassan el Nouty, Docteur ès Lettres (French)
Eric Gans, Ph.D. (German and Comparative Literature)
Carroll B. Johnson, Ph.D. (Spanish)
Richard D. Lehan, Ph.D. (English)

Maximillian E. Novak, D.Phil., Ph.D. (English)
Joseph N. Riddel, Ph.D. (English)
Ross P. Shidee, Ph.D. (Scandinavian and Comparative Literature)
Stephen I. Yenser, Ph.D. (English)

Associate Professors

Frederick L. Burwick, Ph.D. (English)
Edward I. Condren, Ph.D. (English)
Michael Heim, Ph.D. (Czech and Russian Literature)
Albert D. Hutter, Ph.D. (English)
Kathleen L. Komar, Ph.D. (German and Comparative Literature)
Robert M. Maniquis, Ph.D. (English)

Assistant Professors

Shuhsi Kao, Ph.D. (French)
Katherine C. King, Ph.D. (Classics and Comparative Literature)
Lucia Re, Ph.D. (Italian and Comparative Literature)

Visiting Professor

Hans Robert Jauss, Ph.D.

Scope and Objectives

UCLA's graduate Comparative Literature Program makes it possible to study several literatures rather than just one. Students skilled in foreign languages may select from UCLA's range of literature courses and choose to emphasize any period or genre. In the program, students combine work on the major literary texts and traditions of their chosen literatures with the study of literary theory and criticism.

Standing at the forefront of innovative literary analysis and criticism, comparative literature is one of the most exciting fields in the humanities. As a discipline it requires exceptional linguistic ability and high intellectual caliber.

Graduate degree programs, leading to the Master of Arts and Ph.D. degrees in Comparative Literature, ordinarily prepare students for careers in college and university teaching and research. Like other liberal arts subjects, however, comparative literature can also serve as a foundation for careers in a variety of international activities.

Master of Arts Degree

Admission

A bachelor's degree in literature, ancient or modern, is a prerequisite for admission to the program. Students not having a literature major in their B.A. program will be required to demonstrate the equivalent knowledge and comprehension of one literature before being considered a graduate student in good standing. Applicants are expected to have at least a 3.4 grade-point average in upper division literature courses, take the Graduate Record Examination (GRE), and submit three letters of recommendation to the Comparative Literature Program (334D Royce Hall, UCLA, Los Angeles, CA 90024). Applicants should have literary proficiency in one foreign language and at least an elementary knowledge of a second.
Areas of Study
Your study plan should combine work in the major and minor literatures by focusing on a limited area in which these literatures may be explored. The area may be a literary period (e.g., Romanticism), a genre (e.g., the novel), or a theoretical problem.

The major literature is the area of your primary concentration. You specialize in one historically defined period (e.g., medieval, Renaissance, and baroque, neoclassicism and 18th century, Romanticism to modern), but a general knowledge of the major literature is a prerequisite for the specialization.

In the minor literature, you focus on a period comparable to the area of specialization in the major literature, although you may not have as much historical depth and breadth as in the major literature.

Foreign Language Requirement
Literary proficiency in the major and minor literatures is an essential prerequisite for courses and degrees in comparative literature. You should be able to take graduate classes conducted in the languages of your specialization, speak the major foreign language adequately, and read literary texts in that language with "literary proficiency" (i.e., with sensitivity to stylistic nuances).

Before completing the M.A., you must demonstrate a knowledge of two foreign languages. Proficiency in one must be certified by completing two or more upper division and/or graduate literature courses in the appropriate language department. (You must prove more than elementary language competency in order to take these courses.) The second language requirement may be satisfied either by completing two years of language classes, by taking one upper division literature class, or by passing the Educational Testing Service (ETS) foreign language examination with a score of 600 or better. Translation examinations may be administered by departmental members in languages for which no ETS examination is available.

Course Requirements
The following 12 courses are the minimum course requirements. Some students will take extra courses to make up deficiencies.

1. Four courses from the following: Comparative Literature 200 and one course from 201, 202, 204; the comparative study of one genre (e.g., the novel, the epic, the lyric, the drama); the comparative study of one period or movement (e.g., baroque, Romanticism).

2. Five courses (three must be graduate, two may be upper division) in your major literature.

3. Three courses, either graduate or upper division, in your minor literature. You should study periods, genres, or problems in the minor literature which lend themselves to comparison with similar elements in your major literature.

Of the above required courses, eight units at most may be in the 500 series. Course 596 or 597 may be applied toward the minimum course requirement and the graduate course requirement.

Comprehensive Examination Plan
The examination for the M.A. is both written and oral, testing both historical knowledge and comprehension of methodology. There are three possible results of the examination: you may receive an M.A. degree and be allowed to progress toward the Ph.D., be granted a terminal M.A., or fail the examination altogether. The program allows a maximum of two attempts to pass the M.A. examinations.

The written examinations test your skill in literary analysis and detailed knowledge of specified works in the major and minor literatures. The examinations are based on reading lists from the works of at least 15 authors in the major literature and the works of at least ten authors in the minor literature. Normally, the reading list consists of approximately 24 to 30 works in the major literature and 12 to 15 works in the minor literature. For more details on the reading list, contact the program office.

Ph.D. Degree
Admission
For entrance into the Ph.D. program, an M.A. degree in Comparative Literature is normally required. Students with an M.A. degree in one national literature, extensive knowledge of a second, and the ability to read literary texts in a third language may be considered for admission. Applicants should submit three letters of recommendation. Students entering with any degree other than an M.A. in Comparative Literature at UCLA are required to pass a "permission to proceed" examination before being allowed to continue toward the Ph.D. It should be taken within the first year of residence.

Major Fields or Subdisciplines
The study plan for the Ph.D. should combine work in the major and minor literatures by focusing on a limited area in which these literatures may be explored. This area may be a literary period or a particular aspect common to several literatures (e.g., a genre like tragedy or the novel, or a phenomenon like neoclassicism or the baroque). It may also be a critical or theoretical problem, involving analyses of styles or modes of interpretation; comparisons of classical and modern genres and themes; questions about the artistic process in different art forms; or problems in literary aesthetics or epistemology.

Foreign Language Requirement
You must have literary proficiency in at least two foreign languages before taking the qualifying examination. A reading knowledge of a third foreign language is strongly recommended. Two of the three languages offered for the Ph.D. must be from different language groups (e.g., Romance and Germanic, English and Slavic). If you intend to offer three literatures written in foreign languages for your Ph.D. degree, you are expected to have literary proficiency in the three pertinent foreign languages. A classical language is usually necessary for anyone majoring in a period prior to the 19th century. The language requirements for the Ph.D. are to be fulfilled in the same way as those for the M.A. degree.

Course Requirements
All students entering with an M.A. must take a minimum of six graduate courses, and often up to 12 courses. Those whose M.A. is not in Comparative Literature at UCLA will have to take three of the required six courses in comparative literature and one from each of the major and minor literatures. Other relevant or necessary courses will be determined in consultation with a graduate adviser. None of the minimum required courses may be in the 500 series. Although only six courses are required, you are strongly advised to take at least two and usually three courses in each of your literatures.

If you have taken your M.A. in Comparative Literature at UCLA, two of the required graduate courses should be comparative literature courses and one of the two should have a theoretical orientation (such as Comparative Literature 202, 203, 204). Three courses in the second minor are normally recommended.

Teaching Experience
Teaching experience is not required but is highly recommended.

Qualifying Examinations
The examinations are both written and oral and may be taken over a period of two to three quarters. The written examinations are based on reading lists for the major and two minor literatures.

For the major literature, you may select one of the following examination formats:

1. A written examination divided into two parts, each based on a reading list of at least 25 to 30 items and three to four hours in length. The first part evaluates your broad historical knowledge of the major field; the second part tests specific knowledge of your particular period or critical problem.

2. A written examination and a prospectus (25 to 30 pages) to be discussed during the University Oral Qualifying Examination. The written examination evaluates your broad historical knowledge of the major field and is based
on a reading list of 25 to 30 items. The pro-
spectus must be submitted at least two weeks
before the oral qualifying examination and
should identify the proposed dissertation top-
ical, give an example of the problem and method
of the dissertation, outline the dissertation as a
whole, and present a bibliography of relevant
material.

If you select the second format, you must pass
three courses given by your major department
in your period or area of specialization before you
can take the oral qualifying examination.

Coursework taken for the M.A. degree may not
be applied.

A three- to four-hour written examination is tak-
en in each of the minor literatures. These ex-
aminations are based on approved reading
lists of 25 to 30 items.

The University Oral Qualifying Examination
must be taken within 60 days after you pass the
last written examination and covers three areas:

1. Competence as determined by the reading
lists and the written examinations.
2. Both a familiarity with major critical texts
pertaining to the reading lists and competence
in general literary theory.
3. The proposed dissertation topic. If you se-
lect the first format for your major literature
written examination, this section of the oral
examination will be a minor part and will focus on
a brief dissertation prospectus of six to ten pages.
If you select the second format, this
section of the oral examination will be a major
part and will focus on the dissertation prospectus
(25 to 30 pages) prepared as part of the
written examination.

The program allows a maximum of two at-
tempts to pass the Ph.D. examinations.

The doctoral dissertation must demonstrate
original critical work in the field. Although a

C229. Archetypal Heroes in Literature, Lecture,
three hours. Prerequisite: reading knowledge of one
appropriate foreign language. Survey and analysis of
the function and appearance of such archetypal he-
roeas Achilles, Ulysses, Prometheus, Oedipus, and
Orpheus in literature from antiquity to the modern
period. Concurrently scheduled with Humanities
C129. Graduate students are required to prepare pa-
pers based on texts read in the original language and
to meet as a group one additional hour each week.

Ms. King

C230. Translation Workshop. Prerequisites: solid
reading knowledge of at least one foreign language,
consent of instructor. Open to qualified undergrad-
uates. Graduate language preparation. The theory
and practice of literary translation. Analyses of signif-
cant theoretical contributions to the field. Weekly ex-
ercises in translation technique with genres, periods,
and authors at the discretion of the participants.

Mr. Heim

C239. Early Medieval Literature. Prerequisite: read-
ing knowledge of one appropriate foreign language. A
survey of the Latin and Germanic literatures from the
fall of Rome to the beginning of the 12th century. May
be concurrently scheduled with Humanities C139.
Graduate students are required to write papers based
on texts read in the original languages and may meet
as a group one additional hour each week.

Mr. Calder

C240. Medieval Epics. Prerequisite: reading knowl-
dge of one appropriate foreign language. The semi-
nar considers five medieval epics: Beowulf, El Cid,
Chanson de Roland, Nibelunglied, and Njálsaga.
There are two objectives: first, a critical understand-
ing of each work, and second, an understanding of
the nature of epic literature. Assignments consist of
an extended seminar paper and short oral reports.
May be concurrently scheduled with Humanities
C140. Graduate students are required to prepare pa-
pers based on texts read in the original languages.

Mr. Condren

C241. The Literary Mediation of History in the Re-
naisance. Seminar, three hours. Prerequisite: read-
ing knowledge of one appropriate foreign language.
An analysis of the presence and the treatment of his-
tory in the rhetoric of Renaissance authors ranging
from the Italian humanists to Machiavelli and Shake-
peare. Other authors include Poliziano and Lorenzo
de' Medici. May be concurrently scheduled with Hu-
manities C141. Graduate students are required to prepare pa-
pers based on texts read in the original languages and
may meet as a group one additional hour each week.

Ms. Ms. King

C245. Renaissance Drama. Prerequisite: reading
knowledge of one appropriate foreign language. The
course offers a broad introduction to the subject mat-
ter and types of plays in the Renaissance. Historical
and literary influences on the plays are considered.
Readings include works of such dramatists as Tasso,
Machiavelli, Lope de Vega, Racine, Jonson, Shake-
peare. May be concurrently scheduled with Human-
ities C145. Graduate students are required to prepare pa-
pers based on texts read in the original languages and
to meet as a group one additional hour each week.

Ms. Braunmuller
C268. Romantic Autobiography. Discussion, three hours. The course traces the evolution of the autobiography from spiritual (Augustine) and secular (Cesellini) sources to the transition in the 18th century which blended features of the epic poem and the quest-romance. Wordsworth's Prelude came to represent the best example of this mixture. Major examples of the Romantic autobiography to be studied include Rousseau's Confessions, Wordsworth's Prelude, and Goethe's Wilhelm Meister's Apprenticeship. Later novels that develop and extend the genre include Joyce's Portrait of the Artist as a Young Man and Proust's Swann's Way. May be concurrently scheduled with Humanities C168. Ms. Powder III.

C270. The Dream in English and German Romantic Literature. Lecture, three hours; discussion, one hour. Prerequisite: reading knowledge of one appropriate foreign language. A study of the use of the dream as a standard narrative technique in English and German Romantic literature. May be concurrently scheduled with Humanities C170. Graduate students may be required to prepare papers based on texts read in the original languages and to meet as a group one additional hour each week.

Mr. Burwick

C271. Dramatic Theory and Criticism in German and English Romanticism. Prerequisite: reading knowledge of German. The seminar examines the generic concepts of drama in the critical essays of the Schiller, Tieck, Tieck, Paul, Coleridge, Goethe, Hazlitt, and Hazlitt. It gives particular attention to the role of the actor and the idea of dramatic action as discussed by the critics.

Mr. Burwick

C272. The Grotesque in Romantic Literature and Art. Prerequisite: reading knowledge of one appropriate foreign language. A study of the grotesque in the visual and verbal arts of the Romantic period; interpretation addresses the aesthetics of tragic-comic interaction among the demonic and human. Emphasis on studies of man's abnormality and perversion. May be concurrently scheduled with Humanities C172. Graduate students are required to prepare papers based on texts read in the original languages and to meet as a group one additional hour each week.

Mr. Burwick

C273. Theory and Texts of the Fantastic. Seminar, three hours. Prerequisite: reading knowledge of one appropriate foreign language. An attempt to define the fantastic as a theoretical genre separate from the wider genre of fantasy. Critical texts by Todorov and Brooke-Rose. Primary texts by Hoffman, Nerval, James, Poe, Borges, Casares, Cortazar, Landolfi, and Cahnri. May be concurrently scheduled with Humanities C173. Graduate students are required to prepare papers based on texts read in the original languages and may meet as a group one additional hour each week.

Ms. Re

C274. The Search for Organic Forms. Prerequisite: reading knowledge of Digital or German. A study of the romantic perception of nature and theories of state. Major emphasis on the works of Rousseau and Goethe. A large part of the course is given to the study of the transition made between theories of nature and theories of state.

Mr. Maniguas

C275. The 19th-Century Novel. Seminar, three hours. Prerequisite: reading knowledge of French or German. A comparative study of the 19th-century novel in England and on the continent. Novels are selected so as to allow the seminar to concentrate on a particular tradition or critical problem. May be concurrently scheduled with Humanities C175.

Mr. Lehman

C276. Fiction and History. Seminar, three hours. Prerequisites: upper division standing and literature major, or consent of instructor. The course analyzes the use of historical events, situations, and characters in literary works of the Renaissance and/or the modern period. Texts and individual assignments range from Renaissance historical narratives (the Italian Humanists, Machiavelli) to 19th- and 20th-century novels by authors such as Stendahl, Verga, Tomasi di Lampedusa, Carpenter, and Kundera. Use of fictional methods by historians may also be analyzed. Emphasis on how aesthetic, ideological, and political factors influence the authors' choice and use of historical material. May be concurrently scheduled with Humanities C176. Graduate students are required to prepare papers based on texts read in the original languages.

Mr. Pasinetti, Ms. Re

C278. Darwinism and Literature. Seminar, three hours. Prerequisites: graduate standing or consent of instructor, reading knowledge of one appropriate foreign language. The course studies the impact of Darwin's theories on European and American literature. While texts include major works in the development of naturalism, such as novels by Zola, Hardy, Crane, or Dreiser and plays by Strindberg and Ibsen, the course moves forward into the continuing influence of other "determinist" and behaviorally oriented theories in works by authors such as Mann, Sartre, Camus, Stevens, and Skinner. May be concurrently scheduled with Humanities C178. Graduate students are required to prepare papers based on texts read in the original languages and may meet as a group one additional hour each week.

Mr. Shideler

C280. The Symbolist Tradition in Poetry. Prerequisite: reading knowledge of either French or German. A study of the symbolist tradition in 19th- and 20th-century English, French, and German poetry. May be concurrently scheduled with Humanities C180. Graduate students are required to prepare papers based on texts read in the original languages and may meet as a group one additional hour each week.

Mr. Shideler

C281. Poetry and Poetics of the Post-Symbolist Period. Prerequisite: reading knowledge of French or German. A study of some of the dominant poetic trends and figures in American and European poetry in the first half of the 20th century, including such surrealists as Apollinaire and Breton, imagists, and major individual poets such as Pound, Eliot, Valery, Rilke, George, and Stevens. May be concurrently scheduled with Humanities C181. Graduate students are required to prepare papers based on texts read in the original languages and may meet as a group one additional hour each week.

Ms. Komar, Mr. Shideler

C283. Novel, Crime, Ritual. Discussion, three hours. Prerequisite: reading knowledge of one appropriate foreign language. An investigation of a range of novels dealing with ritual and crime and their relation to the novel form. Readings include such texts as de Ayalas Belarmino and Apollonio, Singer's The Magician of Lublin, selected stories from Babel's Red Cavalry, a Dickens' novel, and Leclers Lissards Dangerous. Concurrently scheduled with Humanities C183. Graduate students are required to prepare papers based on texts read in the original language.

Mr. Baumgarten

C292. The Psychological Novel. Prerequisites: major in literature, reading knowledge of French. A comparative study of French and English novels which both precede and follow the development of psychoanalysis. Selected readings of Freud are assigned in addition to the required fiction.

Mr. Baumgarten

C297. The Mystery Novel. Prerequisite: reading knowledge of French. A study of mystery and detective fiction in England, France, and the United States. The origin, form, and historical significance of mystery fiction are developed through close readings of selected works. May be concurrently scheduled with Humanities C117. Graduate students are required to prepare papers based on texts read in the original languages and to meet as a group one additional hour each week.

Mr. Hutter

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit.

S/U grading.

495. Preparation for the Teaching of Literature and Composition (2 units). Lecture, three hours. Seminar on problems and methods of presenting literary texts as exemplary materials in the teaching of composition. The course deals with theory and classroom practice and involves individual counseling and faculty evaluation of TAs' performance. May not be applied toward the M.A. course requirements.

S/U grading.

596. Directed Individual Study or Research (2 to 12 units). Prerequisite: graduate standing in comparative literature. The course is 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 units). Prerequisite: graduate standing. Preparation for M.A. comprehensive examination or Ph.D. qualifying examinations. May be repeated for credit.

S/U grading.

599. Research for Ph.D. Dissertation (2 to 12 units). Research for and preparation of Ph.D. dissertation. May be repeated for credit.

S/U grading.
The balance of the curriculum is designed for several constituencies:

(1) Letters and Science majors who wish to obtain an extensive education in basic computer science and then apply this knowledge to their discipline should take Program in Computing 10, 20, and, depending on the advice of their major department, either course 30 or 60 or both.

(2) Pre-mathematics/computer science majors who wish to advance to the major should take Program in Computing 10, 20, 30, and the related required courses in mathematics and physics.

(3) Physical science students who would like one course in programming should take either Program in Computing 3 (uses Fortran) or 10 (uses Pascal), on the advice of their major department.

Lower Division Courses

1. Introduction to Computers and Computing. Lecture, three hours; discussion, one hour; computer terminals, five hours. Not open to students with credit for course 10 or equivalent or Computer Science 5. Fundamentals of computers and computing; machine organization and computer hardware; algorithm and software development; data representation; social impact of computing; contemporary computer applications.

2. Introductory Fortran Programming. Lecture, four hours; discussion, two hours; computer terminals, ten hours. Students with credit for Computer Science 10F will not receive credit for this course; students with credit for course 10 or Computer Science 10C or 10S will receive only two units of credit for this course. Basic principles of programming, using Fortran as the example language. A terminal course intended for physical science and engineering majors who need to use the extensive library of existing Fortran programs. Students who wish to take more advanced Program in Computing courses should take course 10 rather than this course.

3. Introductory Fortran Programming. Lecture, four hours; discussion, two hours; computer terminals, ten hours. Students with credit for Computer Science 10F will not receive credit for this course; students with credit for course 10 or Computer Science 10C or 10S will receive only two units of credit for this course. Basic principles of programming, using Fortran as the example language: algorithmic, procedural problem solving; program design and development; control structures and data structures; human factors in programming and program design.

4. Intermediate Programming (6 units). Lecture, four hours; discussion, two hours; computer terminals, fifteen hours. Prerequisite: course 10 or Computer Science 10C, 10F, or 10S. Students with credit for Computer Science 20 will not receive credit for this course. Design and development of programs solving problems of intermediate complexity drawn from various disciplines, using one or more high-level languages. Programming techniques, algorithm analysis, and data structures. Students develop programming sophistication through intensive individual laboratory work.

5. Machine Organization and Assembly Language Programming. Lecture, four hours; discussion, two hours; computer terminals, fifteen hours. Prerequisite: course 20 or Computer Science 20. Students with credit for Computer Science 30 will not receive credit for this course. Description of machine organization and operation. Representation of information, instruction sets and formats, addressing modes, memory organization and management, I/O processing and interrupts.

60. Data Structures and Algorithms. Lecture, four hours; discussion, one hour; computer terminals, ten hours. Prerequisites: course 20, Mathematics 31A, 31B, 61. Review of basic data structures: arrays, stacks, queues, lists, trees. Advanced data structures: priority queues, heaps, balanced trees. Sorting, searching techniques. Corresponding algorithms.

Cybernetics (Interdepartmental)

4731 Boelter Hall, 825-7482

Professors

Jack W. Carlyle, Ph.D. (Computer Science)
Edward C. Carterette, Ph.D. (Psychology)
Joseph J. DiStefano, III, Ph.D. (Computer Science), Chair
Peter Ladefoged, Ph.D. (Linguistics)
Steven A. Lippman, Ph.D. (Management)
Jacques J. Vidal, Ph.D. (Psychology)
Donald M. Wiberg, Ph.D. (Electrical Engineering)

Associate Professor

Peter M. Narins, Ph.D. (Biology)

Assistant Professor

Elliot M. Landaw, M.D., Ph.D. (Biomathematics)

Scope and Objectives

The major in cybernetics is designed primarily for highly motivated undergraduates interested in interdisciplinary activities 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 introduction to psychology and computing. The major itself provides an introduction to modeling, information processing, control and system analysis, with emphasis on quantitative ideas and methodologies. Mathematical and other analytical skills are essential in the major.

Cybernetics majors have three options for in-depth studies: life sciences, behavioral sciences, or engineering and applied mathematical sciences. 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.

Bachelor of Science Degree

Pre-Cybernetics Major

You may apply for the pre-cybernetics major via petition if you are a sophomore and have taken at least three of the premajor mathematics courses with a 2.7 GPA or better and three other premajor courses. All "Preparation for the Major" courses, including mathematics, must be completed with at least a 3.0 GPA. Transfer students must meet the same academic requirements, based on all courses transferred from another institution which satisfy premajor requirements.

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 GPA in mathematics, 3.0 GPA overall, and a minimum grade of C in all courses).

Preparation for the Major

Required: A minimum of 72 units (15 full courses), including Chemistry 11A, 11B/11BL, 11C/11CL, 21, 23; Biology 5, 7; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 6A, 6B, and 6C, or 8A, 8B, and 8C; Psychology 10; Program in Computing 10. Additional recommended course lists are available in the program office and/or the College Counseling Service in the College of Letters and Science.

The Major

The major consists of a methodology core (five and one-half courses), a specialization area (seven courses), and a cybernetics breadth requirement (three courses). Each course in the major must be completed with a grade of C or better.

Methodology Core: Four subject areas as follows:

(1) Two courses in probability and statistics from one of the following groups: (a) Mathematics 152A and 152B, or (b) Mathematics 150A or Electrical Engineering 120A and either Mathematics 150B or 152B, or (c) Public Health 101A and 101B.

(2) Two courses in signals and control systems (one from each group): (a) Computer Science 170 or Electrical Engineering 121C and (b) Electrical Engineering 122A or Mechanical, Aerospace, and Nuclear Engineering 171A.

(3) One course in modeling and computer simulation: Computer Science M196B.

(4) One overview course: Computer Science 196A.

Applications/Specialization Areas: A minimum of seven courses in either life sciences, behavioral sciences, or engineering and applied mathematics. A continually updated and approved list of courses in each specialization area is available in the program office and the College Counseling Service.
With few exceptions, courses in the life sciences area are in biology, microbiology, chemistry, and biochemistry, as well as in departments of the School of Medicine. Courses in the behavioral sciences area are in psychology, linguistics, and economics. And courses in the engineering and applied mathematics area are in engineering, computer science, and mathematics.

Cybernetics Breadth Requirement: One course from each of the applications/specialization areas selected from the current approved list.

**Diversified Liberal Arts (Interdepartmental)**

A316 Murphy Hall, 825-1965

**Undergraduate Certificate Program**

The Diversified Liberal Arts Program (DLAP) is not a major, but a special certificate program through which you may receive credit toward a credential to teach in California elementary schools. To earn the credential, you must complete the Teacher Credential Program in the Graduate School of Education. In addition, you must either earn a satisfactory score on the Common Section of the National Teachers Examination or complete the DLAP in the College of Letters and Science.

To earn the certificate in diversified liberal arts, you must complete a major in the College of Letters and Science. You must also complete DLAP requirements in four areas: (1) English, (2) mathematics and the physical or life sciences, (3) social sciences, (4) humanities, fine arts, and foreign language.

Requirements for one of these areas will normally be satisfied by courses taken for your major; in addition, you must complete seven courses (28 units) in two other areas and eight courses (32 units) in a fourth area. A grade of C or better must be earned in all courses specifically required for the program (i.e., English 120A, Mathematics 38A-38B, 104, History 7A, 7B). A C- or a Passed grade is not acceptable in these courses. A minimum C (2.0) grade-point average is required in each of the four areas.

Courses in divisions outside the major, which are required as preparation for or as part of the major, may be applied toward the area course requirements. However, no course may be applied toward more than one area. You are expected to satisfy breadth or general education requirements of the College of Letters and Science; courses used to satisfy these requirements may also be applied toward the Diversified Liberal Arts Program.

If you plan to pursue the program, you should begin to take courses in your freshman year that will fulfill these requirements. You must petition for admission to the program and are advised to do so as soon as possible. Transfer students may petition to have suitable courses completed at other institutions applied toward the course requirements of this program. The college will certify completion of the program.

If you do not complete the program prior to graduation, you must petition out of the program to be eligible to graduate.

For further information about the program, contact a counselor in the College of Letters and Science Counseling Service, A316 Murphy Hall (825-3382). For information regarding the Teacher Credential Program in the Graduate School of Education, see a counselor in 201 Moore Hall (825-8326).

**Area 1. English**

Composition and Grammar (Required): Two courses: English 120A plus one course in satisfaction of the English Composition requirement. If you wish to complete the Area 1 requirement with additional composition and grammar, the courses must be selected from English 130, Linguistics 1, 2, 100.

Literature (Required): One course from English 10A, 10B, 10C, 70, 75, 80, 85, 90, 112, 113, Humanities 1A, 1B, 1C, or any other upper-division courses in English literature for which you have satisfied the prerequisites. You may complete more than one course from this list to satisfy the Area 1 course requirement.

Speech (Required): One course from Communication Studies 10, 100, Speech 1, 2, 107. You may complete more than one course from this list to fulfill the Area 1 course requirement.

**Area 2. Mathematics and the Physical or Life Sciences**

Mathematics (Required): Mathematics 38A-38B and 104. Substitutions of other courses in mathematics may be made with the written consent of the Department of Mathematics and the College of Letters and Science.

Physical or Life Sciences (Required): A minimum of 12 units in physical sciences and/or life sciences, apart from mathematics.

The remaining courses for Area 2 may be selected from any courses in the physical or life sciences that satisfy breadth or general education requirements (mathematics courses may be included).

**Area 3. Social Sciences**

History (Required): One course from History 7A, 7B. Other courses which may satisfy the Area 3 requirement are those listed as fulfilling the social science breadth or general education requirements.

**Area 4. Humanities, Fine Arts, and Foreign Language**

Although there are no specific course requirements, courses applied toward this area must be selected from those courses listed as fulfilling the humanities breadth or general education requirements. The following may also be applied toward Area 4: any courses in foreign language; Dance 1A, 1B, 1C; English 4, 30; Music 1A, 1B, 113A, 113B; Theater Arts 118A, 118B, 119A.

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**Earth and Space Sciences**

3806 Geology, 825-3880

**Professors**

Orson L. Anderson, Ph.D. (Geophysics)
Arthur L. Boettcher, Ph.D. (Geochemistry and Geophysics)
Friedrich H. Busse, Ph.D. (Geophysical Fluid Dynamics)
Donald Garlishe, Ph.D. (Geology and Mineral Resources)
John M. Christie, Ph.D. (Geology)
Paul J. Coleman, Jr., Ph.D. (Geophysics and Space Physics)
Donald J. DePaolo, Ph.D. (Geochronology and Geology)
Wayne A. Dollase, Ph.D. (Geology), Vice Chair
W. Gary Ernst, Ph.D. (Geology and Geophysics)
Clarence A. Hall, Jr., Ph.D. (Geology)
David D. Jackson, Ph.D. (Geophysics), Vice Chair
Isaac R. Kaplan, Ph.D. (Geology and Geophysics), Vice Chair
William M. Kaula, M.S. (Geophysics)
Margaret G. Kivelson, Ph.D. (Space Physics), Chair
Robert L. McPherron, Ph.D. (Space Physics and Geophysics)
Clemens A. Nelson, Ph.D. (Geology)
Gerhard Oertel, Dr. rer. nat. (Geology)
John L. Rosenfeld, Ph.D. (Geology)
Christopher T. Russell, Ph.D. (Space Physics)
J. William Schoepf, Ph.D. (Paleobiology)
Ronald L. Shreve, Ph.D. (Geology and Geophysics)
John T. Wasson, Ph.D. (Geochronology and Chemistry)
Robert E. Holzer, Ph.D., Emeritus
Helen Tappan Loeblich, Ph.D., Emeritus
Kenneth D. Watson, Ph.D., Emeritus

**Associate Professors**

Peter Bird, Ph.D. (Geophysics and Geology)
Paul M. Davis, Ph.D. (Geophysics)
Michael J. DeNiro, Ph.D. (Geochemistry)
William I. Newman, Ph.D. (Planetary Physics)
Walter E. Reed, Ph.D. (Geology)
The disciplines of geology, geochemistry, and geophysics are concerned with the structure and evolution of the solar system, the earth, and life; essentially, the physical environment and its interaction with biota. These studies entail the application of fundamental physics and chemistry to a broad subject area stretching from astronomy at one extreme to biology at the other. Areas which are emphasized at UCLA include isotope and trace element analyses, petrology and mineralogy, sedimentology, paleobiology and organic geochemistry, structural geology and tectonophysics, the earth’s interior, planetary physics, space plasmas, and economic geology.

The variety of techniques applied lead to several specializations within the three main disciplines. Students completing their studies with a B.S. or M.S. degree usually are employed by industry. The greatest number go to oil companies, but many are also employed in other types of mineral exploitation, construction, and environment-related activities.

**Bachelor of Science in Geology**

**Engineering Geology Specialty**

**Preparation for the Major:** Earth and Space Sciences 1, 51A, 51B, 51C; Biology 1, Chemistry 11A, 11B/11BL, 11C; Mathematics 31A, 31B, 32A, 33A; Physics 8A, 8B/8BL, 8C/8CL; Program in Computing 3 (recommended) or 10 or more advanced placement by examination. All courses must be passed with a minimum grade of C-. 

**The Major:** Earth and Space Sciences 103A, 103B, 111A, 111B, 130, 131; Chemistry 110A, 110B, 114 (or Chemistry 23 and 25 or 184 or Earth and Space Sciences 132); three courses from Chemistry 23, Earth and Space Sciences 112, 119, 121A, 121B, 128A, 128B; two earth and space sciences or chemistry courses on consent of adviser.

**Geology Specialty**

**Preparation for the Major:** Earth and Space Sciences 1, 2, 51A, 51B, 51C; Biology 2, Chemistry 11A, 11B/11BL, 11C; Mathematics 31A, 31B, 32A; Physics 8A, 8B/8BL, and 8C/8CL or 6B; Program in Computing 3 (recommended) or 10 or more advanced placement by examination. All courses must be passed with a minimum grade of C-. 


**Nonrenewable Natural Resources Specialty**

**Preparation for the Major:** Earth and Space Sciences 1, 2, 51A, 51B, 51C; Biology 2, Chemistry 11A, 11B/11BL, 11C; Mathematics 31A, 31B, 32A; Physics 8A, 8B/8BL, and 8C/8CL or 6B; Program in Computing 3 (recommended) or 10 or more advanced placement by examination. All courses must be passed with a minimum grade of C-. 

**The Major:** Earth and Space Sciences 103A, 103B, 103C, 111A, 111B, 112, 121A-121B, 128A or 128B, 135, 136C, 137, and two additional courses from 128A or 128B, 138, M139, 141, 150.

**Geophysics and Space Physics Specialty**

**Preparation for the Major:** Earth and Space Sciences 1, 9; Chemistry 11A, 11B/11BL, 11C; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 8A, 8B/8BL, 8C/8CL, 8D/8DL; Program in Computing 3 (recommended) or 10 or more advanced placement by examination. All courses must be passed with a minimum grade of C-. 


**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 member of the faculty. Requirements for admission to candidacy are the same as those required for admission to the Honors Program 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 GPA of 3.5, who have completed at least 90 graded units at the University of California, and who have completed a minimum of two quarters (eight units) of Earth and Space Sciences 199H leading to the preparation of a satisfactory honors thesis. Students demonstrating exceptional ability will be awarded highest honors.
Graduate Study

Admission

Application may be made for admission to any quarter. Graduate Record Examination (GRE) scores are required; the examination should be taken at least six weeks before the deadline. Also required are three letters of recommendation which should be sent to the Graduate Adviser, Department of Earth and Space Sciences, 3683 Geology, UCLA, Los Angeles, CA 90024. Application forms and a brochure giving information about the department may be obtained from the graduate adviser. Students who wish to apply for fellowships or teaching assistantships should be aware that these are allocated in February for the following academic year; completed applications should be received by January.

Major Fields and Subdisciplines

The Department of Earth and Space Sciences offers programs leading to the M.S. and Ph.D. degrees in Geochemistry, in Geology, and in Geophysics and Space Physics. The program in geochmistry offers study in biogeochemistry, crystal chemistry, experimental petrology, isotopic studies of stable and radioactive elements, marine geochemistry, meteorite research, planetology, and lunar geochemistry. The program in geology offers study in geochemistry, glaciology, micropaleontology, mineral deposits, mineralogy, nonrenewable natural resources, organic geochemistry, paleobiology, petrology, sedimentology, stratigraphy, structural geology, tectonophysics, and other fields. The program in geophysics and space physics offers study in applied geophysics, the earth's interior (seismology, gravity, thermal regime, geomagnetism, tectonics), geophysical fluid dynamics (turbulence, rotating systems, stability, hydromagnetism), planetoLOGY (orbital dynamics, planetary interiors, surfaces and atmospheres, solar-system origin), and space physics (magnetosphere, radiation belts, solar wind, magnetic fields, cosmic rays). Other comparable areas of study are also possible.

Foreign Language Requirement

Advising committees may require one or more foreign languages in special individual cases. The committee determines how the requirement is to be fulfilled.

Master of Science in Geochmistry

Admission

A bachelor's degree in chemistry, geology, physics, or a related field is required. Applicants must have outstanding records in the basic sciences, physics, chemistry, and mathematics. The Graduate Record Examination (GRE) Advanced Test may be in any appropriate field of science.

Course Requirements

A minimum of nine courses is required for the degree, at least six of which must be graduate-level courses. Each course of study is worked out individually between you and the advising committee. You are expected to attain, either through prior training or through prescribed coursework, a common mastery of the subject matter of Earth and Space Sciences 51A, 51B, 51C, 130, 131, 234A or 234B, and Chemistry 110A, as well as more advanced courses in particular fields, and some familiarity with the methods of field geology. You must take course 235A, 235B, or 235C each quarter.

Sixteen units of 500-series courses (596, 597, 598) may be applied toward the total course requirement; 12 units may be applied toward the minimum graduate course requirement.

Thesis Plan

The thesis must be approved by the research director (usually the chair of your advising committee), as well as by the other members of the advising committee. No examination is required of students who write a thesis.

Comprehensive Examination Plan

If you elect this plan, the advising committee will prepare and administer the final examination (normally oral). In most cases, a failed final examination can be repeated once.

Master of Science in Geology

Admission

A bachelor's degree in geology, biology, chemistry, physics, or other science is required. Applicants must have outstanding records in the relevant basic sciences and mathematics.

Course Requirements

Each course of study is worked out individually between you and the advising committee. It may include appropriate courses offered by other departments. Unless you have already passed Earth and Space Sciences 111A and 111B, you are required to take either 195G or 111A and 111B in your first year of residence. Depending on performance in course 195G, you may subsequently be required to take all or part of the 111 sequence.

Courses applied toward the 36-unit minimum requirement must be from the 100, 200, or 500 series in the physical or life sciences. At least 24 units must be graduate-level courses, of which at least four units must be a geology seminar (courses 251 through 260). Except for courses 597 and 598, those graded on an S/U basis may not be applied toward the requirements. The advising committees may require additional courses in light of individual educational objectives and backgrounds.

Eight units of 500-series courses (596, 597, 598) may be applied toward the total course requirement; four units may be applied toward the minimum graduate course requirement.

Specialization in Nonrenewable Natural Resources

The objective of this program is to prepare students for professional careers in the geology of metallic, nonmetallic, and fossil energy resources. Individual courses of study are arranged in consultation with the committee for graduate study in nonrenewable natural resources. Relevant subjects include mineral deposits, mining and exploration geology, geophysical exploration, petroleum and coal geology, depositional systems and basin analysis. Particularly relevant courses include Earth and Space Sciences 128A, 128B, 130, 131, 132, 136A, 136B, 136C, 137, 138, 144, 150, 227, 241, 254, 258, and 268, as well as selected courses in chemistry, engineering, the social sciences, law, and management.

Thesis Plan

This plan is normally required for students not continuing to the doctorate. The thesis subject may be selected at once and the research undertaken concurrently with coursework; in any event, it should normally be selected within the first year of residence. The completed thesis must be approved by the thesis committee. If it is not, the committee may recommend either termination of graduate study or further coursework or research or both leading to a revised thesis. Revision and resubmission is not normally permitted more than once.

Comprehensive Examination Plan

This plan is recommended for those continuing to the Ph.D. The examination consists of a six-hour written part covering your major field of study and a subsequent oral part which may be more general in scope. If the examination is failed, the advising committee may recommend either termination of graduate study or further coursework followed by another examination. Reexamination is not normally permitted more than once.

Master of Science in Geophysics and Space Physics

Admission

A bachelor's degree in a physical science, engineering, mathematics, or other field is required. Undergraduate work must include junior- or senior-level courses in mathematical methods, dynamics, electromagnetism, and thermodynamics. Graduate Record Examination (GRE) Advanced Test scores are preferable in physics, although mathematics or geology scores are also acceptable.
Qualified students may proceed directly toward the Ph.D. degree, although most obtain the M.S. degree in the process.

Course Requirements
Courses applied toward the 36-unit minimum requirement must include Earth and Space Sciences 200A, 200B, and 200C and at least 12 additional units of 200-series (graduate) courses. At least half of these must fall within a single field of concentration (applied geophysics, earth's interior, geophysical fluid dynamics, planetology, or space physics) selected in consultation with your faculty adviser, and the remainder must contribute to your general competence in geophysics and space physics. Courses from the 500 series and courses graded on an S/U basis may not be applied toward the minimum requirement; 500-series courses also may not be applied toward any other degree requirements.

Thesis Plan
This plan is an optional alternative to the comprehensive examination plan. At least two members of the thesis committee must be from the department.

Comprehensive Examination Plan
The examination is the comprehensive part of the written qualifying examination taken by doctoral students, but the passing level for the master's degree is less rigorous. The examination is on the level of the introductory courses (200A, 200B, 200C). It lasts six hours and is given every June and December. It must be first attempted by the end of the fourth quarter of enrollment. If failed, it must be retaken the next time it is given. Permission to take it a third time may be granted by the graduate adviser in extenuating circumstances.

Specialization in Applied Geophysics
The objective of this program is to provide advanced technical training to students who plan to do detailed analysis of geophysical data in industry, mainly in petroleum exploration. Undergraduate preparation for admission is equivalent to a B.S. in Geophysics (applied geophysics specialty), including a common mastery of the subject matter of Earth and Space Sciences 111A, 111B, and 112, 122, 136A, 136B, 136C, Physics 105A, 105B, 110A, 110B, and 114. Exceptions may be allowed, but in particular, deficiency in geophysical fieldwork must be made up.

Course Requirements: Courses applied toward the 36-unit minimum requirement must include Earth and Space Sciences 200A and 202, plus at least two courses from 203, 204, 205, 222. Eight additional units of graduate-level courses are required; courses 200B, 208, M224A, M224B are recommended. Eight units of 500-series courses (596, 598) may be applied toward the graduate course requirement.

Thesis Plan: A thesis is required for this specialization. A qualifying examination on the suitability of the proposed thesis should be taken by your fourth quarter in residence. You will also be required to take a final examination on the adequacy of your completed thesis.

Ph.D. in Geochemistry
Admission
Admission requirements are the same as those for the M.S. in Geochemistry.

Course Requirements
Each course of study is worked out individually in consultation with your advising committee. You are expected to complete at least the minimum number of courses which are required for the M.S. in Geochemistry and to attain, either through prior training or through prescribed coursework, a common mastery of the subject matter of Earth and Space Sciences 51A, 51B, 51C, 130, 131, 234A or 234B, and Chemistry 110A, as well as more advanced courses in particular fields, and some familiarity with the methods of field geology. You must take course 235A, 235B, or 235C each quarter.

Qualifying Examinations
The departmental written qualifying examination must be taken before the end of the first year of the doctoral program if you have a master's degree; otherwise, it must be taken before the end of the second year of enrollment. It may be given in either a question-answer format or in a proposal-proposition format, at your discretion. Contact the department for details of each format.

After passing the written qualifying examination, you must nominate your doctoral committee and arrange a time for the University Oral Qualifying Examination. This examination determines the suitability of the selected problem for the dissertation and your ability to research the problem but is not limited to these topics. Repetition of a failed examination is at the discretion of the doctoral committee.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
The final oral examination is normally required.

Ph.D. in Geophysics and Space Physics
Admission
Admission requirements are the same as those for the M.S. in Geophysics and Space Physics.

Course Requirements
There are no specific requirements.

Qualifying Examinations
In this program the written qualifying examination is divided into three stages: (1) the fundamental physics examinations, (2) the comprehensive examination, and (3) the field examination. Examinations 1 and 2 must be passed before undertaking examination 3. Students not passing these examinations within three years, two years, and four years, respectively,
COLLEGE OF LETTERS AND SCIENCE  /  Earth and Space Sciences  /  141

after entering the program are subject to dismissal. Contact the department for details on each of the three stages.

You must nominate the doctoral committee and arrange a time for the University Oral Qualifying Examination as soon as possible after passing the field examination. This examination determines the suitability of the selected problem for the dissertation and your ability to research the problem but is not limited to these topics. Repetition of a failed examination is at the option of the doctoral committee. If you do not pass this examination within five years after entering the program, you are subject to dismissal.

Final Oral Examination
The examination is required.

Lower Division Courses
1. Fundamentals of Earth Science. Elements of earth science; study of earth materials; the nature and interpretation of geologic evidence; study of geologic processes; historical aspects of geology. Prerequisites: course 1 or consent of instructor. Recommended: completion of chemistry requirement. Mineralogic crystal chemistry; relation of physical properties to structure. Structural classification and petrogenesis of the main rock-forming minerals. Laboratory study of crystallography and identification of minerals in igneous, sedimentary, and metamorphic rocks. Mr. Dollase (F)

51B. Mineralogy-Petrology. Course prerequisite: course 51A and an introductory course in high school or college. Focus on crystallography, or color, crystal size, and physical properties of rocks. Prerequisites: upper division standing or consent of instructor. Recommended: completion of chemistry requirement. Mineralogic crystal chemistry; relation of physical properties to structure. Structural classification and petrogenesis of the main rock-forming minerals. Laboratory study of crystallography and identification of minerals in igneous, sedimentary, and metamorphic rocks. Mr. Dollase (F)

51C. Mineralogy-Petrology. Course prerequisite: course 51B. Composition, occurrence, and origin of igneous, sedimentary, and metamorphic rocks; meagascopic and microscopic study of rocks. Mr. Barton (Sp)

Upper Division Courses
100. Principles of Earth Science. Designed for nonmajors. Not open to students with credit for course 1. Fundamentals of physical geology and earth history; major problems of geology, such as continental drift and development of large-scale features of the earth; physical and biological evolution. Mr. Ernst, Mr. Kaula, Mr. Schopf

5. Earth Science and Society: Geologic Ecological Interactions. Geologic aspects of major environmental problems, with emphasis on lithosphere-biosphere interactions. Problems of exploration and exploitation of fossil fuel resources. Comparison of society-produced materials and natural cycles. Mr. Ingersoll, Mr. Nelson (W)

8. Earthquakes. The causes and effects of earthquakes, with special emphasis on the problems of living with earthquakes in Southern California. Topics include the relationship between earthquakes and local and regional geology, types of earthquakes, past and future earthquakes in California, earthquake engineering, disaster preparedness, and prospects for predicting or controlling earthquakes. Mr. Coleman (Sp)


10. Geology of California. Prerequisite: course 1. General survey of major geologic features and geologic history; emphasis on the relation to large-scale crustal motions of Western North America and the Eastern Pacific. Environmental geology; study of geologic hazards such as earthquakes, landslides; aspects of urban geology. Mr. Nelson (Sp)

15. Introduction to Oceanography. Not open for credit to students with credit for course 103A. Processes responsible for the chemical composition of the ocean and current circulation patterns. Seafloor spreading and morphology of the ocean floor. Biological productivity, marine ecology, and minerals forming in the ocean. Mr. Rosenfeld (F)

20. Natural History of Southern California. Identification, distribution, diversity of plants, animals, and communities; environmental factors influencing distribution in alpine to lower desert life zones. Interpretation, interpretation, and description of rocks, landforms, and structural geologic features within the physiographic regions of Southern California. Emphasis on field-based learning related to integrated aspects of natural history. Mr. Hall

51A. Mineralogy-Petrology. Prerequisite: course 1 or consent of instructor. Recommended: completion of chemistry requirement. Mineralogic crystal chemistry; relation of physical properties to structure. Structural classification and petrogenesis of the main rock-forming minerals. Laboratory study of crystallography and identification of minerals in igneous, sedimentary, and metamorphic rocks. Mr. Dollase (F)

51B. Mineralogy-Petrology. Course prerequisite: course 51A and an introductory course in high school or college. Focus on crystallography, or color, crystal size, and physical properties of rocks. Prerequisites: upper division standing or consent of instructor. Recommended: completion of chemistry requirement. Mineralogic crystal chemistry; relation of physical properties to structure. Structural classification and petrogenesis of the main rock-forming minerals. Laboratory study of crystallography and identification of minerals in igneous, sedimentary, and metamorphic rocks. Mr. Dollase (F)

51C. Mineralogy-Petrology. Course prerequisite: course 51B. Composition, occurrence, and origin of igneous, sedimentary, and metamorphic rocks; meagascopic and microscopic study of rocks. Mr. Barton (Sp)

103A. Igneous Petrology. Lecture, two to three hours; laboratory, six hours; field trips. Prerequisites: courses 51A, 51B, 51C; Chemistry 11B, Mathematics 31A, 31B, Physics 88. Recommended: Mathematics 32A. Petrologic, chemical composition, and field occurrence of igneous rocks with reference to their origin by melting in the earth. Introduction to thermodynamics as applied to petrology. The formation of magma, its movement, eruption, crystalization, and chemical evolution. Petrologic structure of the crust and mantle and its relation to seismology. Overview of the petrological and chemical evolution of the earth, moon, and other planets from their origin to the present. Mr. Ernst (F)

103B. Sedimentary Petrology. Lecture, two to three hours; laboratory, six hours; field trips. Prerequisite: course 103A. Recommended: course 111A. Study of sedimentary rocks based on the characteristics of sediments, processes, and the dynamics of deposition processes. Lectures focus on development of depositional facies models, and laboratories emphasize recognition of sedimentary deposits from each major depositional facies. Mr. Reed (W)

103C. Metamorphic Petrology. Lecture, two to three hours; laboratory, six hours; field trips. Prerequisite: course 103B. Interpretation of metamorphic rocks based on field occurrence, mineralogical composition, texture, and the application of physical and chemical principles. Mr. Rosenfeld (Sp)

105. Nonrenewable Resources and Society. Lecture, two hours; discussion, two hours. Prerequisite: course 1 or consent of instructor. Topics include geo- logical and economic characteristics of mineral resources, exploration, recovery, risks, exhaustibility, mineral law, land-use conflicts, taxation, and environmental concerns. Mr. Carlisle (F)

111A. Elements of Field Geology. Lecture, two hours; laboratory, three hours; field, one day per week. Prerequisites: courses 1, 2, 51C, and 112, or consent of instructor. Topics of geologic mapping; preparation of geologic reports; methods of mapping faults and folds, sedimentary, igneous, and metamorphic terrains, and Quaternary deposits; introduction to field methods in engineering and environmental geology, petroleum geology, and mining geology; mineral and mining exploration; interpretation of geologic maps; field exercises in pace-and-compass topographic and geologic mapping. Mr. Bird (F)

111AG-111BG. Field Geology (2 to 4 units each). Prerequisites: course 111A or consent of instructor. Topics of geologic mapping; principles of stratigraphy, structural geology, and map interpretation. Mr. Bird (F)

111BT. Stratigraphic and Field Geology. Prerequisite: course 111A or consent of instructor. Principles of stratigraphy; geologic mapping of a selected area; preparation of a geologic report. Mr. Hall, Mr. Reed (W)

112. Structural Geology. Lecture, three hours; laboratory, six hours. Prerequisite: course 1 or consent of instructor. Recommended: course 51C. Planar and linear structures at different scales in sedimentary, metamorphic, and igneous rocks. Faults and folds, their description, classification, and kinematic and dynamic analysis. Deformation, strength, fracture, and rheological properties of rocks. Mr. Christie (F)

114. Introduction to Stress and Deformation. Lecture, three hours; discussion, three hours. Prerequisite: course 112 or consent of instructor. An introduction to the quantitative treatment of geological bodies, the stresses that cause them, and their rheological behavior. Stress and strain fields in rocks, and in and near intruding magma bodies. Mr. Oertel

115. Principles of Paleontology. Principles governing the evolution and distribution of fossils, the geologic history of plants, invertebrates, and vertebrates. Mr. Oertel

M118. Paleobotany. (Same as Biology M118.) Lecture, three hours; laboratory, three hours. Prerequisite: one course in biological science or consent of instructor. Recommended: course 2 or equivalent. Survey of morphology, paleobiology, and evolution of vascular and nonvascular plants during geologic time, with particular emphasis on major evolutionary events. Mr. Schopf

119. Continental Drift and Plate Tectonics. Lecture, three hours. Prerequisites: upper division standing and an introductory course in geology (course 1, 100, or equivalent), or consent of instructor. Classical concepts of sedimentation and tectonics, Alfred Wegener's theory of continental drift and ensuing controversy. Phylogeny of continents and oceans. Geophysical evidence regarding the nature of the ocean floor, magnetic stratigraphy, Seafloor spreading. The plate tectonic model and its driving mechanisms. Tectonic, igneous, and metamorphic processes at plate boundaries. Mr. Bird (Sp)
120. Rubey Colloquium: Major Advances in Earth Science. (Formerly numbered 120A, 120B.) Lecture, three hours. Prerequisite: upper division standing. Lectures on earth science topics presented by distinguished authorities (including regular faculty). Supervision of preparation and study of student performance by a faculty member. Content varies from year to year. If laboratory work is required, course 199 must be taken concurrently.

Mr. Ernst (W)

121A-121B. Advanced Field Geology (6 units each). Fieldwork, eight weeks. Prerequisites: courses 102B, 111A, and 111B, or consent of instructor. Courses 121A and 121B must be taken concurrently. Problems in field geology; preparation of geological maps and cross-sections; preparation of written geological reports in the field and a final written summary of geologic report of selected areas.

Mr. Ernst, Mr. Nelson (Sum)

122. Physics of the Earth. Prerequisites: Physics 8A, 8B, 8C, Mathematics 31A, 31B, and 32A, or consent of instructor. Application of physics to the structure and evolution of the solid earth. Seismology, convection and heat flow, gravity, geomagnetism, rock magnetism, and the relation of these topics to plate tectonics and other problems of current geophysical interest.

Mr. Anderson (F), Mr. Carlisle (W)

128A. Mineral Deposits. Prerequisite: course 51C. Origin and occurrence of important mineral deposits, with emphasis on chalcophile elements and sulfide ores. (Alternate yearly with course 128B.)

Mr. Barton (F)

128B. Mineral Deposits. Prerequisite: course 51C. Origin and occurrence of important mineral deposits, with emphasis on siderophile and lithophile elements and their minerals. (Alternate yearly with course 128A.)

Mr. Barton, Mr. Carlisle (W)

130. Isotope Geochemistry. Prerequisite: junior or senior standing in physical or biological science, consent of instructor. Theoretical aspects of isotope geochemistry, particularly carbon 14 dating. Application of radioisotopes to the hydrologic cycle and to atmospheric circulation. Stable isotope distribution in nature, exchange mechanisms and their applications to paleotemperatures, hydrology, mineral formation, and origin of biological deposits. (Alternate yearly with course 131.)

Mr. Boettcher (F)


Mr. DeNiro (F)

133. Regional Geology. Lecture, three hours; discussion, two hours. Prerequisites: courses 111A and 111B, or consent of instructor. Application of geologic, stratigraphic, paleontologic, biological, and climatic principles to a specific province or provinces. Emphasis on tectonic evolution of selected region. (Alternate yearly with course 130.)

Mr. Ernst, Mr. Nelson (F)

135. Introduction to Applied Geophysics. Prerequisites: Physics 8A, 8B, 8C or 8B, Mathematics 31A, 31B, and 32A, or consent of instructor. Students with credit for course 136A will not receive credit for this course. Geological and geophysical techniques in earth sciences; seismic, magnetic, and other geophysical methods of exploration for ores, petroleum, and other economic minerals.

Mr. McPherron (F)

136A. Applied Geophysics. Lecture, three hours; laboratory/field trips, three hours. Prerequisites: Physics 8A, 8B, 8C, 8D, Mathematics 31A, and Computer Science 10F, or consent of instructor. Principles and techniques of exploration for mineral deposits using natural and artificial electric and magnetic fields. Methods include self-potential, resistivity, induced polarization, electromagnetics, magnetotellurics, magnetics.

Mr. Coleman (W)

136C. Field Geophysics (6 units). (Formerly numbered 169.) Lecture, three hours; discussion, one hour; laboratory, two hours; fieldwork, ten hours. Prerequisites: course 135 or 136A, consent of instructor. Application of seismic, gravimetric, magnetic, electric, and other geophysical methods to geologic and engineering problems. Practical aspects of geophysical exploration, including planning, data collection, data reduction, and interpretation. Fieldwork on unsolved problems (week-long field trip).

Mr. Davis (Sp)

136D. Advanced Field Geophysics (6 units). Lecture, six hours; laboratory, six hours; field, twelve hours. Prerequisites: course 135 or 136A, consent of instructor. Application of seismic reflection, seismic refraction, gravity, magnetic, electrical, and electromagnetic methods to geologic problems. Planning, data collection, data reduction, and interpretation. Use of computer in applied geophysics.

Mr. Davis, Mr. Jackson (Sum, six weeks)

137. Petroleum Geology. Lecture, three hours. Prerequisites: courses 111A and 111B, or consent of instructor. Geology applied to exploration for and production of natural gas and petroleum; techniques of surface and subsurface geology; problems of petroleum geology.

Mr. Bonham (Sp)

138. Exploration and Mining Geology. Lecture, three hours; discussion, two hours; laboratory, four hours; field trips. Prerequisite: course 51C. Geologic principles applied to exploration for commercialization of mineral deposits; geological techniques at operating mines; mine economics; exploration geology and mineral resource economics.

Mr. Carlisle (W)

139. Engineering and Environmental Geology. (Same as Architecture and Urban Planning M195.) Lecture, two and one-half hours; discussion, one hour. Prerequisite: course 1 or 100. Recommended: course 111A. 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.

Mr. Merfeld (W)


Mr. Schubert, Mr. Wurtele (F)

141. Sedimentation and Tectonics. Lecture, three hours; laboratory, four hours. Prerequisites: courses 103B, 111B (may be taken concurrently). Depositional and tectonic environments; strata; interpretation of ancient facies; basin analysis; plate tectonic settings of sedimentary basins.

Mr. Igerfors (W)

144. Marine Geology. Prerequisite: senior standing. Recent marine sedimentology and geochronology; oceanography, morphology, structure and geologic history of the ocean basins.

Mr. Schubert (F)


Mr. M154. Solar Terrestrial Physics. (Same as Atmospheric Science M154.) Lecture, three hours; discussion, one hour. Prerequisite or corequisite: Physics 110B. Particle and electromagnetic emissions from the sun under quiet and disturbed conditions. The solar wind, the magnetospheres and the ionospheres of the earth and other planets. Geomagnetic phenomena. Aurora and arglow.

Mr. Thorne (F)

160. Nonlinear Waves. (Same as Atmospheric Science M160.) Lecture, three hours; discussion, one hour. Prerequisite: course M140 or consent of instructor. Basic concepts and examples of nonlinear wave behavior: limit cycles, attractors, bifurcations, relaxation, subharmonics, solutions, periodic versus chaotic behavior. Lorenz masks and Rossler bands.

Mr. Newman (Sp)

190. Earth and Space Sciences Colloquium (2 units). Prerequisite for majors: consent of instructor. Current topics of research in the department. May be repeated for credit.

Mr. Rosenfeld (W)

195Q. Field Geology for Graduate Students (2 units). Field mapping; preparation of a geologic report. P/NP grading.

Mr. Nelson (F)

199. Special Studies in Earth and Space Sciences (2 to 6 units). May be repeated for credit.

Mr. Schubert (W)

Graduate Courses

200A. Introduction to Geophysics and Space Physics I: The Solid Earth and Planets. Lecture, three hours. Prerequisites: Physics 105A, 110A, 112, and 131, or consent of instructor. Geomagnetism, geoconomy, and petrology; geodynamics: gravity field; seismology; heat transfer, thermal and mechanical evolution of the mantle; core and geomagnetism: lunar and planetary interiors.

Mr. Davis (F)

200B. Introduction to Geophysics and Space Physics II: Oceans and Atmospheres. Lecture, three hours. Prerequisites: Physics 105A, 110A, 112, and 131, or consent of instructor. Evolution, chemistry, and heat balance of oceans and atmospheres; molecular spectra, radiative transfer, and planetary observations; dynamics of oceans and atmospheres.

Mr. Schubert (W)

200C. Introduction to Geophysics and Space Physics III: Plasmas — Aeronomy and the Interplanetary Medium. Lecture, three hours. Prerequisites: Physics 105A, 110B, 112, and 131, or consent of instructor. Evolution, chemistry, and heat balance of oceans and atmospheres; molecular spectra, radiative transfer, and planetary observations; dynamics of oceans and atmospheres.

Mr. McPherron (Sp)


Mr. Newman (Sp, alternate years)


Mr. Newman (Sp, alternate years)
203. Electrodynamics. Prerequisite: upper division electromagnetic theory course or consent of instructor. Maxwell’s equations and boundary conditions; momentum, angular momentum, and energy of electromagnetic fields; plane electromagnetic and magnetohydrodynamic waves; wave guides, simple radiating systems, diffraction. (W)

204. Time-Series Analysis and Spectral Estimation. Lecture, three hours. Prerequisites: intermediate courses in calculus (including linear algebra and complex variables) and computer programming (in or out of FORTRAN). The course surveys basic methods in time-series analysis, including spectral estimation, prediction, and signal detection, in application to problems in geophysics, atmospheric physics, and space physics. Topics include Fourier transforms (continuous, discrete, FFT), time series (Z-transforms, deconvolution), maximum entropy spectral analysis, autoregressive and moving average methods (AR, MA, ARMA), and multichannel prediction and spectral analysis. (W)

205. Inverse Theory and Data Interpretation. Lecture, three hours. Prerequisites: Mathematics 115A and 150A-150B-150C, or consent of instructor. The course addresses the inverse modeling problem — to determine model parameters from experimental data, considering the effects of random errors and nonuniqueness. Linear and quasi-linear problems are emphasized, but nonlinear problems are discussed. Tools to be used include matrix theory, quadratic forms, orthogonal transformations, singular value decomposition, the principal axis transformation for rectangular matrices, Backus-Gilbert resolving kernels, and Lagrange multipliers. Examples are taken from a broad range of physical sciences. Mr. Jackson

208. Geothermics. Lecture, two and one-half hours; discussion, 30 minutes. Prerequisite: Mathematics 33A or consent of instructor. Basic concepts of heat transfer applied to the solutions of geological and geophysical problems, including continental heat flow, boiling of oceanic lithosphere, solidification of magma, thermal and subsidence history of sedimentary basins, frictional heating on fault zones, mantle geotherms, temperature in descending slabs, thermal convection in geothermal regions. Mr. Schubert

210. Advanced Paleontology. Prerequisite: course 115 or advanced standing in biological science. Lectures emphasize evolutionary, ecological, stratigraphic, and taxonomic aspects of fossil organisms. Fieldwork and laboratory are devoted to a research project and written report. Content varies from year to year. May be repeated for credit.

211. Hydrodynamic Instabilities and Turbulence. (Same as CS 182C, E 112, and EE 112C.) Prerequisite: course 126 or consent of instructor. Linear stability analysis of hydrodynamic systems. Interaction to the theories of hydrodynamic instability and the nonstatistical description of turbulence; stability bounds by the energy method; linear theory of instability; finite amplitude theories of post-instability breakdown; wave-mean flow and turbulence; remote sensing and inversion techniques. Mr. Newman

215. Paleoecology. Prerequisite: course 115 or advanced standing in biological science. Survey of microorganisms of the animal kingdom, their systematical, morphological, ecological, evolutionary history, and stratigraphic uses, with emphasis on foraminiferans, radiolarians, chitoninoids, ostraconids, selenodons, and conodonts. (Alternate yearly with course 215.) Mrs. Loeblich

216. Micropaleontology. Prerequisite: course 115 or advanced standing in biological science. Survey of microorganisms of the animal kingdom, their systematical, morphological, ecological, evolutionary history, and stratigraphic uses, with emphasis on foraminiferans, radiolarians, chitoninoids, ostraconids, selenodons, and conodonts. (Alternate yearly with course 215.) Mrs. Loeblich

219. Planetary and Orbital Dynamics. Solar system dynamical evolution; figure and gravitational field of a planet; satellite orbits; earth-moon system evolution; rotational dynamics, including effects of tides and energy dissipation. Mr. Kaula

220. Principles of Paleobiology. Prerequisite: graduate standing in science. Open to qualified undergraduates in biological and physical sciences by consent of instructor. Current and classic problems in paleobiology, with emphasis on interdisciplinary problems involving aspects of biology, geology, organic geochemistry, and cosmology. Content varies from year to year. May be repeated for credit. Mr. Schopf (W)

222. Introduction to Seismology. Types of seismic waves; travel-time seismology; epicenter location; amplitude variations; seismograph theory; explosion seismology; seismicity, focal conditions, surface wave analysis; microseisms and tsunamis. Mr. Davis

224A. Elastic Wave Propagation I. (Same as Mechanical, Aerospace, and Nuclear Engineering M257A.) Prerequisite: Mechanical, Aerospace, and Nuclear Engineering 158A or 166A or consent of instructor. Review of elasticity theory; field of a point, translation, and space group symmetry, core.

224B. Elastic Wave Propagation II. (Same as Mechanical, Aerospace, and Nuclear Engineering M257B.) Prerequisite: course 224A. Diffraction and scattering from simple and complex, elastic, stratified media; wave propagation in layered media; waves generated by concentrated loads; radiation from dislocations; attenuation; representative applications in engineering and seismology. Mr. Noack (F)

225A. Physics and Chemistry of Planetary Interiors I. Chemical compositions of the earth and planets; heat energy and temperature effects, phase transitions, and equations of state; variations of density and temperature with depth; thermal and compositional evolution. Mr. Anderson, Mr. Boettcher (W)

225B. Physics and Chemistry of Planetary Interiors II. Lateral inhomogeneities in the earth: seismic velocities, petrology, geothermal and gravitational variations, applications of thermodynamics, magnetism, seismic motions; postglacial rebound; plate tectonics; rheology of mantle; thermal convection. Mr. Schubert

226. Theoretical Geomorphology. Lecture, three hours. Prerequisites: Mathematics 33A and course in elementary probability theory, or consent of instructor. Analysis of the intellectual foundations and objectives of modern geomorphology, illuminated by selected past and present theories of river profiles, slope processes, and channel networks. Dynamic theory and discussion of original sources. Preparation of term paper. Mr. Shreve (Sp, approximately every third year)

227. Resource Evaluation Field Methods. Prerequisites: course 111B or 128A or 129B or 138, or consent of instructor. Techniques of mapping, sampling, appropriate laboratory studies, economic or socioeconomic evaluation of a variety of nonrenewable natural sources; preparation of reports. Mr. Carlisle

228. Planetary Magnetism. Prerequisite: consent of instructor. Description and analysis of the magnetic fields of the earth and planets. Origin and history of the earth’s magnetic field: core dynamics, dynamo theory, paleomagnetism. Mr. Busse

229. Planetary Atmospheres. Lecture, three hours. Prerequisite: course 200B or consent of instructor. The course surveys planetary atmosphere structure, dynamics, and composition. Topics include space- craft observations; evolution of planetary atmospheres; photochemistry, radiation mechanisms, and transport; atmospheric waves and general circulation; wave-mean flow and turbulence; remote sensing and inversion techniques. Mr. Busch

230. X-Ray Crystallography. Prerequisite: course 51C. Point, translation, and space group symmetry, diffraction of X ray, reciprocal lattice theory, single crystal X-ray methods, diffraction symmetry and elementary crystal structure analysis. (Alternate yearly with course 231.) Mr. Dollase

231. Crystal Chemistry and Structure of Minerals. Prerequisite: course 51C. Bonding, interatomic configurations, polyomorphous transformations, isotopy, thermal and positional disorder; survey of the structures of the common minerals, and relation of physical and chemical properties to crystal structure. (Alternate yearly with course 230.) Mr. Dollase (Sp)

233. Mineral Physics and Equation of State. Prerequisite: consent of instructor. Interrelationships of the physical properties of rock-forming minerals, crystal structure, refractive index, sound velocity, elastic constants, specific heat, and thermal expansivity. Determination of pressure, volume, and temperature relationships and planet-forming compounds. Application of shock-wave experiments to equations of state. Mr. Anderson (Sp)

234A. Thermodynamic and Geometric Principles of Phase Equilibria. Prerequisites: course 51C and Chemistry 110B, or consent of instructor. Thermodynamic bases of phase transformations and of phase rules. Geometric representation of multicomponent systems using pressure, temperature, chemical potential, molar volume, and the fugacity of oxygen, water, and other volatile components as variable parameters. Mr. Boettcher

234B. Petrologic Phase Equilibria. Prerequisites: course 51C and Chemistry 110B, or consent of instructor. Principles governing homogeneous and heterogeneous equilibria, with selected applications to mineral stability relations in igneous and metamorphic rocks (fractional crystallization, partial melting, hydrothermal solutions, element partitioning in coexisting phases), and applications to the study of ancient and present-day geological environments. Mr. Ernst (W)

235A-235B-235C. Current Research in Geochemistry (1 unit each). Prerequisite: graduate standing in earth and space sciences. Seminars presented by staff, outside speakers, and graduate students concerning current research in earth and planetary chemistry. May be repeated for credit. S/U grading.
236. Igneous Petrology. (Formerly numbered 236A, 236B.) Lecture, two hours; laboratory, six hours. Prerequisites: an introductory course in petrology and one of a sequence of courses in fundamental physics. Understanding the genesis of igneous rocks based on major and minor elements. Mr. Boettcher (F)

238. Metamorphic Petrology. Lecture, three hours; laboratory, three hours. Prerequisite: an introductory course in igneous petrology. Interpretation of metamorphic rocks in the light of observation, theory, and experiment. Geologic relations, petrographic evidence, metamorphic zones, thermodynamics of phase equilibria, projections, chemographic relationships, use of piezobirefringent haloes, Rayleigh depletion model, isotopic fractionation, environmental factors of metamorphism. Laboratory study of representative metamorphic rocks and suites of rocks selected to illustrate topics discussed in lectures. Mr. Rosenfeld


240. Space Plasma Physics. Prerequisite: course 203 or Physics 210A. The physics of plasmas in space, including treatments based on magnetohydrodynamics and quantum mechanics. Applications to solar or planetary winds; steady-state magnetospheres; magnetospheric convection; substorm processes; magnetic merging; field-aligned currents and magnetosphere-ionosphere coupling; ion current dynamics; and wave particle instabilities. Mr. Russell

241. Sedimentary Petrology. Lectures, two hours; laboratory, six hours. Prerequisites: courses 51C, 103B. Texture, composition, structure, and modes of origin of the sedimentary rock suites. Continuation of course from year to year. Mr. Ingersoll (F), Mr. Reed (Sp)

244. Tectonics of Sedimentary Basins. Lecture, two hours; discussion, two hours; field trips. Prerequisites: courses 103B, 119. Recommended: course 141. Plate-tectonic settings of sedimentary basins. Basin analysis, stratigraphic and environmental petrology, and related subjects in the context of plate-tectonic controls on basin evolution. Mr. Ingersoll (W)

245A-245B. Stress and Deformation. Lecture, three hours; laboratory, two hours. Prerequisites: Physics 32A, 32B, or consent of instructor. Recommended: Mathematics 33A. Scalars, vectors, tensors; subscript notation; rotation and inversion of axes, transformation matrix: stress; strain; homogeneous strain; rotation; infinitesimal strain; strain rate; Mohr's circle construction and other graphical methods; flow laws. Mr. Oertel (W,Sp)

246. Stress in the Lithosphere. Prerequisite: course 202 or 245A or Civil Engineering 106 or consent of instructor. Lecture, two hours; laboratory, two hours. Discussion of the role of stress in the lithosphere, including topics such as crustal extension and contraction, seismic stress drops; effects of erosion, cooling, earth elasticity, topography, and density anomalies. State of stress in plate boundaries and interiors. Application of finite element and analytic methods to stress determination. Mr. Bird (alternate years)

247. Glaciology. Prerequisite: course 245A or equivalent or consent of instructor. Occurrence and classification of glaciers; accumulation and ablation; glacier budget; mechanical properties of ice; glacial ice, flow; crevasses, fractures, and crevasses; thermal features; thermal relationships; bed slip; climatic response; catastrophic advances. Mr. Shreve (Sp, every third year)

248. Advanced Structural Geology. Lecture, three hours; discussion, two hours. Prerequisites: courses 111A, 111B, and 112, or consent of instructor. Principles of mapping,褶皱带, folding and thrust faults, and fold rocks; solutions of structural problems at various scales; regional tectonic problems. Mr. Christie, Mr. Oertel

249. Structural Analysis of Deformed Rocks. Discussion, three hours; laboratory, three hours. Prerequisites: courses 111A, 111B, and 112, or consent of instructor. Stress analysis of deformed primary features in terranes with complex or multiple deformations. Analysis of strain from deformed primary features. Interpretation of structural history in metamorphic terranes. Mr. Coleman

250. Dynamics of the Solar Wind. Parker's hydrodynamic solution and spiral magnetic field model; effects of magnetic field and solar rotation; shock waves, discontinuities, small amplitude wave propagation, large-scale structure, interaction of the sun with the moon, planets, and interstellar medium, stellar winds and stellar spindown. Mr. Coleman

251. Seminar in Minerology. Examination of groups of rock-forming minerals (e.g., feldspars), integrating such subjects as crystal structure, crystal chemistry, phase equilibria, and petrogenesis. Mr. Dollase

252. Seminar in Geochemistry. Phase equilibria under crustal conditions, chemistry of ocean waters, recent and ancient sediments, structure and chemistry of the upper mantle, geochronology, cosmochemistry, and cosmo-petrology. Mr. Barton, Mr. DePaolo (F, W)

253. Seminar in Petrology. Problems of igneous or metamorphic petrology; methods of evaluating physical conditions of metamorphism; diffusion in mineralogical processes; major classes of rocks and rock-forming processes of the mantle: element fractionation among coexisting phases; other current subjects in the field. S/U or letter grading. Mr. Rosenfeld (Sp)

254. Seminar in Sedimentology. Processes of sediments transport and deposition; deep sea sediments; deltas and estuaries; petrology of carbonates, sandstones, and limestones; stratigraphy; paleoenvironmental studies. Mr. Reed (F)

255. Seminar in Structural Geology and Tectonics. Flow and fracture in the earth's crust from a microscopic to continental scale and in experiments. Examples may include metamorphic terranes, glaciers, plutons, volcanic, and consolidated sediments. Modern concepts of the oceanic crust; processes leading to segregation of continental-type rocks. Mr. Oertel (F)

256. Seminar in Glaciology and Geomorphology. Glacier physics, theoretical geomorphology, river mechanics, statistical models. Mr. Shreve

257. Seminar in Paleontology. Current biogeochemical literature and research on evolution of selected groups of animals and plants, numerical taxonomy, organism-environmental relationships, origin and development of life, biostatigraphy, paleoecology, biogeography, and biostatistics.

258. Seminar in Mineral Deposits. Problems of distribution and formation of metal deposits; mineral economics; investigations of opaque minerals by microscopic or other techniques. Mr. Carlisle (W)

259. Seminar in Advanced Topics in Geology (2 to 4 units). Topics vary. May be repeated for credit.

260. Seminar in Geological Physics (2 to 4 units). Problems of current interest in geophysical physics, including topics related to impact cratering processes, mechanisms of crater formation, high pressure properties of materials, and thermodynamics of crystals.

261. Topics in Magnetospheric Plasma Physics. Lectures, discussions, and exercises on specific advanced topics in magnetospheric plasma physics. Previous courses have examined magnetic storms, magnetopause, auroral processes, magnetospheric ultraviolet frequency emissions, and adiabatic particle motion in the earth's radiation belts.

265. Instrumentation, Data Processing, and Data Analysis in Space Physics. Principles, testing, and operation of magnetometers and other instruments. Data processing, display, and archiving. Time-series analysis techniques, including filtering. Fourier series, eigenanalysis, and power spectra.


289A-289B-289C. Seminar in Fluid Dynamics (2 units each). Problems of current interest in fluid dynamics, with emphasis on geophysical applications. May be repeated for credit. S/U grading.


295. Earth and Space Sciences Colloquium (1 to 2 units each). Reading and discussion in the frontiers of earth and space sciences.


298. Topics in Earth and Space Sciences (2 to 4 units).

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: appointment of a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction in the discipline. May be repeated for credit. S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCL graduate adviser and Graduate Dean. Open to both UCL graduate students and other institutions. May be repeated for credit. S/U grading.

597. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units). S/U grading.
Bachelor of Arts in Chinese
Preparation for the Major
Required: East Asian Languages and Cultures 1A-1B-1C, 11A-11B-11C, 40A, History 9B-9C. Anthropology 22, East Asian Languages and Cultures 113A, and English 4 are recommended.

The Major
Required: A total of 11½ courses, of which seven must be upper division language courses, including at least two vernacular language courses from East Asian Languages and Cultures 121A, 121B, 121C, 124A, 124B, 124C, 151A, 151B, and at least four classical language courses from 113A, 113B, 113C, 152A, 152B, 152C, 163A, 163B, 163C.

The remaining four and one-half required courses must include East Asian Languages and Cultures 140A or 140B or 140C; one course from 170A, 170B, 173, or 183; 199 (at least two units in the senior year); Art History 114B; and either History 182A, 182B, 182C, or 183.

English 100A, 100B, 100C, and additional courses in Chinese history are recommended. Students planning to undertake graduate study are urged to include in their undergraduate program additional courses in classical Chinese and beginning courses in Japanese. Those planning to undertake advanced graduate study are urged to gain a reading knowledge of French or German.

Bachelor of Arts in Japanese
Preparation for the Major
Required: East Asian Languages and Cultures 1A-1B-1C, 11A-11B-11C, 40A, History 9B-9C. Anthropology 22 and English 4 are recommended.

The Major
Required: A total of 11½ courses, of which seven must be upper division language courses selected from East Asian Languages and Cultures 119A, 119B, 129, 134A, 134B, 137, 139, 142A, 142B, 145, 153A, 153B, 176, 179A, 179B. The seven courses must include 119B, 129, and 134A or 134B or 153A or 153B.

The remaining four and one-half required courses must include East Asian Languages and Cultures 141A or 141B; one course from 174 or 184; 199 (at least two units in the senior year); Art History 114C; and either History 187A, 187B, or 187C.

English 100A, 100B, 100C, and additional courses in Japanese history are recommended. Students planning to undertake graduate study are urged to include in their undergraduate program three courses in classical Japanese and beginning courses in Chinese. Those planning to undertake advanced graduate study are urged to gain a reading knowledge of French or German.

Master of Arts Degree
Admission
To qualify for admission you are expected to (1) meet general University requirements, (2) have taken a minimum of three quarter courses or the equivalent in classical Chinese or Japanese, and (3) present a B.A. degree from a Department of East Asian Languages and Cultures similar to UCLA's. Applicants with the B.A. in another field or from departments whose requirements are less rigorous will be admitted to the Department of East Asian Languages and Cultures (290 Royce Hall, UCLA, Los Angeles, CA 90024) only if they can meet the requisite standards within one year. Selection will be based on (1) prior scholastic performance, (2) recommendations by professors, (3) score on the Graduate Record Examination (GRE) Aptitude Test, and (4) strength and suitability of purpose.

Foreign students are also required to take the Test of English as a Foreign Language administered by the Educational Testing Service (ETS), unless this test is not offered in their country of residence. Foreign students must also take a test in translation from Chinese or Japanese into English, either with the comprehensive examinations or earlier.

Major Fields or Subdisciplines
M.A. students may specialize in either Chinese language and culture or Japanese language and culture.

Language Requirements
Students majoring in Chinese must have completed at least one year of modern Japanese with a grade of B or better; those majoring in Japanese must have completed one year of classical or modern Chinese with a grade of B or better. This requirement may be fulfilled before admission to the M.A. program.

Foreign students may also be required to take English (ESL) 33A, 33B, 33C, 34, 36, or other ESL courses.

Course Requirements
Nine courses are required for the degree, of which five must be graduate courses. East Asian Languages and Cultures 295 is required for the Chinese major, and course 296 is required for the Japanese major. In unusual cases and with departmental consent, courses taken outside the department that are appropriate to your program may be applied toward the nine courses but not toward the five graduate courses. Courses in the 500 series and those
taken to meet admission standards and language requirements may not be applied toward the total course requirement.

Comprehensive Examination Plan

All students will take comprehensive examinations in the literature and cultural history of either China or Japan. In addition, you will be required to present two seminar research papers. The results of the examinations and the quality of the papers will determine whether you will be admitted to the Ph.D. program.

Ph.D. Degree

Admission

An M.A. degree in the field or in a related field is required. Selection among qualified applicants from outside the department will be based on the four criteria listed under admission to the M.A. degree, plus a recent research paper by the applicant. Students with an M.A. in the department will be judged on their M.A. record, plus three letters of recommendation. Those with an M.A. from other institutions must also take a translation examination.

Foreign students must meet the same requirements specified for such students in the M.A. program, including a translation examination at the time of the qualifying examinations or earlier.

Major Fields or Subdisciplines

The department emphasizes three major fields at the Ph.D. level: (1) Chinese language and literature with the subdisciplines of poetry, drama, fiction, and modern literature; (2) Japanese language and literature with the subdisciplines of ancient, medieval, early modern, and modern literature; (3) Buddhism with the subdisciplines of Chinese and Japanese Buddhism. In addition, a program in ancient Chinese civilization or Japanese linguistics may be arranged by petition. Departmental faculty will also participate in the design of individual Ph.D. programs.

Foreign Language Requirement

You must demonstrate a reading knowledge of French or German by passing the Graduate School Foreign Language Test administered by the Educational Testing Service (minimum score of 500) or by passing a level five course with a grade of B or better. With the consent of the department, Russian may be substituted.

Course Requirements

Students entering the program with an M.A. in a different field, or in the same field but from another institution, must meet the standards of the department’s M.A. coursework in addition to fulfilling Ph.D. course requirements. A minimum of five courses (not including courses taken to meet the language requirements listed below) beyond the M.A. degree is required.

In addition, students majoring in Chinese must take three years of modern Japanese or the equivalent (i.e., one course beyond East Asian Languages and Cultures 119B); those majoring in Japanese must take two years of classical Chinese or the equivalent (i.e., three courses beyond East Asian Languages and Cultures 113C). Those majoring in Buddhist studies must also take appropriate courses in Sanskrit or Pali. A grade of B or better is required in courses taken to fulfill the language requirements.

Qualifying Examinations

You must take four written examinations, as follows:

1) For students in Chinese literature:

(a) A general examination in Chinese literature.

(b) Examinations in two of the following approved fields (which cannot be from the same group): (1) Chinese poetry, Chinese drama, Chinese fiction, modern Chinese literature; (2) ancient Chinese civilization, Chinese Buddhism or another field of Chinese thought or religion; (3) Japanese literature; (4) a field offered in another department or interdepartmental program.

2) For students in Japanese literature:

(a) A general examination in Japanese literature.

(b) Examinations in two of the following approved fields (which cannot be from the same group): (1) ancient, medieval, early modern, or modern Japanese literature; (2) Japanese Buddhism or another field of Japanese thought or religion; (3) Chinese literature; (4) a field offered in another department or interdepartmental program.

3) For students in Buddhism, ancient Chinese civilization, or Japanese linguistics:

(a) An examination in your major language area.

(b) A general examination in your major field.

(c) An examination in an approved subfield within your major field.

(d) A general examination in another approved field inside or outside the department. The qualifying examinations must be taken within a four-week period after satisfying all language and course requirements. With the consent of the department, you may repeat the examinations once only.

After successful completion of the written examinations, the department appoints a doctoral committee whose chair serves as your dissertation adviser. Preferably within six months, but no more than a year after your written examinations, you must pass the University Oral Qualifying Examination on the proposed dissertation topic and in appropriate related areas of study. With department consent, you may repeat the examination once.

Within three years after you have advanced to candidacy, you must present a dissertation embodying the results of independent investigation. If you do not meet the five-year time limit for the completion of the dissertation, you may be required to take the written qualifying examinations again.

Candidate in Philosophy Degree

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination

A final oral defense of the dissertation is optional at the discretion of the doctoral committee.

Lower Division Courses

No credit will be allowed for completing a less advanced course after successful completion of a more advanced course in grammar and/or composition.

1A-1B-1C. Elementary Modern Chinese. Lecture, five hours. Not open to students who have learned from whatever source, enough Chinese to qualify for more advanced courses. Students whose knowledge of Chinese disqualifies them for these courses should take courses 2A-2B-2C or more advanced courses. An introduction to standard spoken Chinese and Chinese characters, with emphasis on conversation.

Mr. Chu, Mr. Pao

2A-2B-2C. Elementary Mandarin for Speakers of Chinese Dialects. Lecture, five hours. Beginning courses specially designed for students who speak, or have some familiarity with, a non-Mandarin dialect of Chinese. All aspects of Mandarin are taught, with emphasis on Mandarin pronunciation and usage.

Mr. Chu

9A-9B-9C. Elementary Modern Japanese. Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Introduction to modern Japanese with attention to conversation, grammar, and the written forms. Conversation drill is based on material covered in class.

Mr. Chu

11A-11B-11C. Intermediate Modern Chinese. Lecture, three hours; laboratory, one hour. Students with credit for courses 2A-2B-2C, or whose background and experience are equivalent to course 2C, should take courses 12A-12B-12C rather than these courses. A continuation of courses 1A-1B-1C, with balanced instruction in reading, writing, and conversation.

Mr. Pao

12A-12B-12C. Intermediate Mandarin for Speakers of Chinese Dialects. Lecture, three hours; laboratory, one hour. A continuation of courses 2A-2B-2C, covering all aspects of Mandarin but emphasizing those that differ from other dialects of Chinese.

Mr. Pao

Upper Division Courses

113A-113B-113C. Introduction to Classical Chinese. (Formerly numbered 13A-13B-13C and 113A-113B.) Lecture, three hours. Prerequisite: course 1C or consent of instructor. Grammar and reading of representative works in selected texts.

Mr. Wang

119A-119B. Advanced Modern Japanese. Lecture, three hours; laboratory, one hour. A continuation of courses 119A-119B-119C. Emphasis on comprehensiveness, grammar, and proficiency in reading and conversation in modern Japanese. Mr. Plutschow

121A-121B-121C. Advanced Modern Chinese. Prerequisite: course 11C. Readings in modern prose and newspaper style. Mr. Chu

122A-122B. Readings in Modern Chinese Literature. Lecture, three hours. Prerequisite: course 121B or consent of instructor. Readings and discussion of works of modern Chinese literature. 122A. Poetry and Prose; 122B. Drama and Fiction. Mr. Link

124A-124B-124C. Readings in Modern Expository Japanese. Lecture, three hours. Prerequisite: course 121B or consent of instructor. Readings and discussion of works of modern Chinese literature. 122A. Poetry and Prose; 122B. Drama and Fiction. Mr. Link

151A-151B. Readings in Traditional Chinese Fiction. Prerequisite: course 11C or equivalent or consent of instructor. Selected readings from the classic Chinese novels. Designed primarily as a language course; emphasis on translation and obtaining a command of the various literary styles, as well as on critical appreciation of the various works. Mr. Epp

152A-152B. Readings in Traditional Chinese Poetry. Lecture, three hours. Prerequisite: course 113C or consent of instructor. Discussion and critical analysis of representative works selected on the basis of criteria concerning thematic patterns, image clusters, genres, and the characteristics of major poets. Ms. Wang

153A. Kwabata's Contemporaries. Lecture, three hours. Prerequisite: course 119A or 134A or 134B. Readings in the fiction and poetry of Ibuka, Murayama Kanu, Ozaki Kaku, Tsuo Satoz, and Yokotsumitsu Richi. Mr. Epp

153B. Introduction to Shiga Naoya. Lecture, three hours. Prerequisite: course 119A or 134A or 134B. Reading and discussion of Shiga's short stories, with special emphasis on his novel technique. Mr. Epp

154A-154B. Mongolia. Lecture, three hours; laboratory, one hour. To be offered when requested by a sufficient number of students. Mr. Pao

160. Elementary Sanskrit. Introduction to script and grammar; with reading and translation. Emphasis on the significance of Sanskrit for the understanding of other Indo-European languages. Mr. Scharfe

161. Intermediate Sanskrit. Prerequisite: course 160 or equivalent. Advanced aspects of grammar and the structure of Sanskrit. Mr. Scharfe

162. Advanced Sanskrit. Prerequisite: course 161 or equivalent. The entire Bhagavadgita or a comparable amount of other Sanskrit literature is read. Mr. Scharfe

163A-163B-163C. Readings in Classical Chinese Literature. Lecture, three hours. Prerequisite: course 113C or equivalent.

165. Readings in Sanskrit. Prerequisite: course 162 or equivalent. Extensive reading in such texts as best serve the students' needs. Mr. Scharfe

170A-170B. Archaeology in Early and Modern China:

170A. Introduction to Chinese Archaeology. Early Chinese study of their own past, types of artifacts, antiquarianism, and the beginnings of scientific archeology in China before 1949. Mr. Plutschow

170B. Archaeology in the People's Republic of China. Survey of major excavations of sites of all periods, carried out under the intensive archaeological program of the PRC, and the interpretation of the archaeological findings. Mr. Chou
185. Introduction to Korean Thought. Lecture, three hours. A general survey of Korean thought from the earliest records to the 20th century, including shamanism, Taoism, Buddhism, Christianity, and neo-Confucianism. Korean traditions and those found in India, China, Japan, and the Western world discussed. Ms. Kim

188. Chinese Etymology and Calligraphy. Prerequisite: one year of classical Chinese or consent of instructor. Covers (1) the development of the Chinese writing system from the "Pottery Inscriptions" 6,000 years ago to the modern "Simplified Forms" and the studies of the Six Scripts principles which were used to form Chinese characters and (2) the aesthetic training of calligraphic art and its appreciation, with focus on the ways of recognizing and interpreting the "Cursive Style," a common form of handwriting. Mr. Chou

191. Chinese Brush Painting. Lecture, two hours; studio, two hours. A combination studio-lecture course surveying the aesthetics and techniques of Chinese literati painting. Emphasis on realizing the philosophical ideals of critical treatments through mastery of the traditional materials and elements of landscape. Mr. Strassberg

199. Special Studies in East Asian Languages and Cultures (2 to 4 units). Prerequisite: senior standing in department or advanced reading knowledge of Chinese or Japanese, consent of instructor. Required of senior majors. Special individual study. May be repeated once by consent of instructor.

Graduate Courses

203A-203B. Chinese Philosophical Texts. May be repeated for credit by consent of instructor. Mr. Strassberg

213. Chinese Buddhist Texts. May be repeated for credit by consent of instructor. Mr. Strassberg

214A-214B. Pall and Prakrits. Prerequisites: knowledge of Sanskrit equivalent to course 161, consent of instructor. Grammatical studies and reading of texts. Comparative considerations. Mr. Scharfe

221A-221B. Introduction to Panini's Grammar. Prerequisites: course 162 or equivalent. Reading of selected passages of the text, with an introduction to Panini's techniques. Mr. Scharfe

222A-M222B. Vedic. (Same as Iranian M222A-M222B.) Prerequisites: knowledge of Sanskrit equivalent to course 162, consent of instructor. Characteristic of the Vedic dialect and readings in the Rig-Vedic hymns. Only course M222B may be repeated for credit. Mr. Schmidt

223. Seminar: Linguistic Analysis of Japanese Narratives. Prerequisite: course CM176 or consent of instructor. Analysis of selected modern and classical Japanese narratives. Emphasis on exploration of how grammatical features such as tense, aspect, voice, and point of view are utilized to achieve desired literary effects. May be repeated for credit by consent of instructor. Ms. Akatsuka

229A-229B. Japanese Buddhist Texts. May be repeated for credit by consent of instructor. Mr. LaFleur

240. Advanced Chinese Classics. Reading and discussion of selected works in classical Chinese, including various types of literary prose and historical narratives, with attention to stylistic features and historical development. May be repeated for credit by consent of instructor. Ms. Wong


243. Seminar in No and Kyogen. Lecture, three to four hours. Prerequisite: knowledge of classical Japanese. Readings of selected No and Kyogen texts from the Muromachi and Edo periods, as well as readings of critical writings and discussion of theories. May be repeated for credit by consent of instructor. S/U or letter grading. Mr. LaFleur

244. Seminar in Traditional Chinese Fiction and Drama. Prerequisite: reading knowledge of colloquial and literary Chinese. Seminar topics alternate yearly between traditional fiction and drama, with emphasis on generic, hermeneutical, and historical approaches. Topics in fiction are selected from narrative genres from the Chou through the Ch'ing periods. Topics in drama are selected from t'ae-ch'ü and ch'üan-ch'ü. May be repeated for credit by consent of instructor. Mr. Strassberg

245. Seminar in Modern Japanese Fiction. Lecture, three hours. May be repeated for credit by consent of instructor. Mr. Scharfe

246. Modern Japanese Poetry. Lecture, three hours. Studies of individual poets who became established between World War I and World War II and who consequently illustrate the transitional artists trying to modernize their tradition. May be repeated for credit. S/U or letter grading. Mr. Epp

247. Selected Readings in Sanskrit Texts. May be repeated for credit by consent of instructor. Mr. Scharfe

250. Seminar in Medieval Japanese Literature. Prerequisite: one year of classical Japanese. Selected readings in travel poetry, travel diaries, and other genres of Japanese travel literature of the Heian, Kamakura, Nanbokucho, and Muromachi periods. May be repeated for credit by consent of instructor. Mr. Pluschow

251. Seminar: Selected Topics in Modern Japanese Literature. Prerequisite: consent of instructor. Selected readings in 20th-century Japanese literature, emphasizing fiction. Discussion of individual research projects. May be repeated for credit. Mr. Link

252. Seminar: Selected Topics in Japanese Literature. May be repeated for credit. Mr. Befu

253. Seminar: Selected Topics in Japanese Buddhism. May be repeated for credit. Mr. LaFleur

255. Seminar: Selected Topics in Chinese or Indian Buddhism. May be repeated for credit.

261A-261B. Seminar in Classical Chinese Poetry. Prerequisites: courses 152A and/or 152B, or consent of instructor. 261A. Chinese poetry from the Shih-chi or Classic of Poetry to the 6th century, with emphasis on the evolution of the lyric form during the Southern Dynasties (ca. 400-600). 261B. The development of shih and tz'u from the T'ang period (ca. 600-900) and onward; traditional and modern critical approaches to classical Chinese poetry. Ms. Wong

270. Seminar: Selected Topics in Chinese Archaeology. Prerequisite: course 170A or 170B or consent of instructor. Discussion and research on major problems about Chinese archaeology and the different interpretations to the most important archeological finds, with emphasis on the studies of the Xia and Shang cultures and the Xia and Shang dynasties. May be repeated for credit. Mr. Chou

275. Seminar: Selected Topics in Chinese Cultural History. Prerequisite: consent of instructor. Discussion and research on the major problems related to Chinese culture, such as beginnings of the Chinese civilization and the Chinese dynastic history. Other topics include the developments of both ancient and medieval China. May be repeated for credit. Mr. LaFleur

285. Selected Topics in Buddhist Culture. May be repeated for credit by consent of instructor. Mr. LaFleur

292. Bibliography and Methods of Research in Chinese. Required of all graduate students in Chinese. Lectures and discussion on the research methodology dealing with traditional Chinese materials, with emphasis on bibliography training (including the most up-to-date indexes in Chinese studies), punctuation practice, knowledge of textual criticism, and rare book editions. Mr. Chou

296. Bibliography and Methods of Research in Japanese. Required of all graduate students in Japan. Mr. Befu

301. Teaching an Oriental Language as a Foreign Language.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

You may repeat the courses below by consent of instructor; however, none may be applied toward the minimum course requirement for the M.A.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate advisor and Graduate Dean, and host campus instructor, department Chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.


Related Courses in Other Departments

Anthropology 166. Comparative Minority Relations 175S. Japan

261. Comparative Minority Relations

Art History (Art, Design, and Art History) 114A. The Early Art of India

114B. Chinese Art

114C. Japanese Art

C115A. Advanced Indian Art

C115B. Advanced Chinese Art

C115C. Advanced Japanese Art

260. Asian Art

275. Education 253C. Seminar: Asian Education

English 100A. Introduction to Poetry

140A. Criticism: History and Theory

140B. Criticism: Special Topics

201. The History of Literary Criticism

Geography 16G. Contemporary China

266. Eastern Asia

History 182A-182B-182C. History of China

183. Modern China, 1840-1920

184. The Chinese Revolution

186. Diplomatic History of the Far East


188A. Early History of India

200L. Advanced Historiography: China

200M. Advanced Historiography: Japan

200P. Advanced Historiography: History of Religions
East Asian Studies (Interdepartmental)

290 Royce Hall, 206-8235

Professors
Hans H. Baerwald, Ph.D. (Political Science)
Richard D. Baum, Ph.D. (Political Science)
Phillip C. Huang, Ph.D. (History)

Associate Professors
Herbert E. Plutschow, Ph.D. (East Asian Languages and Cultures), Chair
Richard E. Strassberg, Ph.D. (East Asian Languages and Cultures)

Scope and Objectives

This undergraduate major is designed for those who wish to study the Chinese- and Japanese-speaking areas of East Asia and/or engage in business there. It offers a social science approach, combined with language study and work in the humanities.

Bachelor of Arts Degree

Preparation for the Major

Required: History 9B-9C; East Asian Languages and Cultures 1A-1B-1C or 9A-9B-9C or a parallel Cantonese sequence; East Asian Languages and Cultures 11A-11B-11C or 19A-19B-19C. Students planning to pursue classical Chinese in the major will need East Asian Languages and Cultures 113A-113B-113C in addition to the above courses.

The Major

This consists of three parts:


2. Five courses from the following: any upper division courses in the social sciences listed above not being used to satisfy that requirement; any upper division courses in the Department of East Asian Languages and Cultures not being used to satisfy other parts of the major requirements; any new upper division courses relevant to East Asian or Asian American studies (including no more than three CED courses) which may be approved by the Executive Committee of the college on the recommendation of the advisory committee; Art History 114B, 114C, C115B, C115C; Music 140C, 141, 145, 146A, 146B, 146C, 147A, 147B.

3. The prescribed courses in one of the following areas (courses offered to satisfy this requirement may not be applied toward other parts of the major requirements): (a) archaeology: any four courses from East Asian Languages and Cultures 170A, 170B, Anthropology 112*, 1150*, 115R*; (b) geography: Geography 132 or 133, 186, and two additional upper division geography courses; (c) history: four upper division or graduate courses in East Asian or Southeast Asian history (History 182A, 182B, 182C, 183, 184, 186, 187A, 187B, 187C, 190A, 190B, 197 when in the East Asian field); (d) political science: Political Science 115* and three courses from 135, 136, C137A, 137B, 159, 160, 161, C197 when in the East Asian field; (e) sociology: Sociology 124* and three courses from 113*, 126*, 134*, 151*, 154.

Courses marked with an asterisk are not included among the courses mentioned here.

Economics

2263 Bunche Hall, 825-1011

Professors
William R. Allen, Ph.D.
Robert W. Clower, D.Litt.
Michael R. Darby, Ph.D.
Harold Demsetz, Ph.D.
Bryan C. Elicicoff, Ph.D.
Arnold C. Harberger, Ph.D.
George W. Hilton, Ph.D.

Werner Z. Hirsch, Ph.D.
Jack Hirshleifer, Ph.D.
Michael D. Intriligator, Ph.D.
Benjamin Klein, Ph.D.
Edward E. Learner, Ph.D.
Axel Leijonhufvud, Ph.D.
John J. McCall, Ph.D.
Joseph M. Ostrow, Ph.D.
John G. Riley, Ph.D.
Lloyd S. Shapley, Ph.D.
Harold M. Somers, Ph.D., LL.B.
Earl A. Thompson, Ph.D., D.D.
Finis R. Welch, Ph.D.
Armen A. Alchian, Ph.D., Emeritus
John F. Barron, Ph.D., Emeritus
Paul A. Dodd, Ph.D., LL.D., Emeritus
Earl J. Miller, Ph.D., LL.D., Emeritus
Dudley F. Pregum, Ph.D., Emeritus

Associate Professor
George G. S. Murphy, Ph.D.

Assistant Professors
Sean R. Beckett, Ph.D.
David Dollar, Ph.D.
Sebastian Edwards, Ph.D.
Daniel Friedman, Ph.D.
John C. Haltiwanger, Ph.D.
David K. Levine, Ph.D.
Mark W. Plant, Ph.D.
Marc S. Robinson, Ph.D.
Kenneth Sokoloff, Ph.D.
Michael Waldman, Ph.D.

Scope and Objectives

UCLA’s Economics Department is ranked among the ten best in the nation according to a 1982 survey conducted by the Conference Board of the Associated Research Councils. Its undergraduate program is designed for students who wish to gain a thorough understanding of economic analysis. 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 law, management, public administration, journalism, social welfare, architecture and urban planning, and education, as well as economics.

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. A Master of Arts program is also offered, which involves coursework and comprehensive examinations designed for the Ph.D. student.

**Bachelor of Arts in Economics**

**Pre-Economics Major**

While you are completing the lower division preparation courses for the major, you may be classified as a pre-economics major. When you have completed the preparation courses for the major and before you reach 100 quarter units (but no later than 135 quarter units), you must petition to enter the major at the undergraduate counselor’s office in 2253 Bunche Hall.

**Note:** Students who have completed less than 72 quarter units as of the beginning of Fall Quarter 1984 must complete the following requirements for the degree. Students with 72 or more quarter units may complete the degree requirements listed in the 1982-83 UCLA Undergraduate Catalog.

**Preparation for the Major**

**Required:** English 4 or 30 or two 100W courses; Economics 1, 2, 40 or 41 (or Management 115 or Mathematics 50 as a substitute for Economics 40); two courses in calculus (i.e., Mathematics 3A and 3B, or 3A and 3E, or 31A and 31B. Mathematics 3E is specifically designed for economics). Each preparation course must be completed for a letter grade and with an overall 2.5 GPA. In addition, a 2.0 (C) grade is required in each premajor course, with a combined 2.5 GPA required in the economics and mathematics courses. You must petition for major standing by the time you attain 135 quarter units.

Repetition of more than one preparation course or of any preparation course more than once will result in automatic denial of admission to the major. Transfer credit for any of the above is subject to department approval; consult the undergraduate counselor before enrolling in any courses for the major.

**The Major**

**Required:** Ten upper division courses in economics which must include Economics 101A, 101B, 102, and at least one course in three different fields in economics selected from the list below (all courses must be completed for a letter grade). Economics 100, 110, and 190 may not be included among the ten upper division courses. One or two of the ten courses may include Management 120 and/or 130 and/or 133 (Learning Center courses or courses transferred from other institutions may not be applied toward this option).

A grade of C or better is required in each of courses 101A, 101B, and 102. In addition, you must have a 2.0 grade-point average (computed separately) for both upper division economics and management courses (i.e., a grade-point deficiency in economics courses cannot be offset by grade points earned in management courses and vice versa). Transfer credit for any of the above is subject to department approval; consult the undergraduate counselor before enrolling in any courses for the major.

**Major Fields**

- Economic theory (courses 101A, 101B, 102, 103A-103Z, 104, 107); economic development (courses 111, 112); regional economics (courses 120, 121); public finance (courses 130, 133, M135, M136); statistics, mathematical economics, and econometrics (courses 141, 142, 144, 145, 146, 147A, 147B); labor economics (courses 150, 151, 152); money and banking (courses 160, 161); government and industry (courses 170, 171, 172, 173, 174, 175, 176); economic institutions (courses 180, 181A, 181B, 182, 183); international economics (courses 191, 192).

**Bachelor of Arts in Economics/Business**

This program offers students a business orientation in their undergraduate studies. Designed to prepare students for careers in business and for professional business education at the graduate level, the program requires students to include specific courses offered by the department and the Graduate School of Management (see "The Major").

**Admission**

Resources for the program are limited, and only 250 students per year are admitted. Applications for admission are handled exclusively by the Department of Economics and are available only once or twice a year. To apply you must have completed at least 72 quarter units, one 12-unit quarter of residence in regular session at UCLA, and all courses listed under "Preparation for the Major." In addition, you must be enrolled in UCLA regular session at the time of application and have an overall grade-point average of 3.0 (B) AND an average of 3.0 in the economics courses, computed separately.

Note: The requisite grade-point averages plus completion of the "Preparation for the Major" do not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

**Preparation for the Major**

**Required:** Economics 1, 2, 40 or 41 (or Mathematics 50); English 4 or 30 or two 100W courses; Management 1A, 1B; Mathematics 3A and 3B, or 3A and 3E, or 31A and 31B (Mathematics 3E is specifically designed for economics). All courses must be completed for a letter grade.

Repetition of more than one preparation course or of any preparation course more than once will result in automatic denial of admission to the major. Transfer credit for any of the above is subject to department approval; consult the undergraduate counselor in 2253 Bunche Hall before enrolling in any courses for the major.

**The Major**

**Required:** Economics 101A, 101B, 102, and at least two courses from 104, 173, 174; four other upper division courses in economics in at least two different fields; four upper division courses from Management 120, 122, 124, 130, 133, 140, and tax accounting (currently Management 197A). Learning Center courses or courses transferred from other institutions, including UCLA Extension, may not be applied toward the management part of the major.

Recommended: a course in elementary computer programming (e.g., Program in Computing 10). All major courses must be completed for a letter grade. Transfer credit for any of the economics courses is subject to department approval; consult the undergraduate counselor before enrolling in any courses for the major.

You must maintain a 3.0 grade-point average throughout your program and must have a 3.0 GPA (computed separately) for both management and economics courses in order to remain in the major (i.e., a grade-point deficiency in economics courses cannot be offset by grade points earned in management courses and vice versa when computing the upper division grade-point minimum).

**Bachelor of Arts in Economics/International Area Studies**

This program is for students who wish to attain a 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 foreign 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 submit written applications to the undergraduate counselor in 2253 Bunche Hall to be admitted. To apply you must have completed at least 72 quarter units,
one 12-unit quarter of residence in regular session at UCLA, and all courses listed under “Preparation for the Major.” In addition, you must be enrolled in UCLA regular session at the time of application. Each preparation course must be completed for a letter grade and with an overall 2.5 GPA. In addition, a minimum 2.0 (C) grade is required in each preparation course, with a combined 2.5 GPA in the economics and mathematics courses. Language course preparation need not be completed at the time of admission but must be completed before preparing the research paper required in Economics 199. Your program as a whole must be approved by the Economics faculty adviser before you are admitted to the major; you must apply before you reach 135 quarter units.

Preparation for the Major

Required: Economics 1, 2, 40 or 41 (or Management 115 or Mathematics 50 as a substitute for Economics 40); two courses in calculus (i.e., Mathematics 3A and 3B, or 3A and 3E, or 31A and 31B). Mathematics 3E is specifically designed for economics). You also must complete the sixth quarter course (or equivalent) of any modern language (e.g., French 6, German 6, Russian 6, Spanish 25; these are most frequently offered in fulfillment of this requirement, but also see the offerings under Portuguese, Italian, Germanic Languages, Near Eastern Languages, African Languages, and East Asian Languages and Cultures).

Repetition of more than one preparation course or of any preparation course more than once will result in automatic denial of admission to the major. Transfer credit for any of the above is subject to department approval; consult the undergraduate counselor before enrolling in any courses for the major.

The Major

Required: A total 15 upper division courses selected from economics and the list of “Approved Noneconomics Courses” below. Eleven must be from economics, including Economics 101A, 101B, 102 (with a grade of C or better in each), 191, 192, 199, and five courses from at least two different fields in economics (selected from the “Major Fields” listed under the regular economics major). Four of the remaining upper division courses must be chosen from the approved list below and must include selections from at least two different departments. Economics 199 must be completed in your last quarter before graduation and includes the preparation of a research paper on the economy of the country or region of your specialization, sponsored and supervised by an Economics faculty member. Sources in the language of the region or country must be utilized. The noneconomics courses, the research paper, and the language learned must show consistency of purpose.

One or two of the five upper division economics electives may include Management 120 and/or 130 and/or 133 (Learning Center courses or courses transferred from other institutions may not be applied toward this option). A 2.5 GPA (computed separately from the economics courses) is also required in the management courses applied to this option.

Transfer credit for any courses to be applied toward the upper division requirements is subject to department approval; consult the undergraduate counselor before enrolling in any courses for the major.

To remain in the major you must maintain a 2.5 GPA for both economics and noneconomics courses, computed separately (i.e., a grade-point deficiency in economics courses cannot be offset by grade points earned in noneconomics courses and vice versa).

Approved Noneconomics Courses


Bachelor of Science in Economics/System Science

The degree is described following the Economics Department courses.

Graduate Study

Admission

Applicants for graduate study who satisfy the University minimum requirements are eligible to apply. It is strongly recommended that you have undergraduate training in economics, mathematics, and statistics. You must also submit a full record of prior university experience, three letters of reference, and your scores in the Graduate Record Examination (GRE) Aptitude and Advanced Economics Tests.

The Department of Economics (2263 Bunche Hall, UCLA, Los Angeles, CA 90024) admits students only for the Fall Quarter of each academic year. The deadline for submitting the admission/fellowship application is December 31.

Major Fields or Subdisciplines

Economic theory; economic development; urban and regional economics; public finance; mathematical economics; statistics and econometrics; labor economics; money and banking; industrial organization; economic institutions; international economics; uncertainty and information.

Master of Arts Degree

Course Requirements

Candidates for the Master of Arts degree in Economics should have completed the equivalent of an undergraduate major in economics. The department requires nine upper division and graduate-level courses in economics completed in graduate standing at UCLA. These courses must include Economics 101A, 101B, and 102 with a grade of B or better and 107 with a grade of C or better.

Graduate-level courses in economic theory and history of economic thought may be substituted for these undergraduate courses. At least five of the nine courses must be strictly graduate economics courses.

You must also have completed, if not previously taken, two courses in calculus and one in statistics. Economics 144 may be used as one of the calculus courses and Economics 40 as the statistics course.

With the consent of the graduate chair, you may offer a maximum of two courses in other social sciences such as history, management, mathematics, psychology, education, or philosophy in partial satisfaction of the degree requirements; however, you must still take five graduate economics courses.

Four units of course 596 may be applied toward the total course requirement and the minimum graduate course requirement.

Comprehensive Examination Plan

The comprehensive examination requirement for the master's degree may be met in one of the following three ways:

1. A conditional pass (C) or better in each of two full doctoral comprehensive examinations (C is not acceptable);
2. A satisfactory pass (S) and a conditional pass (C) or better in each of two doctoral examinations, with one of the examinations being either the micro or macro half of the theory comprehensive;
3. A grade of S and two grades of C or better in the quantitative methods examination and each half of the theory comprehensive. If you achieve a B+ average in Economics 246B and 246C, you will automatically receive a satisfactory (S) grade in the quantitative methods examination.

4. The macro and micro parts of the theory examination may be taken or repeated either separately or together, and the grades on each part will be recorded separately for meeting the requirements for the M.A. and Ph.D. degrees.
Ph.D. Degree

Foreign Language Requirement
Ph.D. candidates must offer one foreign language or a substitute program in mathematics prior to sitting for the University Oral Qualifying Examination. If the language option is selected, you will be required to show a proficiency in one language — French, German, Russian, or Spanish — by passing the Educational Testing Service (ETS) examination with a grade of 500 or better. Students whose native language is not English may substitute English for the language requirement by petitioning the Dean of the Graduate Division. If the mathematics substitute is selected, you must show proficiency in mathematics above that ordinarily required of Ph.D. candidates. Since elementary calculus is, as noted above, considered basic for all economists, the three required language-substitute courses must be at a level above first-year calculus. Specifically, Mathematics 32 and 110 or above fulfill the requirement.

Course Requirements
The specific course requirements which must be fulfilled prior to taking the University Oral Qualifying Examination are the following:

1. Quantitative Methods: The requirement may be satisfied in any of the following ways:
   (a) achieving a B+ average in Economics 246B and 246C;
   (b) achieving a B average in at least two quarters of the advanced econometrics sequence (courses 247, 248, 249);
   (c) passing the quantitative methods waiver examination administered at the beginning of Fall Quarter.

2. U.S. or European Economic History: You must take one upper division undergraduate course in either United States or European economic history with a grade of B or better. Economics 181A, 181B, or 183 may be taken to satisfy this requirement.

3. History of Economic Theory: You must take one upper division undergraduate course in the history of economic theory with a grade of C or better. Economics 107 may be taken to satisfy this requirement.

You may petition the graduate committee to substitute any one of the above requirements with comparable coursework taken at a previous institution.

Qualifying Examinations
You are responsible for contacting the graduate adviser for additional regulations covering these examinations. Written examinations are graded S (satisfactory pass), C (conditional pass), and U (unsatisfactory). You are considered to have completed your theory and elective field examinations when you have earned at least three S grades and one C grade. You may not be advanced to candidacy with more than one conditional grade on your record.

For the Ph.D. degree, the overall theory grade will be the lower of the grades on each of the macro and micro parts, except that if a C+ is achieved on one part and an S− or better on the other part, the overall theory grade will be an S−. Where a part has been taken more than once, the grade for that part will be the highest grade achieved at any sitting.

In order to be advanced to candidacy, you will be required to present a paper in a departmental workshop. It is recommended that this be done by the end of your third year.

The University Oral Qualifying Examination, administered by your doctoral committee, will be scheduled after successful completion of all the written examinations, other course requirements, and the foreign language requirement, and after the submission of a written dissertation proposal. The examination will focus on, but not be limited to, the dissertation proposal.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
A final oral examination on the doctoral dissertation is required unless it is waived by the committee that supervises the dissertation.

Lower Division Courses

1. Principles of Economics. Lecture, three hours; discussion, one hour. Not open to students with credit for course 100. An introduction to the principles of economic analysis, economic institutions, and issues of economic policy. Emphasis on allocation of resources and distribution of income through the price system.

2. Principles of Economics. Lecture, three hours; discussion, one hour. Not open to students with credit for course 100. An introduction to the principles of economic analysis, economic institutions, and issues of economic policy. Emphasis on allocation of resources and distribution of income through the price system.

3. Upper Division Research Seminar in Microeconomics. Prerequisite: course 1. Limited to freshmen and sophomores. Seminar in which students do an intensive research project under guidance of regular faculty. Students select topics in consultation with instructor (topics limited to materials covered in course 1), write papers, and present them at the seminar.

4. Upper Division Research Seminar in Macroeconomics. Prerequisite: course 2. Limited to freshmen and sophomores. Seminar in which students do an intensive research project under guidance of regular faculty. Students select topics in consultation with instructor (topics limited to materials covered in course 2), write papers, and present them at the seminar.

Upper Division Courses

Courses 1 and 2, or 100 are prerequisite to all upper division courses in economics.

100. Economic Principles and Problems. Lecture, three hours. Prerequisite: junior standing. Not open to students with credit for course 1 or 2. The principles of economics with applications to current economic problems.

101A. Microeconomic Theory. Lecture, three hours; discussion, one hour. Prerequisites: two courses in calculus or consent of instructor. The laws of demand, supply, returns, and costs; price and output determination in different market situations.

102. Macroeconomic Theory. Lecture, three hours; discussion, one hour. Prerequisites: course 101A. Theory of factor pricing and income distribution; general equilibrium; implications of the pricing process for the optimum allocation of resources; interest and capital.

103A. Political and Economic Issues in the Proliferation of Nuclear Weapons. (Same as Political Science M139A.) The course provides an interdisciplinary approach to the problem of nuclear proliferation. It also deals with the economic aspects of the acquisition of nuclear weapons and economic aspects of nuclear energy treating technological, bargaining, and stability issues.

103B. Economics of Energy. Prerequisites: courses 101A, 101B, 102. Topics include pricing and taxation of exhaustible resources, interactions between energy and the economic institutions such as OPEC and oil price controls, oil debt and the balance of payments, energy conservation, and future technologies.

107. History of Economic Theory. Lecture, three hours. A survey of economic analysis from Greek antiquity to the early 20th century, concentrating on the 18th and 19th centuries. Emphasis on the works of selected writers, including Aristotle, the Mercantilists, the Physiocrats, Hume, Smith, Malthus, Ricardo, Marx, Marginalists, and Marshall.

Mr. Allen, Mr. Hilton

110. Economic Problems of Underdeveloped Countries. Lecture, three hours. Limited to non-Economics Department majors. A survey of the major issues of development economics. Economic structure of low income countries and primary causes of their limited economic growth. Economic goals and the nature of policy alternatives open to their leaders. Possible roles of developed countries. May not be applied toward Economics Department majors.

Mr. Edwards

111. Theories of Economic Growth and Development. Lecture, three hours. Prerequisite: course 101A. Growth models, theory of production under constraints, relative factor prices and their impact on choice of technology, investment criteria, role of the market, economic planning in less developed areas.

Mr. Edwards


Mr. Edwards

120. Introduction to Urban and Regional Economics. Lecture, three hours. Prerequisite: course 101A or consent of instructor. A survey of the broad range of policy and theoretical issues that are raised when economic analysis is applied in an urban setting. Topics include urbanization and urban growth, housing markets, location decisions of households and firms, transportation, urban labor markets, and the local public sector.

Mr. Ellickson, Mr. Hirsch

121. Urban Economic Analysis. Lecture, three hours. Prerequisites: courses 101A, 101B, and 120, or consent of instructor. Urban economic analysis requires the development of analytical tools that are different in some respects from the standard methodology presented in course 101A or 101B. The course focuses on the construction and implementation of these tools, with urban land location decisions, housing, transportation, labor markets, and the local public sector.

Mr. Ellickson, Mr. Hirsch

130. Public Finance. Lecture, three hours. Prerequisites: courses 101A and 101B, or consent of instructor. The course examines the consequences of government activities on the local economy. Topics include tax spending, and revenues and expenditures of state and local governments; the revenues, expenditures, and indebtedness of these governments. Analyses of state and local tax systems.

Mr. Haltiwanger, Mr. Plant, Mr. Robinson

133. State and Local Finance. Lecture, three hours. Prerequisite: course 130. The division of functions and revenues between state and local governments; the revenues, expenditures, and indebtedness of these governments. Analyses of state and local tax systems.

Mr. Hirsch

M135. Economic Models of Public Choice. (Formerly numbered M135A.) (Same as Political Science M105.) Prerequisites: course 101A, any lower division political science course other than Political Science 1, and junior/senior standing, or consent of instructor. The course analyzes the methods and consequences of arriving at collective decisions through political mechanisms. Topics include the free-rider problem, voting and majority choice, demand revelation, and political bargaining.

Mr. Hirshleifer, Mr. Rogowski, Mr. Stein

M136. Economic Models of Political Conflict and Conflict Resolution. (Formerly numbered M135B.) (Same as Political Science M106.) Prerequisites: courses 101A, any lower division political science course other than Political Science 1, and junior/senior standing, or consent of instructor. Biological, cultural, and organizational sources of political conflict. The role of threats, promises, commitments, Models of the onset and termination of conflict. The conduct of war: strategy and tactics.

Mr. Hirshleifer, Mr. Rogowski, Mr. Stein

141. Principles of Statistical Decision. Lecture, three hours. Prerequisite: course 40 or 41. First and second kind errors. Relative frequency and bayes' theorem. Applications of classical and bayesian approaches. Application to inventory and production problems. The value of information and implications for sampling design.

Mr. Ellickson, Mr. Hirshleifer, Mr. McCall, Mr. Ostro

142. Probabilistic Microeconomics. Lecture, three hours. Prerequisites: courses 40 (or 41), 101A, 101B. Topics include: microeconomic theory, theories of the firm, monopoly, market, economic planning in less developed areas. Costs of government programs, profit maximization, price elasticity of demand, market structure.

Mr. Schervish, Mr. Stein

144. Introduction to Mathematical Methods in Economics. Lecture, three hours. Prerequisites: courses 101A, 101B, two courses in calculus. An introduction to the use of calculus in economic analysis. Topics include partial differentiation, integration, differential and difference equations, the use of applications to the theory of the household and the firm, capital theory, and economic dynamics.

Mr. Ellickson, Mr. Intriligator, Mr. Riley

145. Topics in Mathematical Economics. Lecture, three hours. Prerequisite: course 144. Possible topics include theory of economic growth; competitive equilibria; general equilibrium; and major microeconomic theory; construction and implementation of the tools, with applications to urban location decisions and the local public sector.

Mr. Ellickson, Mr. Riley

146. Linear Models in Economics. Lecture, three hours. Prerequisite: a course in linear algebra. Not open to credit for students with credit for Mathematics 144 or Electrical Engineering 129A. Possible topics include the duality theory of linear programming and the simplex algorithm, input-output analysis, and two-person zero-sum games.

Mr. McCall, Mr. Ostro (Sp)

147A. Introduction to Econometrics. (Formerly numbered 147.) Lecture, three hours. Prerequisites: two courses in calculus and course 41 (or Mathematics 150A-150B or 152A-152B), or consent of instructor. An introduction to econometrics, including a review of matrix algebra and statistical theory; the linear regression model; model specification; data collection; estimation and hypothesis testing; and an introduction to simultaneous equations models. An original econometric paper is required.

Mr. Ellickson, Mr. Intriligator, Mr. Levine

147B. Applications of Econometrics. (Formerly numbered 147A.) Lecture, three hours. Prerequisite: course 147A. Econometric models and data; forecasting; policy analysis; estimation of simultaneous equations models, applications of econometrics. A major original econometric paper is required.

Mr. Ellickson, Mr. Intriligator, Mr. Levine

150. Wage Theory. Lecture, three hours. Prerequisites: courses 101A and 101B, or consent of instructor. The supply and demand for labor. Analysis of government, union, and other constraints on the competitive system of wage determination. Wages and level and structure. Wages and human capital theory.

Mr. Haltiwanger, Mr. Plant, Mr. Waldman

151. Labor, Wages, and Income. Lecture, three hours. Prerequisite: course 130 or consent of instructor. Selected topics in labor theory; income distribution; business cycles and unemployment; government programs and policies in human capital and life cycles; migration; human fertility; marriage and divorce, etc.

Mr. Hilton

160. Money and Banking. Lecture, three hours. Recommended prerequisite: course 102. Principals of money and banking in the United States; legal and institutional framework; money supply process; instruments, effects, and practice of monetary policy.

Mr. Darby, Mr. Friedman

161. Monetary Theory. Lecture, three hours. Prerequisite: course 160. The nature of money and monetary exchange; level and term structure of interest rates; level and growth rate of money; transmission of monetary shocks; theory and practice of monetary policy.

Mr. Darby, Mr. Friedman


Mr. Demsetz, Mr. Klein


Mr. Demsetz, Mr. Hirsch


Mr. Demsetz, Mr. Klein

174. The Organization of Firms. Lecture, three hours. Prerequisites: course 101A. Enrollment priority to economics/business students. The role of the firm in traditional economic theory and modern development in the theory of the firm. The functions of ownership and managers in firms; the role of conflict and cooperation; the internal organization of the firm. The problem of separation of ownership from control in the modern corporation. Determinates of firm size, vertical integration, and degree of specialization of the activities of firms. Decision making within the firm in a democratic setting.

Mr. Demsetz, Mr. Klein

175. Economics of Transportation. Lecture, three hours. Recommended prerequisite: course 101A. The economic characteristics of transport; the functions of the different transport industries and resources of transport; the modern transport problem.
176. Business and Government. Lecture, three hours. Prerequisites: courses 101A, 101B. Several aspects of the interaction between business and government are discussed, including the regulation of prices, entry, working conditions, natural resource use, policies of taxation, and subsidy of business.

Mr. Demsetz (F,W)


Mr. Murphy

181A. Development of Economic Institutions in Western Europe. (Formerly numbered C181.) Lecture, three hours. Prerequisite: upper division standing. European economic history, 900-1700. Custom, command, and market modes of organization. Evolution of property rights, contract forms, and monetary arrangements. Decline of feudal institutions, especially serfdom. The open field village and enclosures. Crafts manufacturing and guild organization. Development of banking. Public finances and the role of government. (Course is offered approximately every third year.)

181B. Development of Economic Institutions in Western Europe. (Formerly numbered C181.) Lecture, three hours. Prerequisite: upper division standing. European economic history, 1700-1914. The industrial revolution in its context and its span over the continent. The rise of factories, industrial firms, and unions. Changes in the standard of living and demographic consequences. Imperial expansion and the decline of Britain. Worldwide diffusion of economic growth and the German hypothesis. (Course is offered approximately every other year.)

Mr. Sokoloff

182. Centralized Economics Systems. Lecture, three hours. Prerequisites: courses 101A, 101B. The course provides an introduction to the theory of centralized systems and an examination of some centralized economies. Considerable attention to the economy of the U.S.S.R.; some attention to other economies selected in light of the centralized model and with a view to the march of current events.

Mr. Murphy

183. Development of Economic Institutions in the United States. Lecture, three hours. A study of the changing economic conditions in the U.S. from Colonial times to the early 19th century and the impact of these changes on American society.

Mr. Sokoloff

190. International Economics. Lecture, three hours. Limited to non-Economics Department majors. Not open for credit to students with credit for course 191 or 192. An introduction to international economics, based on an examination of the theory of trade and the means and significance of balance of payments adjustments, with analysis of major issues of international commercial and monetary politics, confrontational national and international agencies. May not be applied toward Economics Department majors.

Mr. Beckett

191. International Trade Theory. Lecture, three hours. Prerequisite: course 101B. Not open to students with credit for course 190. The theory of international trade: the bases, direction, terms, volume, and gains of trade. The effects of tariffs, quantitative restrictions, and international integration. The effects of bilateral and restricted trade on economic welfare and political stability.

Mr. Dollar

192. International Finance. Lecture, three hours. Prerequisite: course 102. Not open to students with credit for course 190. Emphasis on the interpretation of the balance of payments and the relationship between international equilibrium and the theory of international monetary and international equilibria through changes in price levels, exchange rates, and national income. Other topics include making international payments, determination of exchange rates under various monetary arrangements, exchange controls, and international monetary organization.

Mr. Friedman

198. Special Studies in Economics (2 or 4 units). Prerequisites: courses 101A, 101B, junior/senior standing, consent of instructor. May be repeated but may be applied only once toward the major requirements.

Graduate Courses


Mr. Hirschleifer

201B. Theory of Production and Distribution. Theory of the firm, with particular attention to the demand for factors of production in the short and long run. May cover an introduction to general equilibrium theory and welfare economics.

Mr. Welch

201C. Theory of Interest and Capital. Covers the topics of intertemporal choice and equilibrium, interest, and accumulation of capital, decisions under uncertainty, and the allocation of risk.

Mr. Dolan


Mr. Darby, Mr. Leijonhufvud


Mr. Darby, Mr. Leijonhufvud

M203A. Economics of Decision. (Same as Management M203A.) Prerequisites: rudiments of economic theory, calculus, and probability of statistics. Norms and facts of decision making in the household, business, and government. Consistent behavior in terms of personal utilities and probabilities. Multimodule value theory. Departures from consistency: descriptive theories of behavior and resulting models.

Mr. Erev, Mr. Sarin

M203B. Economics of Information. (Same as Management M203B.) Discussion, three hours. Prerequisites: rudiments of economic theory of the firm, calculus, probability, and statistics; course M203A or consent of instructor. Optimal decision and information risks. Risk aversion, stochastic dominance, and their impact on economic decisions in a stochastic environment.

Mr. Lippman


M204A-204Z. Applications of Economic Theory. (Formerly numbered 204A-204H.) Lecture, three hours.

207. History of Economic Theory. Mr. Allen

211. Economic Development. Prerequisite: graduate standing in economics or consent of instructor. General survey of current literature, emphasizing empirical tests of development theories.

Mr. Edwards

212. Applied Topics in Economic Development. Prerequisite: course 211 or consent of instructor. Applications of theories of development to case studies, including project analysis, policy-making at the national level, and economic planning. Occasionally the course focuses on a single applied research area for the entire quarter.

Mr. Edwards, Mr. Harberger

213A-213B. Selected Problems of Underdeveloped Areas. Seminars for graduate students.

221. Urban and Regional Economic Analysis I. Development of theoretical and empirical analysis of the major urban markets, including land and housing, transportation, labor, and the local public sector. Interdependencies within and between these markets are given particular emphasis.

Mr. Ellickson, Mr. Hirschleifer

222. Urban and Regional Economic Analysis II. Prerequisite: course 221. Development of theoretical and empirical analysis of the major urban markets, including land and housing, transportation, labor, and the local public sector. Interdependencies within and between these markets are given particular emphasis.

Mr. Ellickson, Mr. McCall


Mr. Harberger, Mr. Somers


Mr. Somers

233. Topics in Public Finance. Lecture, three hours. After a discussion of tax incidence and optimal taxation, it proceeds to a consideration of natural monopoly, personal income, corporate income, property, capital gains, consumption, and windfall profits. Both the excess burden and the incidence of these tax policies are examined, with emphasis on the different types of models economists have used to consider these questions. Other topics of current interest may be covered from year to year.


Mr. Thompson

M240. Control and Coordination in Economics. (Same as Computer Science M222.) Prerequisite: graduate standing in economics or engineering; consent of instructor. Recommended: appropriate mathematics course. Stabilization policies, short- and long-run dynamics and stability analysis; decentralization, coordination in teams; certainty equivocation and separation theorems; stochastic and learning models. Bayesian approach to price and output rate adjustment.

241A-241B-241C. The Economics of Uncertainty and Information. Prerequisites: calculus, introduction to probability. The sequence begins by examining how individuals adapt to the fact of uncertainty, with special emphasis on topics such as private versus social risk, adverse selection and moral hazard, and asset pricing under uncertainty. It next explores the ways in which individuals overcome uncertainty by engaging in informational activities. Topics include speculation, innovation, market signaling, and rational expectations. Third, the emphasis shifts away from evaluation of the market uncertainty. Topics include price searching, queuing, Brownian motion, and auction design.

Mr. Hirschleifer, Mr. McCall,Mr. Riley

242A-242B. Game Theory. Lecture, three hours. Prerequisites: course 245A or suitable mathematical courses. Elements of the theory of cooperative and noncooperative games, with applications to economic models. Strategic and coalition games, minimax Nash-Cournot equilibrium, bargaining theory, the core, imperfect competition, applications to oligopoly, general exchange and production economics, allocation of joint costs.

Mr. Shapley
243A-243B-243C. Workshop in Mathematical Economic Theory. Prerequisite: consent of instructor. Workshop for dissertation writers and pre-dissertation writers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA faculty members, advanced graduate students. Research paper is required. S/U grading. Mr. Ingritigor, Mr. Ostroy, Mr. Riley

244. Economic Modeling. Designed to help students learn to switch back and forth from the precise language of mathematics, as they analyze economic phenomena. Emphasis on the techniques of multivariate constrained optimization. Modeling skills are developed by considering a sequence of economic issues (e.g., peak load pricing, regulation monopoly, capital asset pricing, Pareto efficiency).

Mr. McCall, Mr. Riley

245A-245B-245C. Advanced Theory and Mathematical Economics. Prerequisite: course 201C or equivalent or consent of instructor. Selected advanced theoretical topics of current interest and an introduction to modern mathematical economics (including general equilibrium theory).

Mr. Ingritigor, Mr. Ostroy, Mr. Riley

246B. Introduction to Theory of Econometrics. Least-squares regression, generalized least squares, serial correlation, errors-in-variables, simultaneous equations, multicollinearity. Mr. Ingritigor

246C. Applications of Econometrics. Selected econometric studies of consumption, investment, asset demand production functions, goods markets, factor markets, industrial organization, public finance, international trade. Course includes instruction on use of computer. Students are expected to write a research paper.

Mr. Learner

248. Multiple Equation Econometrics. Multivariate regression, error-in-variables, simultaneous equations, proxy variables (latent variables). Mr. Ingritigor, Mr. Learner

249C. Special Topics in Econometrics. Mr. Ingritigor, Mr. Learner, Mr. McCall

251. Labor Economics I. Analysis of wage determination in competitive labor markets. Wage determination extends to schooling and occupational choice. Empirical literature of life cycle earnings profiles is examined. Special topics include discrimination, minimum wage legislation, and unionism. Mr. Welch

252. Labor Economics II. Prerequisite: course 251. Models of life cycle learning and work behavior together with one-period models of labor supply. Special emphasis on the recent literature of family decisions concerning labor supply behavior of women. Mr. Welch

253. Labor Problems. Mr. Welch


261. Monetary Economics I. Prerequisites: courses 202A, 202B, 202C. The existence of money; financial institutions and markets; supply of money; demand for money; money and wealth; money and growth; money and fluctuations in real income, employment, and inflation; interest rates; international monetary arrangements; monetary policy. Mr. Crowder, Mr. Leijonhufvud, Mr. Thompson

262. Monetary Economics II. Prerequisites: courses 202A, 202B, 202C. The existence of money; financial institutions and markets; supply of money; demand for money; money and wealth; money and growth; money and fluctuations in real income, employment, and inflation; interest rates; international monetary arrangements; monetary policy. Mr. Crowder, Mr. Leijonhufvud, Mr. Thompson

263A-263B-263C. Studies in Monetary Economics. Prerequisite: consent of instructor. Workshop for dissertation writers and pre-dissertation writers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA faculty members, advanced graduate students. Research paper is required. S/U grading. Mr. Clower, Mr. Leijonhufvud, Mr. Thompson

271. Industrial Organization, Price Policies, and Regulation: Theory. Analysis of the institutional resolution of the problem of economic organization. Major economic aspects of the property right system underlying these institutions are analyzed. The firm and the market are then compared from the perspective of alternative arrangements for allocating resources. Traditional problems of competition, monopoly, and industrial concentration are discussed. Course concludes with brief analysis of those portions of antitrust policy bearing on industrial structure.

Mr. Demsetz

272. Industrial Organization, Price Policies, and Regulation: Policy. Prerequisite: course 271. Study of firm organization and pricing under conditions of less than perfect competition; information costs and advertising; economic and legal analyses of marketing practices, such as discrimination, tie-in-selling, resale price maintenance, exclusive dealing, and territorial arrangements. Mr. Klein

273. Public Utility Regulation. Theory, practice, and consequences of regulation in electric power, gas, water, telecommunications, broadcasting, and other regulated industries; experience of unregulated monopoly and public enterprises by way of contrast. Mr. Hinton

274. Mathematical Theory in Industrial Organization. Lecture, three hours. Prerequisites: courses 201A, 201B, 201C. Formal modeling of the theory of industrial organization: the principal-agent problem; entry deterrence; endogenous price discrimination; monopolistic competition; new approaches to rationality. Mr. Waldman

275. National Transport Policy. Regulation of surface and air carriers; pricing and investment in public transport facilities; policy toward the merchant mariner. Mr. Hillon

277A-277B-277C. Workshop in Law and Economics. Prerequisites: graduate standing, consent of instructor. Workshop for dissertation writers and pre-dissertation writers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA faculty members, advanced graduate students. Research paper is required. S/U grading. Mr. Demsetz, Mr. Klein

278A-278B-278C. Dissertation Research Workshop in Economic Organization. Discussion, three hours. Prerequisite: consent of instructor. A workshop for advanced graduate students writing dissertations in the areas of transaction and information costs and the role these costs play in economic organizations and market processes. S/U grading. Mr. Demsetz, Mr. Klein

281. Evolution of Economic Institutions in Western Europe. (Formerly numbered C281.) Lecture, three hours. Prerequisite: graduate standing or consent of instructor. Seminar on selected topics in European economic history, with emphasis on theoretical analysis of institutions and institutional change. Examples: theories of serfdom and its disappearance, open versus closed system and enclosures, social class conflict, guild versus factory organization of manufacturing. Mr. Leijonhufvud

282. Soviet Economic Theory and Organization. Course deals with the overall strategy of planning used by U.S.S.R. planners and with specific planning methods. Method is interpreted broadly to cover not only instructions and objectives but also institutional arrangements. Intended and unintended outcomes of the methods are examined. Mr. Murphy

283. Evolution of Economic Institutions in the United States. An introduction to the professional literature of American economic history and to the most important substantive issues raised therein. Mr. Sokoloff

291. International Trade Theory. Theoretical and empirical analysis of the microeconomic relationships among countries. The determinants of commodity and factor flows, prices, and factor rewards. The effects of trade barriers. Mr. Allen, Mr. Learner


Mr. Allen, Mr. Edwards, Mr. Learner

293A-293B-293C. International Economics: Selected Topics. (Formerly numbered 293A-293B.) Discussion, three hours. The course combines student presentation of current research, lecturing by visiting experts and resident faculty members, and student discussion of current published research. The object is to expose students to critical analysis of their work and to suggest dissertation topics. S/U grading (based on oral and written performance). Mr. Edwards, Mr. Harberger, Mr. Learner

299A-299B-299C. Workshop for Preparing a Dissertation Proposal. (Formerly numbered 299.) Lecture, three hours. Workshop for third-year graduate students who are preparing for their oral qualifying examination. During the first part of the course, students present journal articles for critical analysis to develop their analytical skills. Later, students are required to present their own research for critical analysis by fellow students and faculty. Workshop is open to research in all fields of economics. S/U grading.

375. Teaching Apprenticeship Practicum (1 to 4 units). Prerequisite: apprenticeship personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.


597. Individual Study: Graduate Examinations (2 to 8 units). Directed individual study in preparation for M.A. comprehensive examination or Ph.D. qualifying examinations. S/U grading.


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Economics/System Science

(Interdepartmental)

2263 Bunche Hall, 825-1011

Professors

Masanoa Aoki, Ph.D. (Computer Science)
Bryan C. Eliclson, Ph.D. (Economics)
Michael D. Intriligator, Ph.D. (Economics)
Stephen E. Jacobsen, Ph.D. (Economics)
Scope and Objectives

The major is an alternative to the regular departmental major in economics and combines work in the School of Engineering and Applied Science with preparation in economic theory and in those aspects of mathematics and statistics necessary for the study of quantitative aspects of economics and systems theory. The major is appropriate for students with interests in such areas as economic theory, mathematical economics, econometrics, feedback and control systems, optimization, computing techniques, and the modeling and analysis of various socioeconomic systems.

Bachelor of Science Degree

Admission

Written applications are accepted from April 1 to May 15 only. Ten to 15 students will be admitted based on space availability, completion of “Preparation for the Major” courses, and the GPA in those courses. Minimum qualifications for admission include the completion of six preparatory courses (four of the mathematics courses with a minimum GPA of 3.0 exclusively must be included) and an overall 2.75 GPA in the preparatory courses. Any transfer credit applied to the major will be used in GPA calculations; physics grades will not be calculated into the GPA.

Preparation for the Major

Required: Economics 1 and 2; Computer Science 10C or 10F or Program in Computing 3 or 10; Mathematics 31A, 31B, 32A, 32B, 33A, 33B. Strongly recommended but not required: Physics 8A, 8B, 8C, 8D. All courses must be completed for a letter grade of C - or better. Repetition of more than one preparation course or of any preparation course more than once will result in automatic denial of admission to the major. Transfer credit for any of the above courses subject to department approval; consult the undergraduate counselor in 2253 Bunche Hall before enrolling in any courses for the major.

The Major

Required: Fourteen upper division courses (completed for a letter grade of C - or better) as follows: six courses in economics selected from Economics 101A and above, including 101A, 101B, 102, and one course from 141, 142, 144, 145, 146, 147A, 147B; six courses in system science selected from Electrical Engineering 120A through 129A, including 120A (or Mathematics 150A or 152A) and 120B (or Mathematics 151 or 152B); two courses in mathematics selected from Mathematics 110A and above (such mathematics courses may not also be applied toward the system science requirements).

Recommended courses include Computer Science 170 and Electrical Engineering 122A and 128A in the area of dynamic systems analysis and Electrical Engineering 129A in the area of optimization.

Education

The College of Letters and Science offers a program of courses through which you may receive credit toward a credential to teach in California elementary schools. For details, see “Diversified Liberal Arts” earlier in this chapter.

English

2225 Rolfe Hall, 825-4173

Professors

Michael J. B. Allen, Ph.D.
Martha Banta, Ph.D.
Calvin Bernard Bedient, Ph.D.
Charles Ashton Berst, Ph.D.
A. R. Braumuller, Ph.D., Vice Chair
Daniel G. Calder, Ph.D., Chair
Michael J. Colacurcio, Ph.D.
Vinton A. Dearing, Ph.D.
Reginald A. Foakes, Ph.D.
Patrick K. Ford, Ph.D.
Robert A. Georges, Ph.D.
Gerald Jay Goldberg, Ph.D.
George Robert Guffey, Ph.D.
Charles Bennett Gullans, Ph.D.
Henry Ansgar Kelly, Ph.D., Vice Chair
Jascha Kessler, Ph.D.
Robert Starr Kinsman, Ph.D.
Richard Alan Lanham, Ph.D.
Richard D. Lehan, Ph.D.
Anne Kostelanetz Mellor, Ph.D.
Maximillian Erwin Novak, D.Phil., Ph.D.
Waldo Woodson Phelps, Ph.D. (Rhetoric)
Joseph N. Riddett, Ph.D.
Florence Ridley, Ph.D.
Alan Henry Roper, Ph.D.
George S. Rousseau, Ph.D.
William David Schaefer, Ph.D.
Paul Roland Sellin, Ph.D.
Paul Douglas Sheats, Ph.D.
George Bernhard Tennyson, Ph.D.
Peter Larsen Thorslev, Jr., Ph.D.
Alexander Welsh, Ph.D.
D. K. Wilgus, Ph.D.
Thomas Richard Wortham, Ph.D.
Ruth B. Yeazell, Ph.D.
Stephen Irwin Yenser, Ph.D.

Emeritus Professors

Robert Martin Adams, Ph.D.
Robert William Dent, Ph.D.
Robert Paul Falk, Ph.D.
Charles V. Hartung, Ph.D.
Paul Alfred Jorgensen, Ph.D.
Robert Paul Fogel, Ph.D.
Joseph F. Nagy, Ph.D.
Paul Douglas Guffey, Ph.D.
Barbara Lee Packer, Ph.D.
Richard Alan Yarborough, Ph.D.

Associate Professors

Walter Eldon Anderson, Ph.D.
Charles Linwood Batten, Jr., Ph.D.
Frederick Lorrain Burwick, Ph.D.
Edward Ignatius Condon, Ph.D.
James Edward Goodwin, Ph.D.
Christopher Waldo Grose, Ph.D.
Albert David Hutter, Ph.D.
Gordon L. Kipling, Ph.D.
Jack Kolb, Ph.D.
Kenneth Robert Lincoln, Ph.D.
Robert Maniquis, Ph.D.
Joseph F. Nagy, Ph.D.
Barbara Lee Packard, Ph.D.
Raymund Arthur Paredes, Ph.D.
Jonathan F. S. Post, Ph.D.
Karen Elizabeth Rowe, Ph.D.

Assistant Professors

Susan Broden, Ph.D.
King-Kok Cheung, Ph.D.
Donka Minkova, Ph.D.
Michael Andrew North, Ph.D.
Vincent P. Pecora, Ph.D.
Jeffrey Rubin-Dorsky, Ph.D.
J. Fisher Solomon, Ph.D.
Seth Joshua Weiner, Ph.D.
Richard Alan Yearborough, Ph.D.

Senior Lecturers

David Stuart Rodes, Ph.D.
Jerome Cushman, A.B., B.S.L.S., Emeritus
Everett L. Jones, M.A., Emeritus

Adjunct Professor

Brian Moore

Scope and Objectives

An interest in English and American literature draws many students to the Department of English, which also offers courses in other fields, including the history and structure of the English language itself. Although committed to no single method or approach, the department encourages an emphasis on literary history and requires of its undergraduate majors a firsthand acquaintance with such influential writers as Chaucer, Milton, and Shakespeare. Students may range outward from this core to a rich variety of other fields — literary criticism, for example, or the ethnic literatures and popular culture of America, or the relation of literature to such complementary disciplines as history, sociology, psychology, and philosophy. Qualified students may elect a concentration in creative writing or an interdisciplinary program in American studies.

An understanding and appreciation of literature can furnish lifelong rewards. In addition to such personal benefits, the department seeks to impart the capacity to make balanced 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 two-year graduate program leading to the Master of Arts degree is often selected by students planning a career in community college teaching. A second program leads to the Ph.D.
degree. As this may require six 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.

Bachelor of Arts Degree

Admission to Courses in English
You must have completed the Subject A requirement before taking any courses in English (other than English A or B). For further information regarding Subject A, see “Undergraduate Degree Requirements” in Chapter 2.

Preparation for the Major

Required: English 3, 4, 10A, 10B, 10C taken in the stated sequence (each course is a prerequisite for the next course).

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) any combination of five courses in foreign language and foreign literature, including foreign literature in translation (see course listings later in this section of the catalog). For option 2, the department especially recommends Classics 144, Humanities C107, 116. These courses may be taken on a P/NP grading basis.

The Major

Required: English 141A or 141B, 142A, 142B, 143, at least one course from the 180 series, and a minimum of seven additional upper division English courses. At least five of the seven courses must be selected from 140A, 140B, 142C, or 150 through 190. At least one of the seven courses must be in literature before 1900 (the 150 series).

You are encouraged to choose additional electives from courses 140A through M197. English 140A is especially recommended if you plan graduate work in literature. You may wish to select several courses in the relevant classical and postclassical foreign literatures and thought; the department especially recommends Classics 144, 161, Humanities C107, 116.

Special Programs

The department offers special programs in American studies and general literature. For both 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 planning to do graduate work in English should consult the departmental counselor before selecting either of these.

American Studies: This program consists of nine upper division courses in English and six related upper division courses taken in other departments. The nine English courses must include 109 and 178; two courses from 142A, 142B, 143; three courses from 170, 171, 172, 173, 174; and one course pertaining to American studies selected from the 180 or 190 series, taken preferably in the senior year. Of the six upper division courses in other departments, four must be in a selected discipline (history, political science, art, etc.). One of the four courses must deal with the methodology of the discipline, while the other three must explicitly treat American culture. The courses must be selected in consultation with the English departmental counselor.

General Literature: This program consists of nine upper division courses in English or American literature and six upper division courses in foreign literatures (at least one of which must be taught in the original language). The nine English courses must include 142A and 142B; 141A, 141B, or 143; at least one course from the 150 series; and four electives selected from courses 140A through M197 (students intending graduate work in literature are especially encouraged to take English 140A). A listing of acceptable courses may be obtained from the department.

Creative Writing Major

For this major, you must satisfy all requirements listed under “Preparation for the Major,” including the foreign language requirement. The major consists of English 142A and 142B and a minimum of ten additional upper division English courses: three creative writing courses from the 133A through 135C series, taken in a single genre (poetry, short story, or drama), three literature courses paralleling the creative writing specialization, and four electives selected from courses 140A through M197. If you are planning to choose this major, you are encouraged to take course 20; for further details, contact the departmental counselor.

Major for Foreign Students

The department offers a special major in English foreign students whose first language is other than English. For this major, you must satisfy all requirements listed under “Preparation for the Major”; you may fulfill the departmental foreign language requirement with your own native language. The following 12 courses are required for the major itself: English (ESL) 103J, 105J, 109J; two courses from English 100A through 199; 122, 142A, 142B, and four additional courses from those numbered 140A through 199. If you complete this major and wish to pursue graduate study, you should consult the departmental counselor or about programs of study and requirements for admission.

Teaching Credential Candidates

If you wish to obtain a credential to teach English, you should declare your intention at the beginning of your junior year and seek the advice of the departmental counselor in planning a coherent program. The department requires English 120A or 120B or 120C, 130, and at least one American literature course selected from 170 through 174 as part of, or in addition to, the major. You must also complete English 300 before you can be certified to begin student teaching. You are encouraged to select additional courses in language, children’s literature, literature for adolescents, American literature, and literature for minorities as some of your electives. Note: Students who enter the Graduate School of Education seeking a credential to teach English must, before beginning their required practice teaching assignment, be certified by the Department of English as prepared to teach this subject; the department will not certify any student who has not completed the courses specified above. For additional information on courses leading to the teaching credential, consult the Graduate School of Education (201 Moore Hall) or the Department of English.

Honors Program

Admission: The honors program is open to English majors with a 3.5 departmental and a 3.25 overall grade-point average. If you have a lower GPA, you may petition for admission to the program, but these grade-point averages must be achieved before graduation in order to qualify for honors. You should apply by the second quarter of your junior year. For application forms and further information, contact the departmental counselor.

Requirements: All honors students are required to take English 140A during the junior year and one seminar from the English 180 through 189 sequence, preferably before the senior year. In the Fall Quarter of your senior year, you must take course 199HA. During the Winter and Spring Quarters, you will take courses 199HB and 199HC, in which you will write a thesis under the direction of a faculty member. The thesis will determine whether you receive high honors, honors, or no honors.

M.A. and Ph.D. Degrees

All students admitted into the UCLA English graduate program with a B.A. must enter the M.A. course of study, which also serves as the first phase of the doctoral program for those who wish to pursue the Ph.D. The M.A. degree may be obtained either by passing the first qualifying examination (which also grants admission into the second phase of the doctoral program) or by writing a thesis. Students admitted with a master's degree may waive most course requirements but must pass the first qualifying examination.
Admission

Admission to the program is based on a thorough review of the student's academic record. Ordinarily, students holding the B.A. are expected to meet these minimum requirements: an undergraduate major or program that provides preparation for advanced study of literature; a grade-point average in all English courses and in the junior and senior years of at least 3.4; and a recent (within the last five years) score on the Graduate Record Examination (GRE) of 620 on both the verbal section of the general test and the Literature in English Subject Test. Applicants holding the M.A. are expected to have a grade-point average of at least 3.5 in all graduate courses and correspondingly higher scores on the Literature in English Subject Test. A minimum of three letters of recommendation attesting to your ability to succeed in graduate study are also required. Care should be taken with the statement of purpose, since it is considered a sample of your writing ability. For a descriptive brochure, write to the Graduate Counselor, Department of English, 2225 Rolfe Hall, UCLA, Los Angeles, CA 90024.

If you are limited on admission to the M.A. program, you may continue in the doctoral program by passing the first qualifying examination. If you elect the M.A. thesis option, you may, on completion of that course of study, petition to enter the doctoral program provided you have maintained a grade-point average of at least 3.5 in your graduate studies and are recommended by your thesis committee. Such petitions are not automatically approved and should be accompanied by appropriate supporting materials.

Foreign Language Requirement

If you are pursuing only the M.A. degree, you may fulfill the language requirement by demonstrating a reading knowledge of any foreign language. This requirement should be satisfied at the beginning of your first quarter of residence, but in any event no later than the mid-point of the quarter in which you complete all degree requirements.

If you are pursuing the Ph.D., you are normally expected to have a reading knowledge of two foreign languages, or to demonstrate a superior proficiency in a single language. The departmentally approved languages are French, German, Italian, Spanish, Latin, and Greek, but other languages may be substituted by petition on the basis of a special research interest.

Course Requirements

Nine letter-graded English courses from the 200 series are required for the M.A., including one course in literary criticism (English 201). If you enter the program with an M.A. in English, you are presumed to have fulfilled the nine-course requirement but must take course 201 or the equivalent prior to the first qualifying examination. You are also urged to begin fulfilling the second-stage requirements at this time.

Teaching Experience

Although teaching experience is not required, most students in the Ph.D. program have the opportunity to serve as teaching assistants after passing English 495A and being in the program for at least one year. Teaching assistantships are awarded on the basis of merit.

Qualifying Examinations

The doctoral program is divided into three stages, the first two of which culminate in the first and second qualifying examinations.

First Stage

First Qualifying Examination Option: If you select the examination option for the M.A. or are pursuing the Ph.D. degree, you take the first qualifying examination after passing the nine required courses and satisfying at least one of the foreign language requirements. The examination consists of four written tests of four hours each. The four parts are graded high pass, pass, low pass, or fail; in order to pass the examination as a whole, you must have maintained a passing grade on each of the parts. A grade of low pass on all four parts is considered a failure; the graduate faculty decides in each case whether to grant an M.A. and whether you will be admitted to the second stage of the Ph.D. program. Further details on breadth, philology, and bibliography requirements are available from the department.

Thesis Option: If you select the thesis option for the M.A., you must request a thesis committee (three faculty members) from the graduate counselor at least two quarters before completing the program. The committee then meets with you to consider your thesis proposal. Your thesis should not be less than 40 nor more than 60 pages in length.

Second Stage

In this stage of the program, you must take five courses from the 200 series in English, including a minimum of three seminars. You are encouraged to take as many seminars as possible (any graduate seminar may be repeated for credit), as well as suitable courses in other departments. When sufficiently well prepared and after satisfying the second language requirement, you take the second qualifying examination.

Second Qualifying Examination: The University Oral Qualifying Examination, at least two hours in length, consists of two parts. The first covers a 100-year period or longer in English or American literature. The second part deals with your prospectus, a substantially researched paper which has been approved by the committee chair and distributed to the committee at least one week before the scheduled examination. The committee must certify both that you are competent in the historical field and that the prospectus has been approved. If you fail one or both parts of the examination, you may, at the discretion of the committee, repeat it only once.

Third Stage

Once you have passed the second qualifying examination, you may advance to candidacy and, on application, receive the Candidate in Philosophy (C.Phil.) degree. You may then proceed with the writing of the dissertation.

Final Oral Examination

A final oral defense of the dissertation is optional with the doctoral committee but is usually not required.

Lower Division Courses

A. Basic Review of English Usage (No credit). See listing under "English Composition."

B. Fundamentals of Exposition (No credit). See listing under "English Composition."

C. English Composition, Rhetoric, and Language. See listing under "English Composition."

D. English Composition, Rhetoric, and Language (Honors). See listing under "English Composition."

4. Critical Reading and Writing. Prerequisites: satisfaction of Subject A requirement, course 3 or equivalent. An introduction to literary analysis, with close reading and carefully written exposition of selections from one or more of the principal modes of literature: poetry, prose fiction, and drama. Minimum of six papers (three to five pages).

4H. Critical Reading and Writing (Honors). Discussion, three hours. Prerequisites: satisfaction of Subject A requirement, course 3 or equivalent, consent of department. An introduction to literary analysis, with close reading and carefully written exposition of selections from one or more of the principal modes of literature: poetry, prose fiction, and drama. Minimum of six papers (three to five pages).

10A. English literature to 1660. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A. A study of selected works of the 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) or equivalent.

10B. English literature, 1660-1832. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A. A study of selected works of the period, including writings by Dryden, Pope, Swift, Wordsworth, and Keats. Minimum of three papers (three to five pages) or equivalent.

10C. English Literature, 1832 to the Present. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B. A study of selected works of the period, including writings by Tennyson, Arnold, Browning, Yeats, Joyce, and Eliot. Minimum of three papers (three to five pages) or equivalent.

20. Introduction to Creative Writing. Prerequisites: satisfaction of Subject A requirement, course 3 or equivalent, submission of creative or expository writing samples to a screening committee. Designed to introduce the fundamentals of creative writing. Each class focuses either on poetry, fiction, or drama, depending on the wishes of the instructor(s) during any given quarter. Readings from assigned texts and weekly writing assignments are required.
30. Intermediate Exposition. Prerequisite: satisfaction of Subject A and English Composition requirements. An intermediate course in academic writing which follows course 3 and teaches students how to write longer papers built on more complex, demanding texts. Readings include at least two books dealing with issues central to the discipline, the natural sciences, or life sciences. Writing assignments include a research project appropriate to students’ majors.

75. Major British Authors, 1800 to the Present. Prerequisite: satisfaction of Subject A requirement. Not open for credit to English majors or students with credit for course 10B or 10C. A study of selected works of English literature from 1800 to the present, including the works of such writers as Wordsworth, Coleridge, Keats, Tennyson, Dickens, Browning, Yeats, Joyce, and Eliot.

M104B. Afro-Amer. Literature since the 1940's. Prerequisite: satisfaction of Subject A requirement. An introductory survey of the Afro-American literary tradition from the 18th century to World War I, and of African-American literature since World War II. Includes James Baldwin, Langston Hughes, Stirling Silliphant, Richard Wright, James Baldwin, Gwendolyn Brooks, Richard Wright, James Baldwin, Langston Hughes, Stirling Silliphant, Richard Wright, James Baldwin, Gwendolyn Brooks, Richard Wright. Mr. Rubin-Dorsky, Mr. Wortham

105. The American Novel. Prerequisite: satisfaction of Subject A requirement. Not open for credit to English majors or students with credit for any courses in the 170 series. An introduction to the chief American authors, with emphasis on the poetry, non-fiction prose, and short fiction of such writers as Poe, Dickinson, Emerson, Whitman, Twain, Frost, and Hemingway.

M109D. Introduction to Special Topics and Genres. Prerequisites: satisfaction of Subject A requirement. The special study of a particular topic, genre, or subgenre in literary studies. May be repeated for credit.

109. Interdisciplinary Approaches to Literature. Prerequisite: satisfaction of Subject A requirement. The study of British or American literature in relation to other disciplines such as history, philosophy, psychology. May be repeated for credit.

110. Studies in Individual Authors. Prerequisite: satisfaction of Subject A requirement. The specialized study of the works of a single poet, dramatist, prose writer, or novelist. May be repeated for credit.

M111A. The Literature of Myth and Oral Tradition. (Same as Folklore M111.) Prerequisite: satisfaction of Subject A requirement. A study of myth, dramatic origins, oral and folktale literature, emphasizing Indo-European and Semitic examples.

M111B. Anglo-American Folk Song. (Same as Folklore CM106.) Prerequisites: satisfaction of Subject A requirement, junior standing. A survey of Anglo-American balladry and folk song, with attention to historical development, ethnic background, and poetic and musical values.

M110D. Celtic Mythology. (Same as Folklore M122.) Prerequisite: Folklore 101 or consent of instructor. A survey of the major Irish, Welsh, and Celtic literatures, for the study of the mythic traditions of the Celtic peoples, ranging from ancient Gaul to medieval Ireland and Wales.

M111E. Survey of Medieval Celtic Literature. (Same as Folklore M112.) Prerequisite: satisfaction of Subject A requirement. Knowledge of Irish or Welsh is not required. A general course dealing with Celtic literature from the earliest times to the 14th century.

M111F. Celtic Folklore. (Same as Folklore M127.) Prerequisite: Folklore 101 or consent of instructor. The folkloric traditions of modern Ireland, Scotland, and other Celtic countries, with attention to current techniques of folkloristic research.

M111G. Oral Traditions in Africa. (Same as Folklore M155.) Prerequisite: upper division standing. A survey of African folk traditions: folklore, epic, heroic poetry, and folk song.

112. Children’s Literature. Prerequisite: satisfaction of Subject A requirement. The course analyzes and evaluates the literature intended mainly for students in junior and senior high schools. It also reviews mature books that are popularly suggested for this age group, and studies the interests and reading habits of young adults.

114. World Literatures in English. Prerequisites: satisfaction of Subject A requirement, consent of instructor. A survey of contemporary literature from English-speaking regions of the world, reviewing the major genres from several countries and making cross-cultural comparisons. Genres considered are narrative, poetry, drama, and some non-fiction. Generalizations concerning the nature of the English used by such writers are examined. May be repeated for credit.

M155. American Popular Literature. (Formerly numbered M155.) Prerequisite: English 108B. An introduction to the main current and historical types of children’s literature, folklore and oral tradition, levels of interest, criticism and evaluation, illustration and bibliography.

113. Literature for Adolescents and Young Adults. Prerequisite: satisfaction of Subject A requirement. The course analyzes and evaluates the literature intended mainly for students in junior and senior high schools. It also reviews mature books that are popularly suggested for this age group, and studies the interests and reading habits of young adults.

120. World Literatures in English. Prerequisites: satisfaction of Subject A requirement, consent of instructor. A survey of contemporary literature from English-speaking regions of the world, reviewing the major genres from several countries and making cross-cultural comparisons. Genres considered are narrative, poetry, drama, and some non-fiction. Generalizations concerning the nature of the English used by such writers are examined. May be repeated for credit.

M155. American Popular Literature. (Formerly numbered M155.) Prerequisite: English 108B. An introduction to the main current and historical types of children’s literature, folklore and oral tradition, levels of interest, criticism and evaluation, illustration and bibliography.

113. Literature for Adolescents and Young Adults. Prerequisite: satisfaction of Subject A requirement. The course analyzes and evaluates the literature intended mainly for students in junior and senior high schools. It also reviews mature books that are popularly suggested for this age group, and studies the interests and reading habits of young adults.

114. World Literatures in English. Prerequisites: satisfaction of Subject A requirement, consent of instructor. A survey of contemporary literature from English-speaking regions of the world, reviewing the major genres from several countries and making cross-cultural comparisons. Genres considered are narrative, poetry, drama, and some non-fiction. Generalizations concerning the nature of the English used by such writers are examined. May be repeated for credit.

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M155. American Popular Literature. (Formerly numbered M155.) Prerequisite: English 108B. An introduction to the main current and historical types of children’s literature, folklore and oral tradition, levels of interest, criticism and evaluation, illustration and bibliography.
140. Criticism: History and Theory. (Formerly numbered 140.) Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the major English literary works and documents of the historical periods in English literature, with special emphasis on the development and conceptions of critical thinking throughout literature.

Mr. Kolb, Mr. Solomon

153. Literature of the Early 17th Century (1600-1660). Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the major works as literary documents and as a product of the 17th-century English. The work of Milton is excluded.

Mr. Grose, Mr. Collins, Mr. Post

154. Literature of the Restoration and Earlier 18th Century (1660-1730). Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of the major works as literary documents and as products of the Restoration and earlier 18th-century thought.

Mr. Dearing, Mr. Roper, Mr. Rousseauch
170. American Literature to 1800. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A historical survey of American literature through the Colonial and early national periods.
  Mr. Colacurcio

171. American Literature, 1801-1865. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A historical survey of American literature, including fiction, from the beginning of the 19th century to the end of the Civil War.
  Ms. Packer, Mr. Rubin-Dorsky, Mr. Wortham

172. American Literature, 1866-1912. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A historical survey of American literature from the end of the Civil War to the founding of Poetry magazine.
  Ms. Santa, Mr. Rubin-Dorsky, Mr. Wortham

  Mr. Bedient, Mr. Riddel, Mr. Venser

  Mr. Goodwin, Mr. Paredes, Mr. Yarborough

175. American Poetry, 1945 to the Present. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. A study of contemporary American poetry.
  Mr. Riddel, Mr. Venser

177. American Fiction, 1945 to the Present. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. An interdisciplinary study of American literature in its relationships to other disciplines, including art, architecture, film, history, music, politics, and various social sciences. The course concentrates on the application of literary methodology to a historical survey of American culture.
  Mr. Goldberg, Mr. Wortham

178. Perspectives in the Study of American Culture. (Formerly numbered 175.) Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. An interdisciplinary study of American literature in its relationships to other disciplines, including art, architecture, film, history, music, politics, and various social sciences. The course concentrates on the application of literary methodology to a historical survey of American culture.
  Mr. Goodwin, Mr. Paredes, Mr. Yarborough

Courses 180 through 189 are designed to permit a small number of students (normally 15) to engage in concentrated study in an area in which they have a particular interest and in which they have taken adequate upper division background courses. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. For the author, period, genre, or subject to be studied, see the Schedule of Classes for any given quarter. For further details, see the departmental counselor. Courses may be repeated for credit.

180. Specialized Studies in Medieval Literature.

180X. Specialized Studies in Literature.

181. Specialized Studies in Renaissance Literature.


183. Specialized Studies in 18th-Century Literature.


188. Specialized Studies in 19th-Century American Literature.


190. Literature and Society. Prerequisites: satisfaction of Subject A requirement, courses 3, 4, 10A, 10B, 10C. The intensive study of some aspect of the relationship between literature and social, economic, or political history. May be repeated for credit.
  Mr. Goodwin

191. M197. Topics in Afro-American Literature. (Same as African Studies M197.) A variable specialized studies course in Afro-American literature. Topics include the Harlem Renaissance; Afro-American Literature in the Nadir, 1890-1914; Contemporary Afro-American Fiction. May be repeated for credit.
  Mr. Yarborough

197H. Honors Seminar for Freshmen and Sophomores. Seminar, three hours. Prerequisites: courses 3, 4. Limited to 15 students. Recommended for lower division students who anticipate entering the honors program in English during their junior year. Content varies; see departmental counselor for information.
  Mr. Batten

199. Special Studies in English (2 to 4 units). Prerequisite: consent of instructor. An intensive directed research project. To enroll or obtain information, see departmental counselor.

199HA. Honors Seminar. Prerequisite: course 140A. An introduction to research techniques and a study of various approaches and applications of critical methodology as it relates to the interpretation and evaluation of texts.
  Mr. Solomon (F)

199HB-199HC. Honors Tutorial. (Formerly numbered 199H.) Prerequisites: course 199HA, consent of instructor. A tutorial in which students write a thesis under the direction of a faculty member. In Progress grading.
  Ms. Minkova (W, Sp)

199L. Independent Study for Internships (2 to 4 units). Prerequisite: consent of instructor. An independent study course to be supervised jointly by the Field Studies Office and the faculty supervisor. Further supervision to be provided by the business for which the student is doing the internship. P/NP grading.

Rhetoric

170. Rhetoric of Winston Churchill. Prerequisites: English B, upper division standing. An intensive study of the major speeches of Winston Churchill during the wartime years, the 1930s, and the wartime years. The background and impact of these speeches also are examined.
  Mr. Phelps

171. Rhetoric of Franklin Roosevelt. Prerequisites: English B, upper division standing. An intensive study of major speeches and fireside chats during Roosevelt's presidency. The background and impact of these speeches also are examined.
  Mr. Phelps

172. Rhetoric of Harry S. Truman. Prerequisites: English B, upper division standing. An intensive study of the major speeches of President Harry S. Truman. The background and impact of these speeches are examined in relation to the social and political context of the Truman years.
  Mr. Phelps

180. Contemporary Rhetorical Theory. Prerequisites: senior standing, one course from 170, 171, or 172, consent of instructor. Intensive study of contemporary rhetorical theory, including Winans, Woolbert, Phillips, Brignac, Blankenship, and others. Reports and papers.
  Mr. Phelps

Graduate Courses

200. Approaches to Literary Research. The bibliographical tools of English and American literary scholarship: an introduction to descriptive bibliogra phy and basic methods of research.
  Mr. Batten, Mr. Kipling

201. The History of Literary Criticism. The study of the major documents in Western literary theory from Plato to the present.
  Mr. Kolb, Mr. Solomon

202. Enumerative and Descriptive Bibliography. Problems in bibliography, texts, and editions, with practical application in compiling bibliographies, editing texts, and approaching literature through textual criticism.
  Mr. Dearing

203. Computers and Literary Research. Prior knowledge in this area is not necessary. Practice in writing and using computer programs for the analysis of literary style, content, and authorship.
  Mr. Dearing

M205. Perspectives in American Folklore Research. (Same as Folklore M205.) Prerequisites: Folklore 101, one other upper division folklore course. An examination of American folklore courses compared and contrasted with investigations in other countries, with emphasis on the principal conceptual schemes and research orientations employed in the study of folklore in American society.
  Mr. George, Mr. Jones, Mr. Stern

210. History of the English Language. A detailed study of the history, characteristics, and changing forms of the language from its origin until about 1900.
  Ms. Minkova

211. Old English. Study of Old English grammar, lexicon, phonology, and morphology to enable the student to attend the language silently and aloud. Reading of as much of the more interesting Old English prose and poetry as can be read in a quarter.
  Mr. Calder, Mr. Condren

212. Middle English. Prerequisite: course 211. Detailed study of the linguistic aspects of Middle English and of representative examples of the better prose and poetry.
  Mr. Condren, Ms. Minkova, Ms. Ridley

213. Early Modern English. (Not the same as course 213 prior to Fall Quarter 1985.) Detailed study of the phonology, morphology, syntax, and vocabulary of English between 1450 and 1750. The changes in the language are described and analyzed in relation to the intellectual, political, and social characteristics of the period.
  Ms. Minkova

214. Modern English. (Formerly numbered 213.) Description and analysis of modern English phonology, grammar, and vocabulary, using the theory and techniques of contemporary linguistics. A survey of the evolution of American English and an account of the characteristic phonological and grammatical features of the major regional varieties of English around the world.
  Ms. Minkova

216A-216B. Old Irish. Prerequisite: consent of instructor. Study in Irish grammar. Readings in the glosses and other texts. Comparative considerations.
  Mr. Ford, Mr. Nagy

217A-217B. Medieval Welsh. Prerequisite: consent of instructor. Study in Welsh grammar. Readings in the Mabnegi and other texts. Comparative Considerations.
  Mr. Ford

218. Celtic Linguistics. Prerequisite: consent of instructor. A survey of salient features of the Celtic linguistic stock in its Gaelic and British branches, with reference to the position of Celtic within Indo-European languages.
  Mr. Ford

The following courses stress wide reading in major authors, works, and intellectual developments.

220. Readings in Medieval Literature.
  Mr. Calder, Mr. Kelly, Ms. Ridley

221. Readings in Renaissance Literature.
  Mr. Allen, Mr. Kinsman, Mr. Lanham

222. Readings in Earlier 17th-Century Literature.
  Mr. Guffey, Mr. Guillas, Mr. Sellin
223. Readings in Restoration and 18th-Century Literature. Mr. Dearing, Mr. Novak, Mr. Rousseau
224. Readings in Romantic Literature. Mr. Burwick, Mr. Maniquis, Mr. Thorslev
225. Readings in Victorian Literature. Mr. Tennyson, Mr. Welsh
226A. Readings in Earlier American Literature. Mr. Colacurcio, Mr. Rubin-Dorsky, Mr. Wortham
226B. Readings in 19th-Century American Literature. Ms. Packer, Mr. Wortham
227. Readings in 20th-Century American Literature. Mr. Lehan, Mr. Paredes, Mr. Riddel
228. Readings in 20th-Century British Literature. Mr. Bedient, Mr. Kessler
229A. Readings in the Novel. Mr. Lehan, Mr. Novak
229B. Readings in the Drama. Mr. Braunmuller
Seminar courses (230 through 260) are open to all graduate students with adequate preparation and may be repeated for credit. Enrollment is by consent of instructor, and continuing students must sign up for seminars before the end of the preceding quarter. A prospectus announcing topics and seminars will be available in the department office in early summer for the ensuing academic year.

230. Workshop in Creative Writing. Prerequisite: consent of instructor, following submission of writing samples in the specified genre (poetry, fiction, or drama). May be repeated but may not satisfy more than one of the nine courses required for the first qualifying examination nor any of the five courses required for the second qualifying examination. Mr. Yenser

M235. African Myth and Mythology. (Same as Folklore M235.) Prerequisite: graduate standing. The seminar examines the methods of analyzing and appreciating African myths and mythological systems.

239. Explication (2 units). Lecture, one hour; discussion, one hour. Recommended for first-stage Ph.D. candidates. Seminar to provide training in practical criticism. May be repeated for credit. S/U grading.

240. Studies in the History of the English Language. Individual seminars deal with any single historical period from the Old English period to the present or a particular linguistic characteristic (phonology, syntax, semantics, sociolinguistics) through various periods. Ms. Minkova

241. Studies in the Structure of the English Language. Prerequisite: consent of instructor. Topics in various aspects of the structure of modern English, especially syntax and semantics. Ms. Minkova

242. Language and Literature: The Application of Linguistics to Literary Analysis. Individual seminars deal with a historical period (medieval and Renaissance, early 19th-century American, and others), with some attention to European analogues.

Ms. Brienza, Mr. Grose, Mr. Lanham

M243A. The Ballad. (Same as Folklore M243A.) Prerequisite: consent of instructor. A study of the English and Scottish popular ballads and their American derivatives, with some attention to European analogues. Mr. Wigus

M243B. Problems in Ballad Scholarship. (Same as Folklore M243B.) Prerequisite: course M243A or consent of instructor. Intensive investigation of a problem or problems in the study of the popular ballad. Mr. Wigus

244. Old and Medieval English Literature. Studies in the poetry and prose of Old and medieval English literature; limits of investigation to be set by the individual instructor. Mr. Calder, Mr. Kelly, Ms. Ridley

245. Chaucer. Mr. Condran, Mr. Kelly, Ms. Ridley

246. Renaissance Literature. Studies in the poetry and prose of Renaissance English literature, exclusive of Shakespeare; limits of investigation to be set by the individual instructor. Mr. Allen, Mr. Kinsman, Mr. Kipling

247. Shakespeare. Mr. Allen, Mr. Braunmuller, Mr. Foakes

248. Earlier 17th-Century Literature. Studies in the poetry and prose of 17th-century English literature up to the Restoration; limits of investigation to be set by the individual instructor. Mr. Guffey, Mr. Gullans, Mr. Sellin

249. Milton. Studies in the poetry and prose of John Milton; particular emphasis to be set by the individual instructor. Mr. Gorse, Mr. Post, Mr. Sellin

250. Restoration and 18th-Century Literature. Studies in English literature from 1660 to 1800; limits of investigation to be set by the individual instructor. Mr. Novak, Mr. Roper, Mr. Rousseau

251. The Romantic Writers. Mr. Burwick, Mr. Sheats, Mr. Thorslev

252. Victorian Literature. Studies in English poetry and prose of the Victorian period; limits of investigation to be set by the individual instructor. Mr. Kolb, Mr. Tennyson

253. Contemporary British Literature. Mr. Bedient, Mr. Kessler, Mr. Yenser

254. American Literature to 1900. Studies in Colonial and 19th-century American literature; limits of investigation to be set by the individual instructor. Ms. Banta, Mr. Colacurcio, Ms. Packer

255. Contemporary American Literature. Studies in contemporary American poetry and prose; limits of investigation to be set by the individual instructor. Mr. Lehan, Mr. Riddel, Mr. Yenser

256. Studies in the Drama. Studies in the drama as a genre from its beginning to the present; limits of investigation to be set by the individual instructor. Mr. Berst, Mr. Braunmuller, Mr. Foakes

257. Studies in Poetry. Studies in various themes and forms of poetry from Old English to the present; limits of investigation to be set by the individual instructor. Mr. Bedient, Mr. Kessler, Mr. Riddel

258. Studies in the Novel. Studies in the evolution of the genre from its beginning to the present; limits of investigation to be set by the individual instructor. Mr. Lehan, Mr. Novak, Mr. Welsh

259. Studies in Criticism. Mr. Guffey, Mr. Hutter, Mr. Riddel

260. Studies in Literature and Its Relationship to the Arts and Sciences. Studies in the interrelationships of literature, the arts, and the sciences; limits of investigation to be set by the individual instructor. Mr. Guffey, Mr. Lincoln, Mr. Rousseau

M261. Studies in African Literature in English. (Formerly numbered M271.) (Same as English as a Second Language M265K.) Prerequisite: consent of instructor. Special problems and trends of African literature in English. Mr. Povey (W)

M262. Studies in Afro-American Literature. (Formerly numbered M273.) (Same as Afro-American Studies M200E.) Prerequisite: consent of instructor. Intensive research and study of major themes, issues, and writers in Afro-American literature. Discussions and research on the aesthetic, cultural, and social backgrounds of Afro-American writing.

Mr. Yarborough

263. Celtic Literature. Lecture, three hours. Prerequisite: knowledge of one of the ancient or modern Celtic languages. Studies in the poetry and prose of early and modern Celtic literatures, chiefly Irish and Welsh; limits of investigation to be set by the individual instructor. Mr. Ford, Mr. Nagy

270A-270B. English for the Two-Year College. Prerequisite: course 120B or 275. The courses involve both discussion and practice of two-year college instruction in reading and composition. In Progress grading.

272. Current Issues in the Teaching of English. Prerequisite: course 120B or Linguistics 100. The course focuses each time on one of a variety of topics of special current interest. Mr. Lanham

M274. The Teaching of English for Minority Groups. (Formerly numbered 274.) (Same as English as a Second Language M224K.) Prerequisites: English (ESL) 370K and Linguistics 100, or consent of instructor. The course includes an-depth description of the dialects of English and of other languages (such as Spanish) used by groups of students in American schools. The origins, variations within, and current status of language varieties such as Black English and Chicano Spanish are presented, relevant research reviewed, and educational implications discussed.

Mr. Bowen, Ms. McGroarty

275. Stylistics and the Teaching of English. An introduction to the study of language and style and its application to the teaching of English, including rhetoric, linguistics, and grammar. Teaching assistants must take this course during their first year of teaching.

Ms. Brienza

300. The Teaching of English. See listing under "English Composition."

375. Teaching Apprenticeship Practicum (1 to 4 units). Prerequisite: appropriate personal and employment as a teaching assistant, associate, or fellow. Teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May not be substituted for any departmental enrollment requirements. May be repeated for credit. S/U grading.

495A-495B. Supervised Teacher Preparation (2 units each). See listing under "English Composition."

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor, department chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596. Directed Individual Study. Prerequisite: graduate standing. For students preparing for first qualifying examination. May not be applied toward any course requirement for the degree. S/U grading.

597. Preparation for Ph.D. Examinations (4 or 8 units). For second-stage Ph.D. students preparing for second qualifying examination. S/U grading.

598. M.A. Research and Thesis Preparation. Prerequisite: graduate standing. May not be applied toward any course requirement for the degree. S/U grading.

599. Ph.D. Dissertation Research (4 or 8 units). Limited to Ph.D. candidates unable to enroll in seminars in their fields or to candidates concurrently enrolled in such seminars. (Exception to this rule must be requested by petition.) S/U grading.

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English Composition
UCLA Writing Programs:
371 Kinsey Hall, 206-6815

Freshman Writing Program:
271 Kinsey Hall, 206-1145

Professor
Richard A. Lanham, Ph.D., Executive Director,
UCLA Writing Programs; Vice Chair, Composition
Composition Requirement

Each of the University’s colleges and schools sets its own composition requirement. Completing English 3 with a grade of C or better meets the requirement in all divisions. For further information about the composition requirement, see the introductory copy for your college or school.

Students who score 660 or better on the CEEB English Achievement Test are eligible to take the English Proficiency Examination. Outstanding performance on this examination fulfills the composition requirement. For further information, contact the Freshman Writing Program.

Lower Division Courses

A. Basic Review of English Usage (No credit). Lecture, four hours; tutorial workshop, one hour. Prerequisite: placement into English A determined by performance on the Subject A Placement Test. English A displaces four units on the student’s Study List but yields no credit toward a degree. A preliminary course in academic writing, offering workshop exercises in reading, writing, and revision. Students learn grammar and mechanics primarily through practice and imitation. Completion of this course with a grade of C or better or demonstration of minimum competence on the Subject A Placement Test is prerequisite to English B.

B. Fundamentals of Exposition (No credit*). Formerly numbered 1A. Prerequisite: English A or qualifying score on Subject A Placement Test. English B displaces four units on the student’s Study List but yields no credit toward a degree. Designed to develop proficiency in expository writing required for successful University work. Lectures, readings, class discussions, and assignments in writing and revision. Completion of this course with a grade of C or better meets the Subject A requirement. [*The two units of baccalaureate credit formerly given for English 1 have been withdrawn effective Fall Quarter 1984.]

3. English Composition, Rhetoric, and Language. Lecture, three hours; tutorial workshop, one hour. Prerequisites: satisfaction of Subject A requirement by examination or by completion of course B with a grade of C or better. The course stresses rhetorical techniques and skillful argument. Students analyze varieties of academic prose and write a minimum of five formal papers (three to five pages each). Completion of this course with a grade of C or better satisfies the English Composition requirement.

3H. English Composition (Honors). Lecture, three hours. Prerequisites: satisfaction of Subject A requirement, consent of instructor. A sequence in practical writing and editing. Special sections for students who wish to improve their expository and literary skills and develop their style. Special sections offered periodically include honors, business, journalism, law, and technical writing. May be taken P/NP by English majors, though English majors who wish to use the course to satisfy departmental prerequisites must take it for a letter grade.

Upper Division Courses

100W. Intensive Writing (2 units). Prerequisite: course 3. Students must be concurrently enrolled in a course offered in conjunction with English 100W (refer to the Schedule of Classes for courses so designated). Designed to teach analytic paper writing, with emphasis on revision techniques. Material for writing assignments comes from adjunct course, and assignments reflect and develop writing skills needed in that course. May be repeated for credit by consent of instructor.

Scope and Objectives

Students need writing proficiency at every stage of their university careers. Although UCLA does not have a composition major, the UCLA Writing Programs and the Composition Section of the English Department offer a series of courses introducing the varieties of university discourse and providing basic to highly skilled instruction. Besides courses which satisfy the University’s Subject A and English Composition requirements, the program offers adjunct courses (linked with courses in other departments) and advanced courses in exposition and in professional writing and editing.

Subject A

Every student who does not satisfy the Subject A requirement by presenting transfer credit or acceptable test scores is required to take, in the quarter immediately following admission to the University, either English A or B. Placement in these courses is determined by performance on the Subject A Placement Test. For more information regarding Subject A, see “Undergraduate Degree Requirements” in Chapter 2.

Graduate Courses

300. The Teaching of English. Required of candidates for the single subject credential in English. Study of theories of rhetoric, composition, reading, and literature as they apply to the secondary school English curriculum.

495A-495B. Supervised Teacher Preparation (2 units each). Formerly numbered 495X. Discussion, one hour; laboratory, 30 minutes. 495A is required of all applicants for a teaching assistantship in English and covers the practical concerns of designing a course, creating assignments, grading papers, and holding conferences for English 3 classes. 495B must be taken concurrently with the first teaching assignment. It examines the specialized problems which occur in teaching English 3 and introduces students to techniques for teaching English B and ESL. In Progress and S/U grading.

Ms. Pfoff, Mr. Rose
English as a Second Language Section

3303 Rolfe Hall, 825-4631

Professors
J. Ronald Bowen, Ph.D.
Russell N. Campbell, Ph.D., Vice Chair
Marianne Celce-Murcia, Ph.D.
Evelyn R. Hatch, Ph.D.
John F. Povey, Ph.D.
Clifford H. Prator, Ph.D., Emeritus

Associate Professors
Roger W. Andersen, Ph.D.
Earl J. Rand, Ph.D.
John H. Schumann, Ed.D.

Assistant Professor
Mary E. McGroarty, Ph.D.

Visiting Associate Professor
Grant Henning, Ph.D.

Visiting Assistant Professor
Suzanne Salmi bene, Ph.D.

Adjunct and Visiting Lecturers
Donna Brinton, M.A., Adjunct
Melinda Erickson, M.A., Visiting
Diana Savas, M.A., Visiting

Scope and Objectives

The Teaching English as a Second Language (TESL) Program is designed for students who wish to develop research skills related to the teaching and learning of English as an additional language. The program is a two-year course of graduate study leading to a Master of Arts degree.

The first year of the program is designed to improve teachers' performance in the ESL classroom. The second year provides an opportunity to investigate in depth some particular aspect of teaching and learning English as a second language. The course of study includes a practical element: observing classes, preparing lesson plans, and actual classroom teaching. There is, however, a greater emphasis on theory in the program. Students are expected to become familiar with current theories regarding the nature of language, as well as the ways in which people acquire and use language. They are also expected to be able to relate theoretical guidelines to practical procedures. The program is therefore not appropriate for the student who is interested exclusively in receiving vocational training. Admission preference will be granted to applicants with strong research interests.

In addition, the ESL Section and the Linguistics Department offer an interdepartmental degree program leading to a Ph.D. in Applied Linguistics. For information, write to the Applied Linguistics Program, 3308 Rolfe Hall, UCLA, Los Angeles, CA 90024. (Also see the section on "Applied Linguistics" earlier in this chapter.)

A limited number of teaching assistantships are available to qualified M.A. and Ph.D. students. For information and applications, write to the Academic Director, ESL Service Courses, 3308 Rolfe Hall, UCLA, Los Angeles, CA 90024.

Master of Arts in Teaching English as a Second Language

Admission

Students normally apply for the M.A. in TESL if they desire advanced training in the field. Because of the sequential nature of courses given during the first year, students are admitted only at the beginning of Fall Quarter. To be admitted to the M.A. program, U.S. citizens and students from other countries must have the equivalent of an American bachelor's degree.

After admission, you must maintain a grade-point average of at least B (3.0). A GPA of 3.25 (B+) is required if you are entering the second year of the M.A. program and must be maintained throughout the second year.

Applications for admission may be obtained from the graduate adviser and are due by December 30 of the year prior to admission. The program requires three letters of recommendation in support of the application. You are requested to submit the letters of recommendation directly to the Graduate Adviser, English as a Second Language Section, Department of English, 3308 Rolfe Hall, UCLA, Los Angeles, CA 90024. Since admission is limited to approximately 30 students per year, it is important that supporting papers be submitted by February 15.

The admissions committee screens all applications, using the following criteria: grade-point average (must be 3.0 or better), Graduate Record Examination (GRE) scores, letters of recommendation, statement of purpose, and relevant professional experience. A personal interview is not required for admission. The statement of purpose should contain the following information: (1) reasons for wishing to study TESL at UCLA; (2) special qualifications and experience as a teacher; (3) knowledge of languages other than English; and (4) knowledge of other cultures.

Foreign Language Requirement

Students whose native language is English generally use their Fall and Winter Quarter electives to acquire or perfect a knowledge of the native language or dialect of the pupils to whom they expect to teach English. This can be done by taking any one of four combinations of two courses: (1) two foreign language courses; (2) one foreign language course plus a corresponding course in the Linguistics 220 or 225 series; (3) one foreign language course plus English M274; (4) English 111K plus an unrestrictive elective.

Those particularly interested in working with Mexican-American, Asian American, or American Indian pupils will normally choose the third of these alternatives. When there is doubt as to which language will be most appropriate, a non-European language should be selected because of the greater broadening of linguistic horizons that such a selection offers. Foreign language courses that deal with linguistic structure should be selected whenever possible.

Nonnative speakers of English, depending on the results of the University's English as a Second Language Placement Examination (ESLPE), may be required to take a course to improve their practical command of English.

Exemption from the foreign language requirement may be granted if you can demonstrate a strong need to take other electives and have an unusually extensive background of previous foreign language study. For more information, contact the graduate adviser.

First-Year Curriculum

The typical course of study for the first year of the M.A. program is as follows (descriptions of the English courses mentioned here may be found at the end of this section):

Fall Quarter: Linguistics 100, English 370K, foreign language requirement or elective (course depends on language requirement plan)

Winter Quarter: English 122K, 241K, foreign language requirement or elective (course depends on language requirement plan)

Spring Quarter: English 106K or 107K or 109K, 390K, Linguistics 103 or English 103K

Exceptions to the above requirements will be made only after consultation with the graduate adviser.

Of the nine courses required the first year, at least seven must be in TESL, English, linguistics, or structure of language courses in language departments.

Successful completion of the above courses qualifies students for a TESL certificate (which is not a California State Teaching Credential).

Teaching Experience

One quarter of supervised teaching is required during the first year unless you have had extensive teaching experience. If this requirement is completed at UCLA in an adult education setting, you will be eligible for the California Adult Education Credential in ESL.
COLLEGE OF LETTERS AND SCIENCE / English as a Second Language Section / 165

Second-Year Curriculum
A total of 14 courses is required for the M.A. degree, including a minimum of four 200-series courses. Four of the nine courses taken during the first year (usually Linguistics 100, Linguistics 103 or English 103K, English 122K and 241K) and, in special cases, two of the electives (100 or 200 series only) are applied toward the University's nine-course minimum requirement for master's degrees. This leaves five courses, at least two of which must be at the graduate level, to be completed in consultation with the graduate adviser during the second year.

Eight units of 500-series courses may be applied toward the M.A. degree. You must enroll in course 598K each quarter you are registered; however, only four units may be applied toward the degree (to be taken either in Spring Quarter of your first year or Fall Quarter of the second year).

English 400K is a seminar in which TESL M.A. candidates present and defend the results of their thesis research. Enrollment is required in the Spring Quarter but does not count as one of the 14 courses required for the M.A.

The electives taken during the second year should be selected, in consultation with the faculty M.A. adviser and the chair of your thesis committee, as a sequence of related courses relevant to your thesis topic. Any changes in the approved program must be approved by both the committee chair and the M.A. adviser.

Thesis Plan
By the end of the fourth quarter, a thesis proposal, signed by two faculty members, is submitted to the faculty. At this time, plans for the thesis are approved and the thesis committee is established. An outside member is required.

Undergraduate Courses
Courses 33A, 33B, 33C, 34, 35, 36, 103J, 106J, 107J, 109J are only for students whose first language is other than English. Placement in these courses is established on the basis of the English as a Second Language Placement Examination (ESLPE), which students whose mother tongue is not English must take instead of the Subject A Placement Test (see Subject A in Chapter 2). Depending on the results of this examination, entering students are (1) exempt from any special ESL requirement; (2) required to take course 33C; (3) required to take course 33B followed by course 33C; (4) required to take course 33A followed by courses 33B and 33C; or (5) required to spend a quarter studying elementary English exclusively, through UCLA Extension, followed by courses 33A, 33B, 33C. You must enroll in the course(s) in your first term of residence at UCLA and each subsequent term until you complete course 33C with a grade of C or better.

Lower Division Courses

33A. Low Intermediate English as a Second Language. Laboratory, two hours; recitation, eight hours. Prerequisite: grade of C or better in X832 or proficiency demonstrated on the English as a Second Language Placement Examination. Intensive instruction in the structure of English, with focus on vocabulary building, listening and speaking skills, and basic composition techniques.

33B. Intermediate English as a Second Language. Recitation, five hours. Prerequisite: grade of C or better in course 33A or proficiency demonstrated on the English as a Second Language Placement Examination. Emphasizes reading comprehension, vocabulary development, and composition techniques, with additional work on structure and oral skills.

33C. High Intermediate English as a Second Language. Recitation, five hours. Prerequisite: grade of C or better in course 33B or proficiency demonstrated on the English as a Second Language Placement Examination. Emphasizes academic writing, reading, research skills, and lecture comprehension.

34. Oral Communication Skills for ESL Students. Prerequisite: grade of C or better in course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. Develops oral skills that prepare nonnative speakers of English to participate in class discussion, make oral presentations before an audience, respond to questions, and improve through self-evaluation of speech. P/NP (undergraduates) or SU (graduates) grading.

35. Developmental Composition for ESL Students. Prerequisite: grade of C or better in course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. Developmental composition skills for ESL students, with focus on the mechanics of writing, grammatical structures, and recognition of and practice with the major academic discourse modes.

36. Intermediate Composition for ESL Students. Prerequisite: grade of C or better in course 33C or 35 or proficiency demonstrated on the English as a Second Language Placement Examination. A course designed to improve English language writing skills for nonnative speakers of English. Special attention to grammatical structures, principles and methods of exposition, and writing for academic purposes.

Upper Division Courses

103J. Phonetics for ESL Students. Prerequisite: grade of C or better in course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. A detailed and systematic study of the sounds of American English and the way sounds of speech are put together in connected speech, applied to the improvement of the student's own accent.

Mr. Bowen, Ms. Brinton

103K. Phonetics for Teachers of English as a Second Language. Prerequisite: consent of instructor. Emphasis varies according to current research and linguistic interests of interest to graduate students in TESL and applied linguistics. Limited to TESL students or M.A. candidates. Provides opportunities for practice and improvement in reading and writing skills and thus fulfills the composition requirement for the TESL certificate. Surveys important theoretical and methodological issues related to the teaching of second language writing to ESL students and examines appropriate classroom materials.

Ms. Hatch, Ms. Salimbene

104K. Reading in the ESL Context. Limited to TESL certificate or M.A. candidates. Provides opportunities for practice and improvement in reading and writing skills and thus fulfills the composition requirement for the TESL certificate. Surveys important theoretical and methodological issues related to the teaching of reading and writing to ESL students and examines appropriate classroom materials.

Ms. Hatch, Ms. Salimbene

105J. Introduction to Literature for ESL Students. Prerequisite: grade of C or better in course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. Selections from English and American literature presented so as to make full allowance for the students' linguistic and cultural problems and to contribute to an increasing command of the English language.

Ms. Hatch, Mr. Povey

106K. Writing in the ESL Context. Limited to TESL certificate or M.A. candidates. Provides opportunities for practice and improvement in writing skills and thus fulfills the composition requirement for the TESL certificate. Surveys important theoretical and methodological issues related to the teaching of writing to ESL students and examines appropriate classroom materials and authentic student compositions.

Mr. Rand

107J. Advanced Reading for Foreign Students. Prerequisite: grade of C or better in course 33C or proficiency demonstrated on the English as a Second Language Placement Examination. Selections from English and American literature presented so as to make full allowance for the students' linguistic and cultural problems and to contribute to an increasing command of the English language.

Ms. Hatch, Mr. Povey

109K. Literature in the ESL Context. Limited to TESL certificate or M.A. candidates. Provides opportunities for practice and improvement in reading skills and thus fulfills the composition requirement for the TESL certificate. Surveys important theoretical and methodological issues related to the teaching of literature to ESL students and examines appropriate classroom materials. Strongly emphasizes the cultural basis for literature.

Mr. Povey

111K. Background Language for Teachers of English as a Second Language. Prerequisite: consent of instructor. Emphasis varies according to current research and linguistic interests of interest to graduate students in TESL and applied linguistics. Surveys important theoretical and methodological issues related to the teaching of literature to ESL students and examines appropriate classroom materials. Strongly emphasizes the cultural basis for literature.

Ms. Celce-Murcia (W)

Graduate Courses

All graduate courses are open to qualified graduate students from other departments by consent of department.

209K. Current Issues in Experimental Design and Statistics for Applied Linguistics. (Formerly numbered 202K). Examines important theoretical methods of interest to graduate students in TESL and applied linguistics. Emphasis varies according to current theoretical methodological trends in the field.

Ms. Hatch, Mr. Rand (F,Sp)
220K. Materials Development for Language Teaching. (Formerly numbered 272K.) Prerequisites: course 370K, at least two years of ESL/EFL teaching experience. Planning and preparation of an original set of language teaching materials geared to the needs of a specified group of learners. Revision of first drafts and evaluation of one's own work and that of one's peers are emphasized.

Ms. Celce-Murcia (Sp)

221K. Media for Language Teaching. (Formerly numbered 272K.) The course provides a rationale and pedagogical application for using media equipment and materials in the language classroom. Training in standard classroom media equipment operating basic technical production is provided, focusing on the application to ESL instruction.

Ms. Brinton (W)

222K. Language Testing for Teachers of English as a Second Language. (Formerly numbered 261K.) Prerequisites: current status of Language 100. Techniques and techniques for language assessment across the skill areas are covered. Emphasis on classroom testing and the functions of testing within a language program. Basic statistical concepts and procedures are presented, as is hands-on experience with the construction of language tests.

Mr. Rand (W)

223K. Role of English as a Second Language in Bilingual Education. (Formerly numbered 210K.) Prerequisites: course 370K, Linguistics 100. Survey of theories and techniques for language assessment across the skill areas are covered. Emphasis on classroom testing and the functions of testing within a language program. Basic statistical concepts and procedures are presented, as is hands-on experience with the construction of language tests.

Mr. Campbell, Ms. McGroarty (F)

M224K. The Teaching of English for Minority Groups. (Formerly numbered 224K.) (Same as English 2274.) Prerequisites: course 370K and Linguistics 100, or consent of instructor. The course includes in-depth description of the dialects of English and of other languages (such as Spanish) used by groups of students in American schools. The origins, variations within, and the potential of these languages, as Black English and Chicanio Spanish are presented, relevant research reviewed, and educational implications discussed.

Mr. Bowen, Ms. McGroarty

225K. Program Evaluation in Applied Linguistics. Evaluation of the effectiveness of ESL curriculum and instruction, including the assessment of teacher behavior. Prevalent evaluation theories, the writing of evaluation proposals, developing program monitoring procedures, selecting appropriate evaluation designs and planning for the decision context, and reporting evaluation results.

Mr. Campbell

229K. Current Issues in Language Education. (Formerly numbered 272K.) The course deals with specialized topics in language education of interest to graduate students and applied linguistics. Emphasis varies according to current topics of theoretical and practical import in the field.

232K. Advanced Seminar in the Construction and Administration of Language Tests. (Formerly numbered 283K.) Prerequisite: course 222K or consent of instructor. The course is designed to explore current issues in language testing research from both theoretical and practical perspectives and to provide actual experience in addressing a current issue. Specific topics vary according to trends in the field.

Mr. Rand (Sp)

241K. Contrastive and Error Analysis in the ESL Context. (Formerly numbered 250K.) Prerequisites: course 370K, Linguistics 100. Analysis of English and other languages at the phonological, grammatical, lexical, and cultural levels. Preparing analyses of interlanguage for research purposes. Preparation of lesson plans for helping specific groups of students overcome common errors and misconceptions. Observation of ESL classes.

Mr. Andersen, Mr. Bowen, Mr. Schumann (W)

249K. Current Issues in Language Analysis. (Formerly numbered 272K.) The course deals with specialized topics in language analysis of interest to graduate students in TESL and applied linguistics. Emphasis varies according to current topics of theoretical and practical import in the field.

Mr. Andersen, Ms. Celce-Murcia, Mr. Schumann

250K. Advanced Seminar in Cohesion Analysis of English Structure. (Formerly numbered M250K.) Prerequisite: course 370K, consent of instructor. Investigation in depth of selected linguistic features of oral and written texts that go beyond the sentence level and thus signal cohesion. Structures are studied to determine their function in a variety of English texts representing several discourse types.

Ms. Celce-Murcia (F)

251K. Advanced Seminar in Interlanguage Analysis. (Formerly numbered 272K.) Prerequisite: course 122K or consent of instructor. Current theories and methods of second language acquisition and the application to the teaching of a second language. Emphasis on classroom testing and the functions of testing within a language program. Basic statistical concepts and procedures are presented, as is hands-on experience with the construction of language tests.

Mr. Andersen, Ms. Hatch, Mr. Schumann

262K. Psycholinguistics and Language Teaching. Prerequisites: courses 103K, 370K, and Linguistics 100, or consent of instructor. An exploration of those areas of psycholinguistics covering foreign language acquisition; types and theories of bilingualism; learning theories underlying the current methods of teaching foreign languages.

Mr. Hatch, Ms. Schumann (F)

261K. Second-Language Acquisition. (Formerly numbered 262K.) Prerequisite: consent of instructor. The literature on child and adult second-language acquisition forms the basis for this lecture class. Language skill properties (phonological, semantic, and discourse levels) and social and psychological variables which may account for differences in learning are considered.

Mr. Andersen, Ms. Hatch, Mr. Schumann (W)

269K. Current Issues in Language Acquisition. (Formerly numbered 272K.) The course deals with specialized topics in language acquisition of interest to graduate students in TESL and applied linguistics. Emphasis varies according to current topics of theoretical and practical import in the field.

Mr. Andersen, Ms. Hatch, Mr. Schumann (W)

280K. Language Policy in Developing Countries. (Formerly numbered 270K.) Prerequisite: consent of instructor. Use of and need for English in countries such as Nigeria and the Philippines; factors affecting language policy in their school systems; applicability of research techniques of sociolinguistics and psycholinguistics to problems of language policy.

Mr. Povey

281K. Language Policy in the United States. Prerequisite: consent of instructor. Use of and need for the teaching of English for English or others, in the United States. Issues related to matters of language choice and language planning undertaken for various purposes; factors affecting language use, change, and standardization in the U.S.

Ms. McGroarty

282K. Intercultural Communication and the Teaching of English as a Second Language. (Formerly numbered 272K.) Prerequisite: consent of instructor. An introduction to the field of cross-cultural communication, with specification of a research model and role of language in intercultural communication.

Mr. Andersen, Ms. Celce-Murcia, Mr. Schumann

283K. Discourse Analysis. (Formerly numbered 272K.) A survey course covering language teaching and discourse analysis; discourse analysis and syntax; planned and unplanned discourse; conversation analysis; and interaction analysis. Prerequisite: consent of instructor. Special problems and trends of African literature in English.

Mr. Povey (W)

284K. English for Specific Purposes. (Formerly numbered 264K.) Study of methodologies for needs analysis, curriculum development, and testing for specific academic, professional, and vocational groups who require English as a foreign or second language.

Mr. Campbell (Sp)

M285K. Studies in African Literature in English. (Formerly numbered 285K.) (Same as English M285.) Prerequisite: consent of instructor. Special problems and trends of African literature in English.

Mr. Povey (W)

298K. Current Issues in Language Use. (Formerly numbered 288K.) The course deals with specialized topics in language use and related areas of interest to graduate students in TESL and applied linguistics. Emphasis varies according to current topics of concern in the field.

Mr. Bowen, Mr. Campbell, Mr. Schumann (F)

370K. The Teaching of English as a Second Language. Lecture, six hours. Prerequisite: consent of instructor. Bibliography, survey, and evaluation of methods and materials. The nature of language teaching. Analysis of the differences between two languages as a basis of instruction.

Mr. Bowen, Mr. Campbell, Mr. Schumann (F)

375K. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employed as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

Ms. Altman (F,W,Sp)

380K. Supervised Teaching: English as a Second Language or Dialect. Prerequisite: course 370K. Team teaching at the elementary, secondary, or adult level under the supervision of a senior staff member. P/NP (undergraduates) or S/U (graduates) grading.

Mr. Andersen, Mr. Brinton, Ms. McGroarty (Sp)

400K. TESL Colloquium. Prerequisite: consent of TESL M.A. advisor. M.A. candidates present and defend the results of their thesis research. Required of all candidates but may not be applied toward the M.A. degree requirements. Candidates for the Ph.D. in Applied Linguistics may also use this course to report on their dissertations. S/U grading.

Mr. Andersen, Ms. Celce-Murcia (Sp)

495K. Training and Supervision of Teaching As- sistants (2 units). (Formerly numbered 495K-495KB.) Lecture, two or more hours. Corequisite: appointment as a teaching assistant. Orientation, preparation, and supervision of graduate students who have responsibility for teaching ESL courses at UCLA. Syllabus revision and materials preparation. May not be applied toward the degree requirements for the M.A. or certificate in TESL or Ph.D. in Applied Linguistics. P/NP (undergraduates) or S/U (graduates) grading. Altmann (F,W)

598K. Directed Individual Study. Prerequisite: graduate standing. Independent study in an area related to English as a second language. May not be repeated for credit.
Environmental Science and Engineering (Interdepartmental)

This interdisciplinary graduate program, which leads to the Doctor of Environmental Science and Engineering (D.Env.) degree, provides scientific training in the enlightened management of the environment through a broad range of environmental disciplines. For details on this program, see Chapter 17 on the School of Public Health.

Ethnic Arts (Interdepartmental)

This undergraduate major is now called "World Arts and Cultures." See Chapter 6 on the College of Fine Arts for details.

Folklore and Mythology (Interdepartmental)

1041 Graduate School of Management, 825-3962

Professors
Shirley L. Arora, Ph.D. (Spanish and Portuguese)
Kees W. Bolte, Ph.D. (History)
Margherita Cottino-Jones, Ph.D. (Italian)
Elsie Dunin, M.A. (Dance)
Parke K. Ford, Ph.D. (English)
Robert A. Georges, Ph.D. (English), Chair
Marija Gimbutas, Ph.D. (Slavic Languages and Literatures)
Melyn B. Helstien, Ph.D. (Theater Arts)

Nazir A. Jairazbhoy, Ph.D. (Music)
Michael O. Jones, Ph.D. (History)
Vladimir Markov, Ph.D. (Slavic Languages and Literatures)
James W. Porter, M.A. (Music)
Douglas Price-Williams, Ph.D. (Anthropology)
Jaan Puywee, Ph.D. (Classics)
Stanley L. Robe, Ph.D. (Spanish and Portuguese)
Allegro Snyder, M.A. (Dance)
Donald J. Ward, Ph.D. (German Languages)
Johannes Wilbert, Ph.D. (Anthropology)
D.K. Wilgus, Ph.D. (English and Music)
Wayland D. Hand, Ph.D., Emeritus (Germanic Languages)

Associate Professors
Steven Lattimore, Ph.D. (Classics)
Joseph F. Ngy, Ph.D. (English), Vice Chair
Philip L. Newman, Ph.D. (Anthropology)
Arnold Rubin, Ph.D. (Art, Design, and Art History)

Assistant Professors
Jacqueline C. DjeDje, Ph.D. (Music)
Beverly J. Robinson, Ph.D. (Theater Arts)
Stephen Stern, Ph.D. (Library and Information Science)

Adjunct Professor
Marianna B. Birnbaum, Ph.D. (Germanic Languages)

Adjunct Lecturer
Inkeri A. Rank, M.A., M.Ed. (Scandinavian Languages)

Scope and Objectives

The interdisciplinary Folklore and Mythology Program, which leads to the Master of Arts and Ph.D. degrees, provides coordinated study of the traditional life-styles of specific societies and culture areas, on the one hand, and systematic training in the research methods and investigative techniques of cross-cultural study, on the other. Courses focus on the nature, history, and functions of such traditional forms as narrative, song, music, art, dance, and speech and consider the part they play in human development and cultural existence. The program examines the ways in which human traditions both reflect and contribute to continuity and consistency in thought and life. Trained folklorists pursue careers in teaching, research, governmental agencies, museum work and administration, performing groups and arts management, social work, the medical and legal professions, and business. Their responsibilities include documenting cultural and ethnic traditions, introducing traditional artists and their works to interested audiences, describing transformations of traditional processes and forms, and preserving on tape and film the customs and mores of social groups and individuals.

Although no undergraduate degree program is offered in folklore and mythology, students majoring in ethnic arts may select folklore and mythology as their area of concentration. A variety of undergraduate courses offered by departments or by faculty participating in the interdepartmental program is also available to all University students. Those with undergraduate preparation in folklore and mythology studies may continue their work on the graduate level. For planning coursework, you should consult departmental counselors and the Chair of the committee which administers the interdepartmental program.

Master of Arts Degree

Admission

Two letters of recommendation from former instructors or other comparable references are required and should be sent to the Chair, Folklore and Mythology Program, 1041 GSM, UCLA, Los Angeles, CA 90024.

Foreign Language Requirement

Reading knowledge of French, German, or Spanish is required. You have the option of demonstrating proficiency either by:

1. Passing the fifth quarter or fourth semester course in the chosen foreign language at a college or university with a grade of B or equivalent no more than five years before graduate enrollment, or

2. Successfully completing the Educational Testing Service GSFLT examination with a score of 550 or better, or

3. Passing a reading examination administered and evaluated by members of the program faculty (or by outside faculty for languages not familiar to the program faculty).

Course Requirements

All degree candidates, whether electing the thesis or the comprehensive examination plan (see below), must complete the following courses: Folklore 200, 201A, 201B, 216, and at least one course from each of the following groups:

Group 1: One course in folk song or folk music.
Group 2: One course in the folklore and mythology of a specific culture or culture area.
Group 3: One course in the mythology of a specific culture or in the principles of mythology.
Group 4: One graduate seminar in an area of folklore and mythology.

Only eight units of course 596 may be applied toward the minimum course requirements.

Thesis Plan

If you select this plan, you must complete a minimum of ten courses (six in the 200 series; two 596 courses may be included) and submit an acceptable thesis, prepared under the direction of a member of the program faculty. Submission of the thesis will be followed by an oral examination covering the fields of folklore and mythology studies. You must complete all degree requirements in a maximum of six regular academic quarters.
The thesis committee, composed of three or more faculty members selected with the approval of the Chair of the interdepartmental committee, is appointed no later than the quarter before you expect to complete the requirements. No outside members are required.

Comprehensive Examination Plan
If you plan to pursue a Ph.D. degree in Folklore and Mythology, you must elect this plan and must complete a minimum of ten courses (six in the 200 series; two 596 courses may be included). After completion of the coursework, you will be expected to demonstrate competence in written and oral examinations requiring a grasp of (1) theoretical bases, major documents, and research methods and techniques of folklore and mythology studies; (2) two forms of folklore and mythology; and (3) the folklore and mythology of a specific country, continent, or geographical area. You must complete all degree requirements in a maximum of six regular academic quarters.

Ph.D. Degree

Admission
Requirements for admission to the doctoral program include completing the requirements for the M.A. degree in Folklore and Mythology (or equivalent) and the comprehensive examination. You will be admitted to the doctoral program on the recommendation of the interdepartmental committee (you may secure provisional admission in order to complete the admission requirements).

Major Fields or Subdisciplines
You must develop a competency in (1) a major field of folklore and mythology and (2) an area of concentration within a related discipline. These areas will be selected with the approval of the guidance committee.

Foreign Language Requirement
Reading knowledge of German and another language approved by the guidance committee is required. You may demonstrate proficiency in any of the three ways described above under "Foreign Language Requirement" for the master's degree.

The foreign language examinations must be completed before you attempt the qualifying examinations.

Course Requirements
Before attempting the qualifying examinations, you must complete a minimum of nine courses or seminars in the 200 series (or substitutes recommended by the guidance committee) in (1) folklore and mythology and (2) related disciplines.

Qualifying Examinations
After the required preparation, you will complete a written examination covering (1) your specialization in folklore and mythology and (2) your related area of concentration. The examination will be administered by the committee appointed with the approval of the interdepartmental committee and will include one or more members from your related discipline.

The written examination is followed by the University Oral Qualifying Examination, which you must pass in order to be advanced to candidacy. The oral examination is administered by the doctoral committee, which will also consider and approve your dissertation topic.

Final Oral Examination
A successful oral defense of the dissertation will constitute the final examination for the degree.

Lower Division Course
15. Introduction to American Folklore Studies. Lecture/discussion. A cultural-historical survey of the role of folklore in the development of American civilization and of the influence of the American experience in shaping folklore in American society; attention also to representative areas of inquiry and analytical procedures.

Upper Division Courses
101. Introduction to Folklore. Prerequisite: junior standing. A survey of the various forms of folklore and an examination of their historical and social significance.

CM105. Anglo-American Folk Song. (Formerly numbered M106.) (Same as English M111B.) Prerequisite: satisfaction of Subject A requirement, junior standing. A study of Anglo-American balladry and folk song, with attention to historical development, ethnic background, and poetic and musical values. May be concurrently scheduled with course C206.

Mr. Wilgus

C107. Folklore in Urban Environments. Lecture, three hours. Prerequisites: course 101 or 101/1 and consent of instructor. Exploration of the expressive and symbolic dimensions of complex urban life, focusing on how immigrants, migrants, residents, and workers shape their experiences through the dynamic interplay of community, ethnicity, culture, and religion. Concurrently scheduled with course C207.

Mr. Jones, Mr. Stern

108. Afro-American Folklore and Culture. Prerequisite: course 101 or consent of instructor. A study of the traditional genres and forms of Afro-American folklore and their cultural functions.

Ms. Robinson

M109. Mexican and Chicano Folklore in Cultural Context. (Same as Anthropology M166P) Lecture, three hours. Prerequisite: consent of instructor. A historical and sociocultural survey of the folklore of peoples of Mexican cultural background within Mexico and the United States. Emphasis on folklore as indices of Mexican and Chicano identity, as communicated through such traditional forms as narrative, song, music, customs, beliefs, crafts, and foodways.

M111. The Literature of Myth and Oral Tradition. (Same as English M111A.) Prerequisite: satisfaction of Subject A requirement. A study of myth, dramatic origins, oral epic, folklore, and ballad, emphasizing Indo-European and Semitic examples.

Mr. Nagy

M112. Survey of Medieval Celtic Literature. (Same as English M111E.) Prerequisite: satisfaction of Subject A requirement. Knowledge of Irish or Welsh is not required. A general course dealing with Celtic literature from the earliest times to the 14th century.

Mr. Ford

113. The Arthurian Tradition. Prerequisite: consent of instructor. A survey of the traditions relating to the British King Arthur from medieval times to the present day. Coverage includes both oral traditions and written texts; attention also to modern versions of Arthurian material in other mediums (e.g., opera, film).

Mr. Porter

118. Folk Art and Technology. Prerequisite: junior standing. A general course concerned with the material manifestations of folk culture and the theoretical concepts and methodologies utilized in their analysis.

Mr. Jones

M121. British Folklore and Mythology. (Same as English M111C.) Prerequisites: satisfaction of Subject A requirement, junior standing. A survey of the folklore of the peoples of Britain, with attention to their history, function, and regional differences.

Mr. Nagy, Mr. Porter

M122. Celtic Mythology. (Same as English M111D.) Prerequisite: consent of instructor. A survey of the early materials, chiefly literary, for the study of the mythic traditions of the Celtic peoples, ranging from ancient Gaul to medieval Ireland and Wales.

Mr. Porter

M123A. Finnish Folklore and Mythology. (Same as Scandinavian M123A.) The methods and results of Finnish folklore studies and the mythic traditions of the Finns. Special attention to the oral epic, beliefs, and legends.

Ms. Rank

M123B. Finnish Folk Song and Ballad. (Same as Scandinavian M123B.) Course M123A is not prerequisite to M123B. A survey of Finnish balladry and folk song, with attention to historical development, ethnic background, and poetic and musical values.

Ms. Rank

M124. Finnish Folk Art and Technology. Material manifestations of Finnish folk culture: village layout and architecture, folk technology, arts and crafts, textiles, costumes, and design.

Ms. Rank

M125. Folklore and Mythology of the Lapps. (Same as Scandinavian M125.) Survey of Lappish beliefs, customs, and values relating to oral tradition, including tales, legends, songs, and music. Attention also to the material manifestations of Lappish culture: arts and crafts, textiles, costume, folk technology.

Ms. Rank

M126. Baltic and Slavic Folklore and Mythology. (Same as Slavic M179.) Lecture, three hours. A general course for students interested in folklore and mytho-logy and for those interested in Indo-European mythic antiquities.

Mrs. Gimbules

M127. Celtic Folklore. (Same as English M111F.) Prerequisite: course 101 or consent of instructor. The folkloric traditions of modern Ireland, Scotland, and other Celtic countries, with attention to current techniques of folkloristic research.

Ms. Rank

M128. American Folklore and Mythology. (Same as Hungarian M135.) A general course for the student in folklore and mythology, with emphasis on types of folklore and varieties of folklore research.

Ms. Birnbaum

M129. Folklore and Mythology of the Ugric Peoples. (Same as Hungarian M136.) A survey of the traditions of the smaller Ugric nationalities (Voguls, Ostyaks, etc.).

Ms. Birnbaum

139. North American Indian Folklore and Mythology Studies. Prerequisite: course 101 or consent of instructor. An examination of folkloristic and mythological data recorded from various North American Indian peoples within the contexts of the principal ideological frameworks which have been evolved historically for the analysis of such data.

Mr. Georges
Graduate Courses

200. Folklore Bibliography, Theory, and Research Methods. A basic course in theory and bibliography for folklore students, including the techniques of research necessary for serious folklore study.

Mr. Georges, Mr. Stern

201A. Folklore Collecting and Field Research. Prerequisite: course 200. Discussion/demonstration concerning the theoretical concepts, methods, and techniques of data gathering and field research in folklore.

Mr. Jones, Mr. Stern, Mr. Wilgus

201B. Folklore Collecting and Field Research. Prerequisite: course 201A. The supervised completion of a fieldwork project developed in course 201A.

Mr. Jones, Mr. Stern, Mr. Wilgus

M202A-M202B. Folklore Archiving (2 units each). (Formerly numbered 202A-202B.) (Same as Library and Information Science M202A-M202B.) Prerequisite: course 202A or equivalent. One quarter of lecture/demonstration in the principles and techniques of the classification and preservation of folklore collectanaea, followed by one quarter of directed experience in a library.

Mr. Georges, Mr. Stern

M205. Perspectives in American Folklore Research. (Same as English M205.) Prerequisites: course 101, one other upper division folklore course. An examination of American folklore studies compared and contrasted with investigations in other countries, with emphasis on the principal conceptual schemes and research orientations employed in the study of folklore in American society.

Mr. Georges, Mr. Jones, Mr. Stern

C206. Anglo-American Folk Song. Prerequisite: graduate standing. A survey of Anglo-American balladry and folk song, with attention to historical development, ethnic background, and poetic and musical values. May be concurrently scheduled with course CM106.

Mr. Wilgus

C207. Folklore in Urban Environments. Lecture, three hours. Prerequisites: course 206 and/or consent of instructor. Exploration of the expressive and symbolic dimensions of complex urban life, focusing on how immigrants, migrants, residents, and workers shape their experiences through the dynamic interplay of community, ethnicity, culture, and religion. Concurrently scheduled with course C107.

Mr. Jones, Mr. Stern

208. Afro-American Folklore and Culture. Prerequisite: graduate standing. The course examines the theoretical and methodological constructs which have contributed to the body of black cultural expression in the United States.

Mr. Robinson

213. Folk Belief and Custom. Prerequisite: course 101 and one course from 118, M121, M122, M123A, M123B, 124, M125, M126, M128, M149, M150, Anthropology 156, German 134, 240A, 240B, 240C. A study of beliefs and customs in the folk community: the life cycle, calendrical and agricultural customs, and legal antiquities. Mr. Jones, Mr. Ward

215. The Popular Legend. Prerequisite: course 200 or consent of instructor. A study of the categories of legendry and their relation to myth, custom, ritual, popular beliefs, and ballads.

Mr. Jones, Mr. Ward

216. The Folktales. Prerequisite: course 200 or consent of instructor.

Mr. Georges, Mr. Ward

217. Folk Speech. Prerequisite: course 101, CM106, or M111. Recommended: Anthropology M140, English 121, or Linguistics 100. A study of the ethnography of communication and its relevance to the study of social and regional dialects, pronunciation, riddling, onomatopoeia, folk poetry and verse, and traditional humor.

Mr. Georges

218. Folk Art, Craft, and Aesthetics. Lecture, three hours. Prerequisite: course 200. An examination of research orientations and findings in regard to what has been called folk art, craft, and aesthetics. Course organization reflects major perspectives and areas of inquiry from the latter part of the 19th century to the present.

Mr. Jones

M219. Seminar in the Puppet Theater. (Same as Theatre M219.) Lecture, three hours. Prerequisite: consent of instructor. Studies in the puppet theaters of the world: techniques, literature, aesthetics.

Mr. Heilsten

228. Seminar: Topics in Celtic Folklore and Mythology. Lecture, three hours. Prerequisites: consent of instructor. A seminar preparing students for advanced study of and research in important areas of Irish oral tradition and folklore/mythology scholarship. Possible topics include pagan Celtic/Britain/Ireland comparative Celtic mythology; Celtic origin legends; and oral saints' legends; the Irish Fenian (Ossianic) tradition of ballads (laoidhe/duain) and prose tales; "fair" beings, collecting and archiving methods of the Irish Folklore Commission, folklore studies and nationalism.

Mr. Ford, Mr. Nagy


M235. African Myth and Mythology. (Same as English M235.) Prerequisite: graduate standing. An examination of the theoretical and methodological constructs which have contributed to the body of African myths and mythological systems.

240. Introduction to Jewish Folk Literature. Prerequisites: upper division standing and consent of instructor, or graduate standing. An examination of both the historic and generic methods used in the study of Jewish folk literature.

Mr. Stern

M241. Folklore and Mythology of the Near East. (Same as Near Eastern Languages M241.) Prerequisite: course 101 or equivalent.

M243A. The Ballad. (Same as English M243A.) Prerequisite: consent of instructor. A study of the English and Scottish popular ballads and their American derivatives, with some attention to European analogues.

Mr. Wilgus

M243B. Problems in Ballad Scholarship. (Same as English M243B.) Prerequisites: course M243A and one other upper division folklore course. A teaching assistant seminar examining the problems in analyzing and appreciating American and English ballad traditions.

Mr. Wilgus

248. Theory and Method in Latin American Folkloric Studies. A historical survey of folklore scholarship in Latin America, with emphasis on the theoretical bases, methods, and techniques employed in the study and analysis of traditional tales, songs, music, linguistic expression.

M249. Folk Literature of the Spanish and Portuguese Traditions. (Same as Portuguese M249 and Spanish M249.) Lecture, three hours. An intensive study of the folk literature of the Spanish and Portuguese cultures as represented in (1) ballad and poetry, (2) narrative and drama, (3) oral and written folklore.

Mr. Arora

251. Seminar in Finno-Ugric Folklore and Mythology. Advanced studies in the folklore traditions and mythologies of the Finno-Ugric speaking nations.

M257. South American Folklore and Mythology Studies. (Same as Anthropology M257.) Prerequisite: Anthropology 174F or consent of instructor. An examination of oral traditions and related ethnological data from various South American Indian societies against the background of the religious systems of these people.

Mr. Weltman

M258. Seminar in Folk Music. (Same as Music M258.) Seminar, three hours. Prerequisite: consent of instructor.

Mr. Porter, Mr. Wilgus

259. Seminar in Folklore. Prerequisites: courses 204 or 205, consent of instructor.

M268A-M268B. Studies in Hispanic Folk Literature. (Same as Spanish M268A-M268B.) Lecture, two hours.

Mr. Arora, Mr. Robe

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant or graduate assistant. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

Mr. Georges, Mr. Jones
Related Courses in Other Departments

**African Languages (Linguistics) 150A-150B**. African Literature in English Translation

**Anthropology 118A, 118B. Museum Studies**
133P. Social and Psychological Aspects of Myth and Ritual
133R. Aesthetic Anthropology
156. Comparative Religion
230P. Ethnology
232Q. Myth and Ritual
233Q. Aesthetic Anthropology
M247A. Ethnographic Film
264. Ethnography of the Mexican/Chicano People in North America
271. African Cultures
M272. Indians of South America
273. Cultures of the Middle East
274. Cultures of the Pacific Islands

**Art History (Art, Design, and Art History) 102. Art of the Ancient Near East**
C117A. Advanced Studies in Pre-Columbian Art: Mexico
C117B. Advanced Studies in Pre-Columbian Art: Central America
C117C. Advanced Studies in Pre-Columbian Art: The Andes
118A. The Arts of Oceania
118B. The Arts of Pre-Columbian America
118C. The Arts of Sub-Saharan Africa
118D. The Arts of Native North America
C119A. Advanced Studies in African Art: Western Africa
C119B. Advanced Studies in African Art: Central Africa
203. Museum Studies

**Classics 161. Introduction to Classical Mythology**
162. Classical Myth in Literature
166A. Greek Religion
166B. Roman Religion
168. Introduction to Comparative Mythology
268. Seminar in Comparative Mythology

**Comparative Literature C240. Medieval Epics**
**Dance 180A-180B. Introduction to Dance Ethnography**
181A. Dance Cultures of Asia
181B. Dance in Southeast Asia
181C. Dance in East Asia
181D. Dance in South Asia
182A. Dance Cultures of Africa
183A. Dance in Latin America
184B. Dance in the Balkans
187A. Dance Cultures of Native American Indians

**Music 132A-132B. Development of Jazz**
140A-140B-140C. Musical Cultures of the World
141. Survey of Music in Japan
142A-142B. Folk Music of Eastern Europe and the Mediterranean
143A-143B. Music of Africa
147A-147B. Music of China
148. Folk Music of South Asia
149. The Anthropology of Music
152. Survey of Music in India
153A-153B-153C. Music of the American Indians
158. New Orleans Jazz
C190A-C190B. Proseminar in Ethnomusicology
253. Seminar in Notation and Transcription in Ethnomusicology
254A-254B. Seminar in Field and Laboratory Methods in Ethnomusicology
255. Seminar in Musical Instruments of the Non-Western World
280. Seminar in Ethnomusicology
281A-281B. Music of Indonesia
282. Music of Iran and Other Non-Arabic-Speaking Communities
285. Music of Tibet
287. Seminar in African Music
288. Seminar in North American Indian Music

**Old Norse Studies (Germanic Languages) 139. The Saga**
140. Viking Civilization and Literature
151. Elementary Old Norse
152. Intermediate Old Norse

**Russian (Slavic Languages) 251A-251B. Old Russian Literature**
291A. Seminar in Old Russian Literature

**Sociology 124. Ethnic and Status Groups**
130. Social Processes in Africa
131. Latin American Societies
132. Population and Society in the Middle East
133. Comparative Sociology of the Middle East

**Spanish (Spanish and Portuguese) 262B. Studies in Medieval Spanish Literature**
**Theater Arts C117. The Puppet Theater**

**Foreign Literature in Translation**

The following courses offered in the departments of language and literature do not require a reading knowledge of any foreign language:

**African Languages (Linguistics) 150A-150B. African Literature in English Translation**

**Ancient Near East (Near Eastern Languages) 150A-150B-150C. Survey of Ancient Near Eastern Literatures in English**

**Arabic (Near Eastern Languages) 150A-150B. Survey of Arabic Literature in English**

**Armenian (Near Eastern Languages) 150A-150B. Survey of Armenian Literature in English**

**Bulgarian (Slavic Languages) 154. Survey of Bulgarian Literature**

**Classics 141. A Survey of Greek Literature in English**
142. Ancient Drama
143. A Survey of Latin Literature in English
144. A Survey of Greek and Roman Epic in Translation
145. Ancient Greek and Roman Philosophy

**Czech (Slavic Languages) 155A-155B. Czech Literature**

**Dutch and Afrikaans (Germanic Languages) 112. Dutch, Flemish, Afrikaans Literature in Translation**

**East Asian Languages and Cultures 140A-140B-140C. Chinese Literature in Translation**
141A-141B. Japanese Literature in Translation
144A-144B-144C. The French Novel in Translation
145. Topics in French Literature

**German (Germanic Languages) 119A. Older German Literature in Translation**
119B. Classical German Literature in Translation
119C. 19th-Century German Literature in Translation
119D. Modern German Literature in Translation—Narrative Prose I
119E. Modern German Literature in Translation—Narrative Prose II
119F. Modern German Literature in Translation—Drama and Lyrics
119G. Modern German Jewish Literature in Translation
French

160 Haines Hall, 825-1145

Professors
Marc Bensimon, Ph.D.
Hassan el Kouty, Docteur ès Lettres
Eric Gans, Ph.D., Chair
Peter Haidu, Ph.D.
Stephen D. Werner, Ph.D.
Francis J. Crowley, Ph.D., Emeritus
Milan S. La Duc, Ph.D., Emeritus
L. Gardiner Miller, Docteur de l’Université de Strasbourg, Emeritus
Oreste F. Pucciani, Ph.D., Emeritus

Associate Professor
Patrick Coleman, Ph.D., Graduate Adviser

Assistant Professors
Jean-Claude Carron, Ph.D.
Shuhsi Kao, Ph.D.
Sara Melzer, Ph.D.
James Reid, Ph.D.

Lecturers
Colette Brichant, Docteur
Jacqueline Hamel-Baccash, Licencie-étes-Lettres,
Lower Division Head
Madeleine Korn-Ward, Ph.D., Undergraduate Adviser
Padoue de Martini, B.A.

Scope and Objectives

French is second only to English as a language of international culture, and French literature is perhaps the richest and most consistently significant of all world literatures. In recent decades French critical thought has maintained a dominant position in the Western world. The French Department seeks to give its students not merely a background in French language and literature, but an opportunity to synthesize literary and linguistic study with examination of the critical intellectual questions of our time.

The lower division program is designed to provide a minimal competence in French after one year and a thorough basic knowledge of the language after two years. From the first day of French 1 all instruction is conducted in French.

The upper division program is chiefly devoted to perfecting linguistic skills and to the study of French literature. Courses in civilization and linguistics 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 literature and civilization.

The graduate program comprises training in the various fields of French literature and thought, as well as in literary criticism and analysis. A number of courses in linguistics and stylistics are also offered. The department offers both the M.A. and Ph.D. degrees and admits several new graduate students each year, including many from France and a wide variety of other countries.

Bachelor of Arts Degrees

Preparation for the Majors

Required: French 1, 2, 3, 4, 5, 6, 12, and 15, or equivalent. You will normally take course 6 before undertaking course 12 or 15. If you received a grade of A in course 5, you may enroll in course 12 concurrently with course 6 by consent of instructor.

The Majors

Four majors are offered by the department:

Plan A leads to the Bachelor of Arts in French and subsequently to the standard elementary or secondary credential. Required: Fifteen full courses of upper division work, including French 100A, 100B, 100C, 103, 114A-114B-114C; two quarters from courses 132 through 135*; three courses in French literature from 115A through 120D**; three elective courses normally selected from upper division courses in the Department of French in civilization, or literature. A maximum of one upper division course outside the department may be included in the major program by consent of the undergraduate adviser.

Plan A credential candidates must take 15 upper division French Department courses, including French 105, in order to qualify for a waiver of the national teacher examination for the single subject credential in French.

* A course in French history may be substituted for one of these by consent of the major adviser.

Plan B, with emphasis on literature, leads to the Bachelor of Arts in French and subsequently to the master’s degree. Required: Fifteen full courses of upper division work, including French 100A, 100B, 100C, 103, 114A-114B-114C; six courses in French literature from 115A through 120D**; two elective upper division courses to be selected in consultation with a major adviser, either from the Department of French, from the humanities or social sciences division of the College of Letters and Science, or from the College of Fine Arts.

Plan C (French Studies) is a core program in French allowing for individual selection of relevant courses in related fields in the humanities, social sciences, linguistics, etc. Required: Fifteen full courses of upper division work, including French 100A, 100B, 100C, 103, 114A-114B-114C; three courses in French literature from 115A through 120D**; five upper division elective courses in the fields relevant to French studies to be selected in or out of the Department of French in consultation with the undergraduate adviser. This program does not normally prepare you for admission to the master’s program in French at UCLA.

**In all major plans one course from the 121 series and/or one undergraduate seminar (French 150) may be substituted for courses in the 115A through 120D offerings.
Plan D (French and Linguistics) leads to a Bachelor of Arts degree in French and Linguistics. In addition to the normal preparation for the major, you are required to complete the sixth quarter of work in one other foreign language or the third quarter in each of two other foreign languages. **Required:** French 100A, 100B, 100C, 103, 114A-114B-114C; two courses from French 105, 106, 107, 108A; Linguistics 100, 103, 110, 120A, 120B, and 164 or C165A or C165B.

It is strongly advised that students who intend to pursue advanced degrees begin preparation for the language requirements at the undergraduate level.

If your knowledge of French exceeds the preparation usually received in courses preparing for the major and if you demonstrate the requisite attainment in French 100A, 100B, or 100C, you may substitute for those courses in grammar and composition an equivalent number of upper division courses in the Department of French 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 Department of French. 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. You 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 a major adviser before registering for upper division courses.

**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 with a lower GPA may also apply for admission to the program). If you are interested, contact the department during your junior year.

To graduate with departmental honors, you must take French 140A and 140B and/or two upper division literature courses for honors credit. In order to receive honors credit for a nonhonors upper division literature course, you must arrange with the professor to do an extra honors project. On the basis of your coursework, you are expected to choose a research topic you wish to pursue in greater depth. You must then take course 140C where you will receive personal supervision from a faculty member in researching and writing the topic. The three courses will count as literature courses for the purpose of satisfying major requirements.

**Teaching Credential Requirements**

If you wish a single subject teaching credential in French, you must have the consent of the French Department in order to gain admission to student teaching. For the single subject credential, consent is contingent on a major (or equivalent) in French and the successful completion of French 370. For additional information, consult the Graduate School of Education (201 Moore Hall) and/or the Department of French.

**Master of Arts Degree**

**Admission**

The Graduate Record Examination (GRE) Aptitude Test, a sample of written work in French, and three letters of recommendation are required and should be sent to the Department of French, 160 Haines Hall, UCLA, Los Angeles, CA 90024. A Bachelor of Arts in French is desirable but not mandatory.

**Major Fields or Subdisciplines**

The corpus of French literature is divided into three chronological periods: (1) medieval/Renaissance; (2) classical (roughly the 17th and 18th centuries); and (3) modern (since 1800), with Franco-African literature as an option.

**Foreign Language Requirement**

The foreign language requirement will be fulfilled by passing a course of at least level three in either German, Latin, Spanish, or Italian; by passing the University reading examination in one of these languages; or by passing the Educational Testing Service (ETS) language examination with a score of 500 or better. In special cases, substitution of another foreign language will be accepted if approved by the graduate adviser. You must complete the foreign language requirement before you submit your M.A. thesis (Plan I) or take the M.A. examination (Plan II). All candidates for the M.A. must be proficient in spoken French.

**Plans of Study**

The department offers two master’s programs: Plan I (thesis plan) and Plan II (comprehensive examination plan).

**Plan I and II Course Requirements:** French 201, 202, and 203A or 203B are required and should be taken as early as possible. A total of 12 courses in French are required, including at least three courses in each of two periods. At least eight of the courses must be at the graduate level. Students in Plan I may include four units of credit for course S98.

**Plan I Admission Requirements and Oral Qualifying Examination:** You may apply to the Chair of the department for admission into Plan I after completing at least six graduate courses (200 series), four of which must be literature courses in the French Department. The minimum admission requirements are a 3.5 graduate GPA in French and letters from two graduate professors in the department specifically recommending admission into this plan.

Final admission into Plan I (i.e., permission to write the thesis) is contingent on passing a one-hour oral examination in the two periods prepared. If you fail this examination, the examining committee will determine whether you may be permitted another attempt or be advised to take the comprehensive examination (Plan II).

The thesis should demonstrate proficiency in the methods and concepts of literary research; a suitable length will normally be about 50 pages. A tentative outline of the proposed thesis must be approved by the thesis committee in writing before work on the thesis is begun. Final approval of the thesis by the committee is also required.

**Plan II Comprehensive Examination:** You must pass written examinations of four hours in length in each of the two periods prepared, a two-hour explication de texte, and an oral examination in French. The examinations are given in the Fall and Spring Quarters and may be retaken once.

**Terminal M.A. Degree**

Decision to award a terminal M.A. degree is made by the department on the basis of (1) M.A. examination papers, (2) oral examination, and (3) overall appraisal of record.

**Ph.D. Degree**

**Admission**

Completion of a master’s degree with recommendation for continuance by the M.A. committee is required; outside applicants need an M.A. degree or equivalent and three letters of recommendation, as well as the Graduate Record Examination (GRE) Aptitude Test and a sample of written work in French.

Admitted students holding the M.A. or Maîtrise from another institution must take an oral examen de passage in two periods of literary history in order to be formally admitted to the doctoral program. This examination, administered by the M.A. committee, should be taken during the first year of residence. In case of failure it may be repeated once.

**Major Fields or Subdisciplines**

The corpus of French literature is divided into three chronological periods: (1) medieval/Renaissance.
Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
This examination is no longer required but may be imposed at the discretion of an individual doctoral committee.

Lower Division Courses
Students who have had special advantages in preparation may, through placement examinations or by recommendation of the instructor, be permitted a more advanced program. No credit will be allowed for completing a less advanced course after successful completion of a more advanced course in grammar and/or composition.

1. Elementary French. Lecture, five hours. Not open for credit to students who have completed two years of high school French or equivalent with grades of C or better.
   Ms. Hamel-Baccash in charge

2. Elementary French. Lecture, five hours. Prerequisite: course 1 with a grade of C- or better or one year of high school French. Not normally open for credit to students who have completed two years of high school French or equivalent.
   Ms. Hamel-Baccash in charge

3. Elementary French. Lecture, five hours. Prerequisite: course 2 with a grade of C- or better or two years of high school French or advanced placement standing.
   Ms. Hamel-Baccash in charge

4. Intermediate French. Lecture, five hours. Prerequisite: course 3 with a grade of C- or better or three years of high school French or advanced placement standing.
   Ms. Hamel-Baccash in charge

5. Intermediate French. Lecture, five hours. Prerequisite: course 4 with a grade of C- or better or four years of high school French or advanced placement standing.
   Ms. Hamel-Baccash in charge

6. Intermediate French. Lecture, five hours. Prerequisite: course 5 with a grade of C- or better or advanced placement standing.
   Ms. Hamel-Baccash in charge

10A-10D. French Conversation (2 units each). Discussion, three hours. Prerequisite: course 3 with a grade of A or B or consent of department.
   Mr. de Martini in charge

12. Introduction to the Study of French Literature. Lecture, three hours. Prerequisite: course 6 or equivalent or consent of instructor. Principles of literary analysis as applied to selected texts in poetry and prose.

15. Theory and Correction of Diction. Prerequisite: course 6 or consent of instructor. French pronunciation, diction, intonation in theory and practice; phonetic transcription, phonetic evolution of the modern language; remedial exercises; recordings.
   Ms. Korol-Ward in charge

Upper Division Courses
Prerequisites to all upper division courses taken in partial fulfillment of the French major are French 6, 12, 15, or equivalent. Credit will ordinarily not be allowed for completing a less advanced course after successful completion of a more advanced course in grammar and/or composition. Courses 104, 105, 106, 107, and 108A are not sequential and may be taken in any order, provided the prerequisites for each course are fulfilled.

100A. Advanced Grammar I. Prerequisite: courses 6 and (normally) 15, or equivalent. A placement examination is administered, and qualified students are advanced to course 100B or 100C.
   Ms. Brichant

100B. Advanced Grammar II. Prerequisite: course 100A or equivalent. A placement examination is administered, and qualified students are advanced to course 100C or 103.
   Ms. Brichant

100C. Advanced Grammar III. Prerequisite: course 100B or equivalent. A placement examination is administered, and qualified students are advanced to course 103.
   Ms. Brichant

103. Advanced Stylistics. Lecture, three hours. Prerequisite: course 100C or equivalent. Required of all majors, as well as of all candidates for the standard credential in elementary or secondary teaching.
   Ms. Korol-Ward in charge

104. Literary Composition. Lecture, two hours. Prerequisite: course 103 or consent of instructor.

105. French Linguistics. Lecture, three hours. Prerequisite: consent of instructor.

106. Advanced French Phonetics. Lecture, two hours. Prerequisite: consent of instructor.

108A-10BB-10BC. Advanced Practical Translation. Lecture, three hours.

108A. Prerequisite: course 103 with a grade of B or consent of instructor. An introduction to the translation of advanced texts of general interest, with work in the theory of translation.

108B. Prerequisite: course 108A or consent of instructor. Practice in the translation of technical documents and novels: comparative stylistics of translation.

108C. Prerequisite: course 108B or consent of instructor. Advanced work in areas of general and specialized interest, with exercises in consecutive and simultaneous translation.

114A-114B-114C. Survey of French Literature I, II, III. Prerequisite: course 12 or equivalent. A survey of French literature from the medieval period through the 20th century:

114A. Medieval and Renaissance Literature.

114B. Literature of the Classical Era (17th and 18th Centuries).

114C. Modern Literature (19th and 20th Centuries).

115A-115D. Medieval French Literature:

115A. The Medieval Epic.

115B. The Medieval Romance.

115C. The Medieval Theater.

115D. Medieval Lyric Poetry.
   Mr. Haidu

116A-116D. The Renaissance:

116A. Rabelais and His Time.

116B. Ronsard and His Time.

116C. Montaigne and His Time.

116D. Renaissance Theater.
   Mr. Bensimon, Mr. Carron
174 / French / COLLEGE OF LETTERS AND SCIENCE

117A-117D. The 17th Century:
117A. Corneille and the Baroque.
117B. The Classical Theater: Racine and His Contemporary.
117C. Moliere and the Comedy of the 17th Century.
117D. Philosophers, Moralists, and Novelists of the 17th Century.
  Ms. Melzer

118A-118D. The 18th Century:
118A. Comedy and Drama.
118B. Voltaire and the Encyclopedia.
118C. Diderot and Rousseau.
118D. The Novel.
  Mr. Coleman, Mr. Werner

119A-119D. The 19th Century:
119A. Romanticism.
119B. The Generation of 1848.
119C. Naturalism and Symbolism.
119D. The Turn of the Century.
  Mr. el Nouty, Mr. Gans

120A-120D. The 20th Century:
120A. Wilde, Proust, and Their Time.
120B. Post-World War I French Writers.
120C. Sartre, Camus, and Their Time.
120D. Contemporary French Writers.
  Ms. Kao, Mr. Reid

121A-121D. Contemporary Literature of French Expression:
121A. Afro-African Literature.
121B. Franco-Canadian Literature.
121C. Franco-Helvetic and Franco-Belgian Literature.
121D. Franco-Caribbean Literature.
  Mr. Coleman, Mr. el Nouty

122. French Folklore and Young People's Literature.
  Ms. M. Kao-Ward


124. Dramatic Interpretation. Study of the techniques of stage direction and interpretation of French drama. A survey of some of the different theories and approaches used on the French stage. Each student acts in or directs a scene from a play to be performed under reconditional.
  Ms. Kao-Ward

130A-130B-130C. History of French Civilization and Institutions. Prerequisites: courses 6, 12, 15.
130A. France from Prehistoric Times to the End of the Middle Ages. (Formerly numbered 135.) Lecture, three hours. A fourth hour may be required for the viewing of films and other laboratory activities.
  Ms. Brichant

130B. From the Renaissance to the End of the "Ancien Régime." (Formerly numbered 134.) Lecture, three hours. A fourth hour may be required for the viewing of films and other laboratory activities.
  Ms. Brichant

130C. From the End of the "Ancien Régime" to 1918. (Formerly numbered 133.) Lecture, three hours. A fourth hour may be required for the viewing of films and other laboratory activities.
  Mr. Coleman, Mr. Werner

132. Contemporary France and Its Institutions.
  Lecture, three hours. Social, cultural, political, economic, and technological aspects of the position of France within the Common Market and other international organizations.
  Ms. Brichant

133. Cinema and Literature in Contemporary France.
  Lecture, three hours. Additional hours may be required for the viewing of films and other laboratory activities.

140A-140B-140C. Honors Program in French. Prerequisites: junior or senior standing in French with a 3.5 GPA in the major, a 3.3 overall average, consent of department.
140A. Honors Seminar in French. Seminar on different aspects of a selected literary genre, such as drama, poetry, the novel, etc.
  Ms. Melzer in charge

140B. Honors Seminar in French. Seminar on a selected theme or particular problem of French literature, civilization, or ideas.
  Ms. Melzer in charge

140C. Honors Tutorial in French. Individual study on a topic related to that of course 140A or 140B leading to an essay to be written under the guidance of a faculty member.
  Ms. Melzer in charge

The following courses may not be taken for graduate credit but may be taken as the equivalent of out-of-department electives by undergraduate majors.

142. Contemporary French Theater In Translation. Lecture, two hours.

143. Modern French Thought. Lecture, two hours. Contemporary works are read and discussed in translation.

144A-144B-144C. The French Novel in Translation. Lecture, two hours. Authors to be studied are announced each quarter.

145. Topics in French Literature. To be announced each quarter. May not be taken for major or graduate credit but may be considered as an out-of-department elective for the purpose of satisfying major requirements.

Courses 150 through 157 may be repeated once for credit by consent of the major adviser.

150. Studies in Medieval Literature.


156. Studies in Contemporary Literature of French Expression.


158. Woman in French Literature. Lecture, three hours. The course explores a selected aspect of the situation of woman in French literature as author, character, symbol, etc.

160. Studies in the History of Ideas. Specific themes are selected and developed which address a particular problem of French literature, civilization, or ideas. May be repeated for credit by consent of major adviser.

169. Special Studies in French (2 to 8 units). Prerequisites: junior or senior standing, consent of instructor, consultation with undergraduate advisor. May be repeated once.

Graduate Courses

201. Literary Research and Composition. (Formerly numbered 201D.) Lecture, three hours. Practical work of an advanced nature in the expression and presentation of literary research.

202. Techniques of Literary Analysis. Lecture, three hours. Practice in the close analysis of literary texts.

203A-203B. French Literary Criticism. (Formerly numbered 203A-203B-203C.) Lecture, three hours.

203A. History of Literary Theory. The evolution of literary theory from classical times to the 20th century.

203B. Modern Theories of Criticism.
  Ms. Coleman, Ms. Kao


205A-205D. The Intellectual Background of French Literature.

205A. Scholasticism (with Ancient Sources), Humanism.

205B. Rationalism, Empiricism, Positivism.

205C. Criticism, Idealism, Dialectical Materialism.

205D. Phenomenology, Existentialism, Structuralism.

206. French Linguistics. Prerequisite: course 105 or Linguistics 100 or equivalent. Discussion of modern linguistic theory in the area of French grammar, syntax, and semantics.

207. Introduction to Stylistics. Discussion of the basic stylistic devices of the French language.


215A. Old and Middle French. Course 215A is prerequisite to 215B through 215F. Phonology and morphology of the language. Introduction to Old French texts.

215B. The Chanson de geste.

215C. The Romance.

215D. Medieval Theater.

215E. Provencial Poetry.

215F. Medieval French Poetry.
  Mr. Haidi

216A-216H. The Renaissance:

216A. Topics in Early 16th-Century French Literature.

216B. Topics in the Pleiad.

216C. Topics in Late 16th-Century French Literature.

216D. Ronsard.

216E. Rabelais and Prose Writers.

216F. Baroque Poetry.

216G. Montaigne.

216H. Theater.
  Mr. Bensimon, Mr. Carron

217A-217I. The 17th Century:

217A. Topics in Classical Theater.

217B. Topics in Non-dramatic Literary Genres.

217C. Topics in Classical Prose and Thought.

217D. Moliere.

217E. Corneille.

217F. Racine.

217G. The Novel.

217H. Moralists.

217I. Religious Thought.
  Ms. Melzer

218A-218D. The 18th Century:

218A. Topics in the Early Enlightenment (1680-1747).

218B. Topics in the Enlightenment (1748-1765).

218C. Topics in the Late Enlightenment (1766-1791).

218D. The Theater.
  Mr. Coleman, Mr. Werner

219A-219K. The 19th Century:

219A. Topics in Romanticism.

219B. Topics in Realism and Naturalism.

219C. Topics in Symbolism.

219D. Poetry.

219E. The Novel.

219F. The Theater.

219G. Historians and Critics.

219H. Victor Hugo.

219I. Balzac.

219J. Independent Novelists.

  Mr. el Nouty, Mr. Gans

220A-220P. The 20th Century:

220A. From Symbolism to Surrealism: Selected Topics.
227. From Surrealism to Existentialism: Selected Topics.
228. From Existentialism to the Present: Selected Topics.
229. Paul Valery.
230. Marcel Proust.
231. André Gide.
232. André Malraux.
233. The Theater.
234. The Anti-Theater.
235. The Novel.
236. The Antinovel.
237. Surrealism.
238. Poetry.
240. Franco-Caribbean Literature. Mr. el Nouty - Courses 250A through 260B may be repeated for credit.

250A-250B. Studies in Medieval Literature. Mr. Haadu
251A-251B. Studies in the Renaissance. Mr. Bensimon and the Staff
252A-252B. Studies in the Baroque. Mr. Bensimon and the Staff
254A-254B. Studies in the 18th Century. Mr. Coleman, Mr. Werner
255A-255B. Studies in the 19th Century. Mr. el Nouty, Mr. Gans
256A-256B. Studies in Contemporary Literature. Ms. Kao, Mr. Reid
257A-257B. Studies in French-African Literature: Mr. el Nouty and the Staff
258A-258B. Studies in Literary Criticism. Mr. Gans and the Staff
259A-259B. Studies in Philosophy and Literature.

270. Introduction to Methods of Literary Research. Prerequisite: graduate standing. Lectures by specialists on aspects of literary research, ranging from bibliography to new critical approaches.
280A-310B. The Teaching of French in the Elementary School and at the Junior High Level: Course 103. Observation of language teaching in the elementary school and at the junior high level. Required for the standard elementary credential.
290B. Hours to be arranged. Observation of language teaching in the elementary school and at the junior high level. Required for the standard elementary credential.
300B. The Teaching of French in the Secondary School and at the College Level: Observation. Prerequisite: course 103. Observation of language teaching in the secondary school and at the college level. Ms. Hamel-Baccash
372. The Language Laboratory (2 units). Prerequisite: consent of instructor. New electronic techniques for language instruction. Pedagogical and practical problems of making tapes, installing and organizing a laboratory; control procedures. Mr. de Martini
375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

596. Directed Individual Studies or Research (2 to 4 units).
597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units). May be repeated for a maximum of sixteen units. S/U grading.
598. Research for and Preparation of M.A. Thesis (1 to 4 units). Prerequisite: consent of instructor. A maximum of four units may be applied toward the M.A. degree requirements. S/U grading.
599. Research for and Preparation of Ph.D. Dissertation (2 to 8 units).

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**Geochemistry**

See Earth and Space Sciences

**Geography**

1255 Bunche Hall, 825-1071

**Professors**

Charles F. Bennett, Ph.D., Chair
C. Rainer Berger, Ph.D.
William A. V. Clark, Ph.D.
Gary S. Dunbar, Ph.D.
Tom L. McKnight, Ph.D.
Howard J. Nelson, Ph.D.
Antony R. Orme, Ph.D.
Jonathan D. Sauer, Ph.D.
Allen J. Scott, Ph.D.
Werner H. Terjung, Ph.D.
Norman J. W. Thrower, Ph.D.
Hartmut Walter, Ph.D.
Richard F. Logan, Ph.D.
Clifford H. MacFadden, Ph.D.
Benjamin E. Thomas, Ph.D.

**Associate Professors**

J. Nicholas Enríkin, Ph.D.
Gerry A. Hale, Ph.D.
Christopher L. Sattar, Ph.D.
Stanley W. Trimble, Ph.D.

**Assistant Professors**

Susan W. Beatty, Ph.D.
James H. Johnson, Ph.D.
Robert Mcmaster, Ph.D.
Frank W. Weirich, Ph.D.

**Scope and Objectives**

A geographer is concerned with the origins, development, morphology, and processes of the landscapes inherited from nature and with the institutions and patterns associated with the human use of these landscapes. This information helps the geographer to predict the nature and direction of future landscape change and to chart future growth along lines of rational development and careful management of both human and nonhuman resources.

UCLA's Department of Geography offers training that combines the diversity of a liberal arts education with the technical specialization of a scientific discipline. Curricular offerings and faculty interests encompass the full breadth of geography, including its physical, human, and regional aspects.

The department presents a choice between two undergraduate majors that lead to the Bachelor of Arts degree: (1) the major in geography and (2) the major in geography/ecosystems. In both programs the department is committed to quality education concerning the interactions of environment and society. Students are urged to plan their programs and pursue their coursework with close and frequent personal contact with faculty members appropriate to their interests.

Graduate students are expected to demonstrate a broad background in the discipline before they begin to specialize. Specializations are acceptable in almost any subfield and are especially encouraged in physical geography, biogeography, cultural geography, economic geography, urban geography, political geography, historical geography, social geography, population geography, regional geography, cartography, and remote sensing. Master of Arts and Ph.D. degree programs are offered.

**Bachelor of Arts in Geography**

Students who select the major in geography may be interested in (1) a broad understanding of the earth's many environments and peoples as part of a liberal education; (2) preparation for employment in areas concerned with environment and society (for example, in environmental impact studies and urban planning); (3) preparation for graduate study in the discipline leading to advanced degrees and professional occupation in both academic and nonacademic areas; and (4) preparation for a teaching credential with a specialty in geography and the physical, biological, or social sciences.

Geography majors are encouraged to consult with the undergraduate adviser for the planning of a program suitable to their particular and individual objective.
Preparation for the Major

**Required:** Geography 1, 2, 3, 4, and Mathematics 50 or equivalent. A mathematics background, such as Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A, is recommended.

**Foreign Language/Mathematics Requirement**

Every geography major is required to pass five quarter courses in foreign language (in no more than two languages) or mathematics, in any combination. Each year of high school language (but not mathematics) will be accepted as equivalent to one quarter course. A score of 500 on an Educational Testing Service (ETS) language examination will also satisfy this requirement. In mathematics, only Mathematics 50, 50A, 50B, and 50C, or equivalent are acceptable. A grade of Passed or C (or better) is required in all courses intended to satisfy this requirement. These courses may be used to meet the breadth requirements of the college. (Note: Students should be aware of the college restrictions on duplication of high school foreign language.)

**The Major**

**Required:** A minimum of ten upper division courses in geography taken for a letter grade. In meeting this requirement, you must take three courses from Group I — The Environment; three courses from Group II — Human Geography; one course from Group III — Procedures; two courses from Group IV — Regions; and one elective upper division course in geography. You are encouraged to take more than ten upper division courses.

**Allied Fields**

You must develop some competence in one or two allied fields. This program consists of a group of at least four upper division courses selected from at least one but not more than two of the following disciplines: anthropology, architecture and urban planning, atmospheric sciences, biology, chemistry, earth and space sciences, economics, folklore, history, management, mathematics, philosophy, physics, political science, psychology, public health, sociology. Other disciplines require departmental consent in order to be classified as acceptable.

All courses required for the major in geography must be taken for a letter grade. A C average in the major is required for graduation.

**Honors Program**

Honors in the geography major may be obtained through procedures described under Geography 199HA-199HB.

**Bachelor of Arts in Geography/Ecosystems**

The major in geography/ecosystems offers a choice of three plans, each of which has its foundations within the Department of Geography but is essentially interdisciplinary in scope.

**Plan 1 (Environmental Policy)**

Plan 1 (Environmental Policy) has a social science orientation and is designed primarily for students whose environmental interests focus on policy issues concerning environmental management and conservation.

**Plan 2 (Natural Resources)**

Plan 2 (Natural Resources) has a biogeographic orientation and is designed for students whose environmental interests focus on the conservation and management of renewable natural resources.

**Plan 3 (Environmental Engineering)**

Plan 3 (Environmental Engineering) has a physical geography/technological orientation and is designed primarily for students interested in the physical and technological aspects of environmental conservation and management.

All three plans have certain important features in common. First, a high degree of emphasis is placed on student input and student-faculty interaction — particularly with respect to seminars. The faculty is particularly receptive to student enthusiasm. Second, you are encouraged to consult with the undergraduate advisor for the planning of a program suitable to your particular and individual objective. Third, all courses required for the major, both within and beyond the Geography Department, must be taken for a letter grade. A C average in the major is required for graduation.

**Plan 3 (Environmental Engineering)**

**Preparation for the Major:** Biology 2, Chemistry 11A, Earth and Space Sciences 1 or 100, Economics 1, Environmental Engineering 1, Earth and Space Sciences 1, 2, 5, Mathematics 31A, 31B, 32A, 33A, 50, Program in Computing 10. Mathematics 3A, 3B, and 3C, or equivalent is recommended.

**Electives:** No more than three courses may be taken in any one department to satisfy the elective requirement. Six courses should be selected from the following: Anthropology 132, 133; Biology 103, 111, M118, 120, 122, 125, 131, 135, 147; Civil Engineering 181A, 184A, 184D; Earth and Space Sciences M139; Economics 111, 170; English 131; Geography: no more than three courses from 100 through 199; Materials Science and Engineering M107A; Mechanical, Aerospace, and Nuclear Engineering 180A; Public Health 103, 152, 154. Biology courses taken for elective requirements may not be applied toward the major requirement in biology.

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**Master of Arts Degree**

**Admission**

The Department of Geography admits students to the master's program for the Fall, Winter, or Spring Quarter.

The department requires a bachelor's degree or equivalent from an accredited college or university and a grade-point average of 3.3 in
courses taken in the junior and senior years and in the major field. Prospective students are required to pass the Graduate Record Examination (GRE) Aptitude Test (general section only) and to provide the department with three letters of evaluation from previous instructors. Students not meeting the grade-point average requirements may be admitted in exceptional cases if their letters of evaluation and GRE scores or other evidence indicate that they have unusual promise. Students may be admitted with subject deficiencies, but such deficiencies will have to be made up.

Non-geography majors entering the geography program from another field will be required to show proficiency in six upper division geography courses (in addition to those required for the M.A.), including three courses from Group I and three courses from Group II, embracing at least one course each from Groups Ia, Ib, Ila, and Ilb.

Graduate brochures are available by writing to the Graduate Adviser, Department of Geography, 1255 Bunche Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines
Graduate students commonly focus their attentions on one or more of the following subdisciplines: geomorphology, climatology, biogeography, cultural, historical, urban, economic, political, cartography, environmental studies.

Research Tool Requirement
At least one research tool is required for graduate study. A research tool might be a foreign language or a series of mathematics or statistics courses. If a foreign language is approved, the requirement may be fulfilled by taking a series of courses (with a B average), passing the Educational Testing Service (ETS) examination with a score of 500, or taking a special departmental written examination.

Course Requirements
You must complete at least nine courses, seven of which must be at the graduate level, including the required core courses (Geography 298A, 298B, 298C). Your program must have the approval of your committee. The core courses must be taken at the earliest opportunity.

Only one 500-series course may be applied toward the minimum core course requirement for the master’s degree and toward the minimum graduate course requirement.

No more than eight units of course 596 may be taken in a given term, and you must also take at least one formal course during that term.

Thesis Plan
Students planning to continue for a Ph.D. in this department must elect this plan. Under the thesis plan, you must present a thesis, based in whole or in part on original investigation. Selection of a thesis topic, creation of a scientific design, and conduct of the investigation proceed initially under the supervision of the informal guidance committee, and later, under the official Graduate Division committee. The thesis proposal should include the exact nature of the problem to be studied, an outline of the subject matter, the proposed methods of research, the degree of originality involved, and the anticipated time of completion of the study.

Comprehensive Examination Plan
All formal coursework, including the research tool requirement, must be completed before the examination is attempted. The comprehensive examination normally is given in the final two-week period of the quarter in which you complete work for the degree. It will normally consist of three half-day written examinations embracing a general paper and two further papers drawn from the broad divisions of geography. The examination is designed to test for broad grasp of subject, as well as more specialized abilities. In case of failure, you may be reexamined once within one calendar year of the failure. A student who completes the M.A. degree by this plan may not continue for a Ph.D. degree in this department.

Ph.D. Degree
Admission
The Department of Geography admits students to the doctoral program for the Fall, Winter, or Spring Quarter.

The department requires a B+ (3.5) grade-point average or better, plus a strong showing on the Graduate Record Examination (GRE) Aptitude Test and three strong letters of recommendation.

An M.A. or M.S. degree with a geography specialty and a 3.5 GPA in graduate studies is recommended. No screening examination is required. However, students entering the doctoral program who have not previously written a master’s thesis must, during their first quarter of residence, produce clear evidence of substantive research and writing ability. Students accepted for the Ph.D. program without having officially completed a master’s degree must complete the master’s degree within two quarters or be terminated as a Ph.D. candidate. Under exceptional circumstances, you may proceed directly toward the Ph.D. degree without taking a master’s degree if you (1) are enrolled in the UCLA M.A. program in Geography and have a 4.0 grade-point average; (2) are recommended for a direct Ph.D. by the M.A. guidance committee; (3) have three letters of recommendation in addition to one from the interim adviser or chair; and (4) receive the approval of at least two-thirds of the current faculty in residence by secret ballot.

Research Tool Requirement
At least one research tool (foreign language, statistics, taxonomy, surveying, laboratory methods, etc.) is required for graduate study. The research tool may be fulfilled by taking a series of courses or, if a foreign language, by passing the Educational Testing Service (ETS) examination with a score of 500, or taking a special departmental written examination. If a series of courses are taken, a B average must be received.

Course Requirements
You must successfully complete the required core courses (Geography 298A, 298B, 298C) if these have not already been taken at the M.A. level. You are also required to take at least three graduate geography courses in addition to your M.A. coursework (excluding 298A, 298B, 298C, and the 500 series) and three upper division or graduate courses in one or two allied fields to your main field, subject to approval of your committee. The allied field requirement may be met at any time during graduate standing. The core courses must be taken at the earliest opportunity.

Qualifying Examinations
The written qualifying examinations are administered by your informal guidance committee and consist of five written papers. The examination may be spread over a period of no more than two weeks and should be taken no later than the end of the sixth quarter of the Ph.D. program. In case of failure, you may make one further attempt.

The University Oral Qualifying Examination, conducted by your official Ph.D. dissertation committee, focuses on your dissertation research proposal. Once you have successfully completed the oral qualifying examination, you are eligible for advancement to candidacy. In instances of failure, the oral examination may be repeated once.

The dissertation is the ultimate focus of your Ph.D. program and demonstrates an ability for independent investigation in a selected field of study. The dissertation should be designed and executed in such a way as to make a significant original contribution to geographic research, a contribution that is worthy of publication, in part or as a whole, in a reputable scientific medium.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
A final oral defense of the dissertation may be required by the dissertation committee.
Lower Division Courses

Contact the department office to learn of additional offerings, seminar topics, and specific instructors for the quarter you wish to enroll in courses in geography.

1. Physical Environment. Lecture, three hours; laboratory, one hour. A study of the earth's physical environment, with particular reference to the nature and distribution of landforms and climate.

2. Biogeography. Lecture, three hours; laboratory, one hour. Prerequisites: course 1 or equivalent. An introduction to the basic concepts used in modern urban and economic geography. Emphasis on giving a better understanding of the effects of location on human behavior. Discussion and practical exercises focus on the analysis of problems in the Los Angeles environment.

3. Cultural Geography. Lecture, three hours; discussion, one hour. A broad examination of the basic cultural variables in the human occupation of the earth's surface. The approach is ecological, spatial, and historical.

4. Human Location and Behavior. Lecture, three hours; laboratory, one hour. Introduction to the basic concepts used in modern urban and economic geography. Emphasis on giving a better understanding of the effects of location on human behavior. Discussion and practical exercises focus on the analysis of problems in the Los Angeles environment.

5. People and the Earth's Ecosystems. Lecture, three hours; laboratory, one hour. An examination of the historical and contemporary roles of man as a major agent of biological change in the earth's ecosystems.

6. Maps and Mapping. Lecture, two hours; laboratory, two hours; independent study, one hour. Introduction to maps and their role in society. Fundamentals of reading and use of both reference and thematic maps. Influence of maps on attitudes toward and images of the geographic environment. Introductory survey of the fields of cartography and remote sensing.

10. Freshman Seminar in Geography. Staff-student discussion, three hours; reading period, one hour. Prerequisite: course 1 or equivalent. This seminar is designed to explore various themes and issues pertinent to environment and people. Seminar topics are advertised in the department during previous quarter.

Upper Division Courses

Group I: The Environment

(1b) Basic Environmental Studies

100. Principles of Geomorphology. Lecture, three hours; discussion, one hour. Prerequisite: course 1 or Earth and Space Sciences 1 or 100 or consent of instructor. Strongly recommended: introductory physics and chemistry. A study of the processes that shape the world's landforms, with emphasis on weathering, mass movement, and fluvial erosion, transport, deposition, energy and material transfers, space and time considerations.

Mr. Orme

100A. Principles of Geomorphology: Field and Laboratory (2 units). Laboratory/fieldwork, six hours; Pre-requisite: course 100. Field and laboratory investigations of weathering, mass movement, fluvial erosion, transport, deposition; energy and material transfers; space and time considerations.

Mr. Orme

101. Coastal Geomorphology. Lecture, three hours; discussion, one hour. Prerequisite: course 100. A study of the 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, seascapes, and coral reefs, together with coastal zone management.

Mr. Orme

101A. Coastal Geomorphology: Field and Laboratory (2 units). Laboratory/fieldwork, six hours. Prerequisite or 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, seascapes, and coral reefs, together with coastal zone management.

Mr. Orme

103. Glacial Geomorphology. Lecture, three hours; reading period, one hour. Prerequisites: course 100, upper division standing. An introduction to both mountain and continental glaciers, glacial processes, and deposits. Topics include the classification of glaciers, mass balance, glacier motion, moraines, glaciers, glaciolacustrine and glacialfluvial deposition.

Mr. Weirich

103A. Glacial Geomorphology: Field and Laboratory (2 units). Laboratory/fieldwork, six hours. Prerequisites: courses 100, 103. Field and laboratory investigations of glaciers and glaciofluvial processes of erosion, transport, and deposition.

Mr. Weirich

104. Climatology. Lecture, three hours; reading period, one hour. The many relations between climate and the world of man are examined. The objective is to apply basic energy budget concepts to the climates of relevance to the ecosystems of agriculture, animals, man, and urban places.

Mr. Terjung

105. Hydrology. Lecture, three hours; reading period, one hour. Prerequisite: course 1 or equivalent. The study of water in the hydrologic cycle, hydrologic phenomena in relation to climate, landforms, soils, vegetation, and cultural processes and impacts on the landscape. Field projects required.

Mr. Trimble

105A. Hydrology: Field and Laboratory (2 units). Laboratory/fieldwork, six hours. Prerequisite or corequisite: course 105. Field and laboratory investigations into the 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 lab and make hydrologic measurements in the field.

Mr. Trimble

106. Soils. Lecture, three hours; reading period, one hour. Prerequisites: course 1 or equivalent and Chemistry 11A, or consent of instructor. A study of the origins, evolution, properties, and utilization of soils, with special emphasis on the world's major soil groups.

Ms. Beatty

106A. Soils: Laboratory (2 units). Prerequisite or corequisite: course 106. A study of the processes of development of soils, physical and chemical properties of soil, and uses of soil. Analyses of pH, moisture, texture, nutrients, and organics. Includes a one-day field trip.

Ms. Beatty (W)

107. Soil and Water Conservation. Lecture, three hours; discussion, one hour. Prerequisite: course 105 or Civil Engineering 184A or equivalent. Recommended: courses 100, 106, 182. A systematic study of the processes of and the hazards posed by erosion, sedimentation, and pollution and the techniques needed to conserve soil and maintain environmental quality. The scope includes agriculture, forest engineering, mining, and other rural uses of land.

Mr. Trimble

108. World Vegetation. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 2, or equivalent, or consent of instructor. Characteristics, distribution, environmental and cultural relationships of the world's principal vegetation patterns.

Mr. Sauser

109. Ecology of Vegetation. Lecture, three hours; fieldwork, twelve hours total. Prerequisites: course 2, Biology 11, and Mathematics 50, or consent of instructor. A study of the origin and development of plant communities and ecosystems. Emphasis on structure, dynamics, and measurement of the characteristics of terrestrial vegetation.

Ms. Beatty

109A. Ecology of Vegetation: Laboratory (2 units). Prerequisites: course 2, Biology 11, and Mathematics 50, or consent of instructor. Includes methods of sampling and a variety of current data analysis techniques involving multivariate statistics and computer use. Workshops, research papers, and one-day field trips.

Ms. Beatty (Sp)

110. Plant Migration. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, and Biology 2, or equivalent, or consent of instructor. A study of the factors and principles of animal distribution and dispersal on continents and islands of the earth in time and space.

Mr. Bennett, Mr. Walter

118. Medical Geography: Basic Environmental Studies (2 units). Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, and Biology 2, or equivalent, or consent of instructor. A study of the historical, economic, and social problems associated with the various environmental systems.

Mr. Bennett

120. Conservation of Resources: North America. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, 5, 116, and 112 or 117, or equivalent. Recommended: courses 120, 121. Students who do not meet the prerequisites should not attempt this course. A geographical, ecological, and historical analysis of the world's agricultural and pastoral systems. Emphasis on energy flows, nutrient cycles, and ecological and social problems associated with the various systems.

Mr. Bennett

121. Conservation of Resources: Underdeveloped World. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, 120, or equivalent, upper division standing. An analysis of the principles and problems of the conservation of natural resources in the United States and Canada.

Mr. Bennett, Mr. McKnight, Mr. Trimble

122. Man and Environment in Africa. Lecture, three hours; discussion, one hour. Prerequisites: courses 1, 2, 5. An analysis of the unique ecosystems of tropical and subtropical Africa, with respect to traditional and modern human impacts on vegetation, wildlife, and agriculture. Major research questions include: the definition and measurement goals in relation to socioeconomic policies and Africa's environmental heritage.

Mr. Walter

123. Bioresource Management. Lecture, three hours; discussion, one hour. Prerequisites: courses 1, 2, 5. Recommended: introductory statistics (i.e., Mathematics 50 or Economics 40). Theory and practice of the management and conservation of bioresources. Introduction to wildlife management, endangered species conservation, and the design and maintenance of National Parks and ecological reserves.

Mr. Walter
124. Environmental Impact Analysis. Lecture, three hours; discussion, one hour. Prerequisites: at least two courses from 100 through M127 and Mathematics 50. Recommended: courses 2, 5, 128. Introduction to the interdisciplinary analysis of local and regional impacts on ecosystems. Includes evaluation of state and federal concepts for the analysis of environmental impact.

125. Marine Ecosystems. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 2, 5, Biology 5, 7, or equivalent. Description and analysis of the principal marine ecosystems, with particular emphasis on those which are chiefly affected by human activity. Detailed evaluation of the ecological and conservation problems associated with human use of marine ecosystems.

M127, Soil, Plants, and Society. (Same as Biology M127.) Lecture, three hours; field trip. Prerequisites: Chemistry 11A, 11B, and 11C, or equivalent, or consent of instructor. A general treatment of soil development and morphology and the physical and chemical properties of soils as they relate to plant growth and distribution; soil resources, management, conservation, and cultural aspects. Soil profiles examined on the field trip are used to explain development phenomena.

Mr. Lunt

128. The World’s Ecosystems: Problems and Issues. Lecture, three hours; discussion, one hour. Prerequisite: course 120 or 121. Principal objectives are (1) to identify past, current, and projected problems associated with man-induced ecological disturbances and (2) to identify and evaluate the societal and biophysical factors which have contributed to the identified ecological disequilibria.

129. Problems of the Environment: Seminar. Lecture, three hours; reading period, two hours. Prerequisites: senior standing, four courses from Group I. Highly recommended: Mathematics 152A. Limited enrollment. Qualitative-quantitative analysis of problems associated with rational protection and use of selected environmental systems (urban, rural, forest, desert, coastal, water, soil, or others).

Mr. Dunbar, Mr. Thrower

132. Cultural Geography of the Premodern World. Lecture, three hours; reading period, one hour. Prerequisite: course 3 or equivalent. An evolutionary and structural approach to the sociocultural geography of the earth prior to the rise of the modern world system.

Mr. Hale, Mr. Salter

133. Cultural Geography of the Modern World. Lecture, three hours; reading period, one hour. Prerequisite: course 3 or equivalent. An evolutionary and structural approach to the sociocultural geography of the modern world system, with particular emphasis on the structure and functioning of its core, periphery, and peripheralities.

Mr. Entrikin, Mr. Hale, Mr. Salter

135. Reading the Cultural Landscape: Perspectives and Processes. Lecture, three hours; reading period, one hour. Prerequisite: upper division standing or consent of instructor. Understanding personal and societal environmental preferences begins with analysis of the landscape. The course deals with attitudes toward the cultural or humanized landscape, methods of landscape analysis, problem landscapes, and environmental processes in the future through readings, and field study.

Mr. Salter

136. Historical Geography of the United States. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A study of the evolution of the cultural landscapes of the area that is now the United States. Examination of past geographies and of geographical change through time.

Mr. Dunbar

140. Political Geography. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. The principles of political geography as developed through regional studies of political phenomena throughout the world. Current problems in domestic and international affairs are considered.

Mr. Hale

142. Population Geography. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A study of the spatial and behavioral perspectives influencing people in their patterns of demographic change, migration, and mobility, with special emphasis on spatial relationships and selected case studies.

161. Field Analysis: Cultural Geography. Fieldwork, one a week from 8 to 5. Prerequisites: courses 1, 3, two upper division courses in geography, or consent of instructor. Enrollments priority to seniors, then to juniors. Students must prepare and present a department during the prior or concurrent quarter. Examination of field and laboratory procedures and conceptual ideas used in the observation, measurement, analysis, and interpretation of landscape phenomena of human origin. Techniques of data collection are examined for such topics as settlement form and pattern, environmental change, historical and demographic change, and land use.

Mr. Salter

163. Field and Laboratory Analysis: Biogeography. Laboratory/fieldwork, eight hours. Prerequisites: courses 2, 5, or equivalent, two courses from 106, 108, 109, 112. Limited to geography and ecosystems majors, with enrollment priority to ecosystems majors. Examination of laboratory and procedures and intellectual concepts used in the observation, measurement, analysis, and interpretation of phenomena pertinent to biogeography and interrelations of human influences.

Mr. Walter

165. Map Analysis. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. The analysis of maps, including the physical, cultural, and economic aspects of the region portrayed, including such elements as geomorphic history, hydrography, settlement history, forms of economic livelihood, transportation problems, and toponomy.

167. Cartography (6 units). Lecture, two hours; laboratory, six hours; independent study, three hours. Prerequisites: courses 1 and 3, or equivalent, or consent of instructor. Survey of the field of cartography. Includes theory and construction of map projections, compilation procedures, producing the physical, cultural, and economic aspects of the area and symbolization, terrain representation, lettering, drafting and scribing, and map reproduction methods.

Mr. McMaster

168. Computer Cartography. Lecture, two hours; laboratory, two hours; independent study, two hours. Prerequisites: courses 167, Computer Science 10F or 10S, consent of instructor. Theory and methods of mapping quantitative information with a computer. Includes problems of acquiring and processing machine-readable map data and representing them as point symbols and surfaces.

Mr. McMaster

169. The Earth from Above. Lecture, three hours; reading period, one hour. Prerequisites: courses 1, 3, and 4, or consent of instructor. The course examines the interface between cartography and remote sensing. By means of a wide variety of images from maps and satellite photos, different landscapes are analyzed and explained.

Mr. Thrower

171. Quantitative Analysis. Lecture, three hours; laboratory, three hours. Prerequisites: course 3, Mathematics 10 or consent of instructor. An introduction to the methods of measurement and interpretation of geographic distributions and associations.

Mr. Clark

M178. Dating Techniques in Environmental Sciences and Archaeology. (Same as Anthropology M116S.) Lecture, three hours; reading period, one hour. Prerequisite: consent of instructor. Introduction to scientific dating methods such as radiocarbon dating, radiometric dating methods, biological dating techniques, paleomagnetic dating, and applications in environmental sciences, archaeology, and physical anthropology.

Mr. Berger

Group II: Human Geography

Ila Cultural and Historical Geography

130. Geographical Discovery and Exploration. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A survey of the history of exploration, from earliest times through emphasis on the period from Marco Polo to the present.

Mr. Dunbar, Mr. Thrower

132. Cultural Geography of the Premodern World. Lecture, three hours; reading period, one hour. Prerequisite: course 3 or equivalent. An evolutionary and structural approach to the sociocultural geography of the earth prior to the rise of the modern world system.

Mr. Hale, Mr. Salter

133. Cultural Geography of the Modern World. Lecture, three hours; reading period, one hour. Prerequisite: course 3 or equivalent. An evolutionary and structural approach to the sociocultural geography of the modern world system, with particular emphasis on the structure and functioning of its core, periphery, and peripheralities.

Mr. Entrikin, Mr. Hale, Mr. Salter

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Mr. Dunbar

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Mr. Salter

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Mr. Walter

165. Map Analysis. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. The analysis of maps, including the physical, cultural, and economic aspects of the region portrayed, including such elements as geomorphic history, hydrography, settlement history, forms of economic livelihood, transportation problems, and toponomy.

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Mr. McMaster

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Mr. Clark

M178. Dating Techniques in Environmental Sciences and Archaeology. (Same as Anthropology M116S.) Lecture, three hours; reading period, one hour. Prerequisite: consent of instructor. Introduction to scientific dating methods such as radiocarbon dating, radiometric dating methods, biological dating techniques, paleomagnetic dating, and applications in environmental sciences, archaeology, and physical anthropology.

Mr. Berger
Group IV: Regions

180. North America. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. Delimitation and analysis of the principal geographic regions of the United States and Canada.

Mr. McKnight, Mr. Nelson

181. Middle America. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A study of the geographic factors, physical and cultural, that are basic to an understanding of the historical development of Middle America and the contemporary political and economic conditions and their relation to economic, social, and political problems in the area. Mr. Bennett

182A. Spanish South America. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A study of the geographic factors, physical and cultural, that are basic to an understanding of the historical development of Spanish South America and of the contemporary economic and cultural geography of the individual Spanish-speaking countries. Mr. Bennett

182B. Brazil. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A regional synthesis with varying emphasis on the people of South or Southeast Asia in their physical, biotic, and cultural environment and its dynamic transformation. Mr. Salter

183. Europe. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A study of geographic conditions and their relation to economic, social, and political problems in Europe. Mr. Thrower

184. Soviet Union. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A regional synthesis with varying emphasis on the people of South or Southeast Asia in their physical, biotic, and cultural environment and its dynamic transformation. Mr. Salter

185. South and Southeast Asia. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A systematic geographic analysis of the elements of landscape, resources, population, and socioeconomic characteristics of the People’s Republic of China. The course goal is comprehension of the dynamics that have led to China’s major role in the East Asian and international scene, with special attention to China-Japan and Sino-American relations and their geographic bases. Mr. Salter

186. Contemporary China. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A systematic geographic analysis of the elements of landscape, resources, population, and socioeconomic characteristics of the People’s Republic of China. The course goal is comprehension of the dynamics that have led to China’s major role in the East Asian and international scene, with special attention to China-Japan and Sino-American relations and their geographic bases. Mr. Salter

187. Middle East. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. An analysis of the economic, social, and political geography of the area, concentrating on the countries from Turkey to Sudan. Emphasis on geographical themes and problems during historical and modern times. Mr. Hale

188. Northern Africa. Lecture, three hours; reading period, one hour. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. An analysis of the economic, social, and political geography of the area including Mediterranean Africa, the Sahara, the Sudanic belt, and the eastern Horn. Emphasis on geographical themes and problems during historical and modern times. Mr. Hale

189. Middle and Southern Africa. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. The regions of Africa south of the Sahara (including South Africa) in terms of physical features, human settlement, economic production, and political patterns. Mr. Hale

190. Australasia. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A regional synthesis of the physical and cultural features which characterize Australia, New Zealand, and the islands of the South Pacific. Mr. McKnight

191. California. Prerequisites: courses 1 and 3, or equivalent, or upper division standing. A systematic and regional approach to the geography of California, including the physical, cultural, and economic aspects and detailed studies of the various regions. Mr. McKnight

Special Studies

196. Senior Thesis In Ecosystems Analysis. Hours to be arranged. Prerequisites: courses 129, 160 or 162, and 186 and 187. A seminar sponsored by a faculty member in which the student prepares a senior thesis with guidance of the faculty member. Mr. Trimble, Mr. Walter

199. Special Study (2 to 8 units). Hours to be arranged. Prerequisites: senior standing, consent of instructor. Mr. McKnight

198HA-199HB. Honors In Geography I and II. Hours to be arranged. Prerequisites: a 3.25 overall GPA, at least five upper division geography courses with a 3.5 GPA. 199HA is an independent study course taught by a team of two faculty members who assist the student with bibliographic research and field research on a topic of mutual interest to the student and the faculty members. Successful completion of course 199HA entails the preparation of a detailed map of the project (to be evaluated by the two faculty members) for the writing of a substantial paper during course 199HB. If that work is determined to be of A quality, the student is allowed to continue in the honors program. If that work is graded B or below, credit is awarded, but the student is not permitted to continue in the honors program. 199HB is devoted to the writing of the substantial paper researched and outlined in course 199HA. It also is evaluated by the two faculty members. If the paper is determined to be of A quality, the student graduates with honors in geography. If the paper is graded B or below, credit is awarded, but the student does not receive honors.

Graduate Courses

Group I: The Environment

200. History and Paradigms of Geomorphology. Lecture, two hours; discussion, one hour; reading period, six hours. Prerequisites: course 100 and two courses from 101, 103, 105, 106, 107. Analysis of geomorphic theories since the scientific revolution, with emphasis on catastrophism, uniformitarianism, glacial theories, isostasy and eustasy, evolution and cyclicality, thermodynamics and mechanics, quantification, and current paradigms. Each theme is viewed in its contemporary milieu.

Mr. Orme

201. Coastal Geomorphology Seminar. Discussion, three hours; reading period, five hours; fieldwork. Prerequisites: courses 100, 101. Discussion of selected topics pertaining to geomorphic processes and responses observable in the coastal zone. May be repeated for credit.

Mr. Orme

202. Fluvial Geomorphology Seminar. Discussion, three hours; reading period, five hours; fieldwork. Prerequisites: courses 100 and 105, or Civil Engineering 184A. Discussion of selected topics pertaining to the action of running water, and of the physical landscape. May be repeated for credit.

Mr. Trimble

203. Glacial Geomorphology Seminar. Discussion, three hours; reading period, five hours; fieldwork. Prerequisites: courses 100, 103. Discussion of selected topics pertaining to the action of snow and ice, and of the special systems in cold and arctic and alpine environments. May be repeated for credit.

Mr. Weirich

204A-204B-204C. Advanced Climatology. Lecture, three hours; laboratory, one hour. Prerequisites: courses 104, first year of calculus, and atmospheric science with Fortran IV, or consent of instructor. Courses must be taken in sequence. An introduction to the tools and concepts of environmental physics of relevance to natural and man-made landscapes. Such basic intellectual, mathematical, and computer programing tools are of special concern to physical geographers, ecologists, and architects.

Mr. Terjung

205. Seminar: Climatology. Discussion, three hours; reading period, one hour. Prerequisites: courses 204A-204B-204C, or equivalent, consent of instructor. Selected topics. May be repeated for credit.

Mr. Terjung

208. Advanced Biogeography: Plants. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: courses 108 and 110 or 116, or consent of instructor. An intensive review and analysis of physical and cultural factors influencing plant distributions.

Mr. Sauer

212. Advanced Biogeography: Animals. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: course 112 or 117 or equivalent or consent of instructor. Selected topics. May be repeated for credit.

213. Seminar: Biogeography. Discussion, three hours; reading period, two hours. Prerequisites: course 208 or 212 or equivalent, consent of instructor. Research projects related to or growing out of course 208 or 212. May be repeated for credit.

215. Seminar: Quaternary Studies. Discussion, three hours; reading period, two hours. Prerequisites: courses 202 or 204A-204B-204C or 208 or 212 or an appropriate graduate course in anthropology, botany, earth and space sciences, or zoology, or consent of instructor. An analysis of the changing environment of the Quaternary period. May be repeated for credit.

Mr. Orme

218. Advanced Medical Geography. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: course 118 or consent of instructor. An in-depth study of selected topics in medical geography and an intensive review of recent research.

223. Seminar: Humid Tropics. Discussion, three hours; reading period, two hours. Prerequisite: consent of instructor. Selected topics. Biophysical and cultural aspects of humid tropical environments, with emphasis on problems related to human settlement and livelihood. May be repeated for credit.

Mr. Bennett

227. Water Quality Management. Discussion, three hours; reading period, one hour. Prerequisites: graduate standing, consent of instructor. Discussion of the basic technical, regional planning, and public policy issues in water quality management.

229. Seminar: Man and Environment. Discussion, three hours; reading period, two hours. Prerequisite: course 128 or equivalent. An analysis of man’s perception of, and impact on, the environment throughout history and in different parts of the world and its impact on past, present, and future ecosystems.

Group II: Human Geography

232. Advanced Cultural Geography. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: course 230 or 133 or equivalent. An in-depth study of selected topics in cultural geography. May be repeated for credit.

Mr. Saller
233. Seminar: Cultural Geography. Discussion, three hours; reading period, two hours. Prerequisites: courses 232 or 236, or equivalent, consent of instructor. Discussions center around particular topics in cultural geography. Content may vary from year to year. May be repeated for credit. Mr. Entrikin

236. Advanced Historical Geography of the United States. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: course 136, consent of instructor. Some major themes in American historical geography. Mr. Dunbar

237. Seminar: Historical Geography. Discussion, three hours; reading period, two hours. Prerequisites: course 236, consent of instructor. Theory and practice of historical geography in North America and Europe. May be repeated for credit. Mr. Dunbar

240. Advanced Political Geography. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: course 140 or equivalent or consent of instructor. Advanced research projects growing out of course 240. May be repeated for credit. Mr. Scott

242. Advanced Population Geography. Lecture, three hours; reading period, one hour. Prerequisite: course 142 or equivalent or consent of instructor. A study of population dynamics and migration, spatial variation in population composition, and population resource problems, demography, and epidemiology. Mr. McMaster

248. Location and Space Economy. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: courses 145 and 146, or consent of instructor. Methods of locational analysis as applied to problems of regional growth and development. Mr. Scott

249. Seminar: Economic Geography. Discussion, three hours; reading period, two hours. Prerequisites: course 248 or equivalent, consent of instructor. Related research projects growing out of course 248. May be repeated for credit. Mr. Scott

250. Urban Systems. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: courses 145 and 146, or consent of instructor. A general study of the urban system, including diffusion within the urban hierarchy and theories to account for the location and size distribution of cities. Mr. Clark

251. Seminar: Urban Geography. Discussion, three hours; reading period, two hours. Prerequisites: course 250 or equivalent, consent of instructor. Related research projects growing out of course 250. May be repeated for credit.

252. Location and Social Structure within the City. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisites: courses 145 and 146, or consent of instructor. A study of the links between urban social and urban spatial structure, emphasizing urban residential land use, social areas of the city, and accessibility and urban form. Mr. Clark

254. Migration and Residential Mobility. Lecture, two hours; discussion, one hour; reading period, one hour. Prerequisite: consent of instructor. The description and modeling of national, regional, and intra-urban migration. Mr. Clark

Group IV: Regions

Courses 280 through 291 may be repeated for credit (lecture, two hours; discussion, two hours).

280. North America. Prerequisite: course 180 or consent of instructor. Mr. McKnight, Mr. Nelson

281. Middle America. Prerequisite: course 181, consent of instructor. Mr. Bennett

282. South America. Prerequisite: course 182A or 182B, consent of instructor. Mr. Bennett

283. Europe. Prerequisites: course 183, consent of instructor. Mr. Thower

284. Soviet Union. Prerequisite: course 184, consent of instructor. Mr. Weirich

285. South and Southeast Asia. Prerequisites: courses 185, consent of instructor.

286. East Asia. Prerequisites: course 186, consent of instructor. Mr. Saltier

287. Middle East. Prerequisite: course 187, consent of instructor. Mr. Hale

288. Northern Africa. Prerequisites: course 188, consent of instructor. Mr. Hale

289. Middle and Southern Africa. Prerequisites: course 189, consent of instructor. Mr. McKnight

290. Australasia. Prerequisites: course 190, consent of instructor. Mr. Scott

291. The Arid Lands. Prerequisites: courses 104, 106, 108, 116, 120, 124, or equivalent, consent of instructor. An investigation of the physical and cultural complexes of the world's arid regions. Social factors include climate, landforms, water, soils, natural vegetation, and the various aspects of human occupation, including future possibilities for human utilization. Mr. Dunbar

292. Advanced Regional Geography: Selected Regions. Lecture, three hours; discussion, one hour. Prerequisite: appropriate upper division regional course. A lecture series devoted to a specific region at the discretion of the instructor. May be repeated for credit.

Seminar

295. Seminar: Geographic Thought. Discussion, three hours; reading period, two hours. Prerequisites: graduate standing, consent of instructor. Discussion and study of topics significant to the growth of the modern philosophy of geography. Mr. Entrikin

Core Courses

298A. Philosophical Issues in Geographical Inquiry. (Formerly numbered 200A.) Lecture, three hours. Prerequisite: consent of instructor. A discussion of geographical research within the context of philosophical debates concerning the nature of scientific inquiry.

298B. History of Modern Geography. (Formerly numbered 200B.) Lecture, three hours; reading period, one hour. Prerequisite: consent of instructor. The evolution of the field of geography in the 19th and 20th centuries, with emphasis on the professionalization of geography and its emergence as a modern academic discipline. Mr. Dunbar

298C. Statistical Methods for Geographic Research. (Formerly numbered 200C.) Lecture, three hours. Prerequisite: course 171 or equivalent. The use of linear models, discriminant functions, and factor analysis to analyze problems in geography. Mr. Clark

Special Studies

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

455. Teaching of College Geography (2 units). Discussion, one hour; laboratory, three hours. Prerequisite: consent of instructor. Classroom practice in teaching, with individual and group instruction on related educational methods, materials, and evaluation. May be repeated for credit.

596. Directed Individual Study or Research (2 to 8 units). Prerequisite: consent of instructor. May be repeated for credit. S/U grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units). Prerequisite: consent of instructor. Special individual study. May be repeated for credit. S/U grading.
Geology

See Earth and Space Sciences

Geophysics and Space Physics

See Earth and Space Sciences

Germanic Languages

302 Royce Hall, 825-3955

Professors
Ehrhard Bahr, Ph.D. (German)
Franz H. Bäuml, Ph.D. (German)
Wolfgang Nehring, Ph.D. (German)
Alexander Stephan, Ph.D. (German)
Hans Wagener, Ph.D. (German), Chair
Donald J. Ward, Ph.D. (German and Folklore)
Terence H. Wilbur, Ph.D. (Germanic Linguistics and Philology)

Emeritus Professors
Gustave Otto Artl, Ph.D., LL.D.
Carl William Hagge, Ph.D.
Wayland D. Hand, Ph.D.
William J. Mulloy, Ph.D.
Victor A. Oswald, Jr., Ph.D.
Eli Sobel, Ph.D.
Erik Wahlgren, Ph.D.

Associate Professors
Jesse L. Byock, Ph.D. (Old Norse)
Janet R. Hadda, Ph.D. (Yiddish)
Robert S. Kirsner, Ph.D. (Dutch and Afrikaans)
Kathleen L. Komar, Ph.D. (German)
Vern W. Robinson, Ph.D., Emeritus

Assistant Professors
T. Craig Christy, Ph.D. (Germanic Linguistics and Philology)
Steven D. Martinson, Ph.D. (German)

Lecturer
Jutta Landa, Ph.D. (German)

Adjunct Professor
Marianna D. Birnbaum, Ph.D. (Hungarian)

Visiting Lecturer
Barbara Bopp, Ph.D. (German), TA Coordinator

Scope and Objectives

The Department of Germanic Languages offers an extraordinary scope of Germanic languages and literatures, including philology, linguistics, and folklore. This broad range of studies offers training in specialized fields, in addition to providing a strong background in the literary and cultural traditions. The courses of instruction are designed to enable students to become effective teachers and productive scholars in either German or Germanic languages and literatures, including Germanic folklore, Hungarian, and Finnish.

Undergraduate majors in both German and Scandinavian languages lead to Bachelor of Arts degrees. The graduate program offers Master of Arts degrees in German and Scandinavian and a Ph.D. in Germanic Languages with a variety of specialized fields available. The department also offers courses in Dutch-Flemish and Afrikaans, Hungarian, Old Norse studies, and Yiddish, and a program in Finno-Ugric languages and literatures, which are open to all students.

Bachelor of Arts in German

The undergraduate program in German is comprised of lower division courses in the German language and upper division courses in German language, linguistics, literature, civilization, and folklore. While the nucleus of the undergraduate program consists of training in language and literature, students majoring in German will be prepared for a wide range of graduate studies and activities in related fields.

Preparation for the Major

Required: German 1, 2, 3, 4, 5, 6, or equivalent. Course 1 is not open for credit to students who have completed two years of high school German or equivalent with grades of C or better. Students who have completed two semesters of college German should enroll in course 4. Placement examinations may be given in instances where the proper level is difficult to determine. Native speakers of German must consult the undergraduate adviser. For additional information, all students are encouraged to contact the undergraduate adviser.

The Major

Required: Fifteen upper division German courses as follows: Group I — German 100A or 100B or 100C, 108A, 108B, 129; Group II — four courses from 100A or 100B or 100C (whichever has not been taken to satisfy the Group I requirement), 101A, 101B, 101C, 121A, 128, 134; Group III — three courses from 103, 105, 106, 107, 137; Group IV — four courses from 121B, 122, 123, 124, 126, 127, 130, 132. Native speakers of German should consult the undergraduate adviser before enrolling in course 108A, 108B, or 128. German majors, especially those who wish to pursue graduate studies in German, are encouraged to enroll in courses in German history and philosophy in those respective departments and are strongly urged to acquire reading knowledge of French.

Departmental Honors

To qualify for graduation with departmental honors, you 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 195 with a grade of A. Contact the departmental honors adviser for procedures, special arrangements, possible exceptions, and other information.

Teaching Credential in German

Students desiring the general secondary credential in German should consult the Graduate School of Education (201 Moore Hall) and the Department of Germanic Languages.

Graduate Study

The Department of Germanic Languages offers the advanced degree candidate a scope and variety of studies unique among departments of German in the United States. The department provides programs of study leading to the M.A. in German, the M.A. in Scandinavian, and the Ph.D. in Germanic Languages, with specialized fields in all areas of German literature, Germanic philology and linguistics, Germanic folklore, Scandinavian literature and philology, Netherlandic languages and literatures, and Yiddish studies. In addition, the department offers a program in Finno-Ugric languages and literatures. This wide range of studies within the Germanic languages and cultures enables the Ph.D. candidate to acquire competence in several specialized fields.

For brochures and other information, contact the Department of Germanic Languages, 302 Royce Hall, UCLA, Los Angeles, CA 90024.

Master of Arts in German

Admission

A bachelor's degree in German with a minimum grade-point average of 3.0 from an accredited U.S. institution or the equivalent is required. Candidates deficient in their undergraduate preparation may be admitted but will be required to take remedial courses, as recommended by the graduate adviser. A placement examination in German language or literature may be required. Three letters of recommendation are also required.
There are two M.A. plans that differ with respect to the course requirements and the comprehensive examinations. Plan A is for students who plan to terminate their studies with the M.A. and a teaching credential. Plan B is for students whose main interests are literary and linguistic rather than pedagogical and for students who plan to proceed toward the Ph.D.

**Course Requirements**

Plan A requires a minimum of nine upper division and graduate courses, of which at least five courses must be graduate level (200 or 500 series). German 128, 129 (or equivalent), and 370 are required. Undergraduate credit for these courses (or equivalent) is applicable in satisfaction of these requirements.

Plan B requires a minimum of nine upper division and graduate courses, of which at least six courses must be graduate level (200 or 500 series). One seminar must be included.

Course 596 may be taken twice; course 597 may be taken once before the M.A. degree; course 598 may be taken three times. However, only one 500-series course may be applied toward the M.A. course requirements.

**Thesis Plan**

If you choose this plan, a thesis committee will be established no later than the end of the fourth quarter of graduate study to evaluate the proposal for the thesis. After acceptance of the thesis you must pass a two-hour oral examination in the field of the thesis, as well as in the fields listed below under the comprehensive examination plan.

**Comprehensive Examination Plan**

Examinations are offered each quarter, beginning with the written part during the fifth week of each quarter. Under exceptional circumstances the Chair of the department will receive petitions for M.A. examinations during the summer recess.

One examination committee is appointed for each quarter. The members of the committee administer the written and oral examinations. The M.A. examination consists of two written examinations of three hours each, followed by a one-hour oral examination.

If you select German literature as your major field, you must choose one of the following: (1) German literature before 1700 or (2) German literature from 1700 to the present.

The minor field may be selected from the following options: (1) German literature before 1600; (2) German literature from 1600 through Romanticism; (3) German literature from Romanticism to the present; (4) German philology and linguistics; (5) modern Scandinavian literature; (6) Germanic folklore; (7) Yiddish; (8) Dutch-Flemish and Afrikaans; (9) Old Norse studies. If your major field is German literature, you may not choose options 1 through 3. As a special option, you may select an extra-departmental minor which must be individually endorsed by a majority of the departmental faculty members on the basis of your dissertation plans.

The second Ph.D. program allows specialization in either of the following two areas: (1) modern German literature (1600 to the present) or (2) Germandic — older German literature (to 1600), Germanic philology and linguistics (including Old Norse and Dutch linguistics), Germanic folklore. If you select the latter area, you are expected to choose two of these three fields, with special emphasis on one.

**Foreign Language Requirement**

In addition to French, a second language examination is required either in a modern Scandinavian language or in Dutch and Afrikaans or in Latin or in Yiddish (substitution of another language may be approved by petition).

**Course Requirements**

There are no course requirements per se for the Ph.D. in Germanic Languages. However, the following rules apply: (1) you must have successfully completed at least three seminars in residence before taking the qualifying examinations for the Ph.D.; (2) specific course requirements may be assigned to new students by the graduate advisor; (3) you may choose to fulfill minor field requirements by taking specific courses rather than being tested in the minor field on the Ph.D. qualifying examinations.

**Qualifying Examinations**

The written examinations consist of three parts for the first Ph.D. program and two parts for the second program: (1) first half of major field (three hours); (2) second half of major field (three hours); (3) minor field (three hours).

You may take the written examinations in the major or minor field any time after admission to the doctoral program and fulfillment of all prerequisite requirements. The major field examinations are given within a period of seven school days and completed no later than four weeks before instruction ends in a given quarter.

**Major and Minor Fields of Study**

The department offers two Ph.D. programs. The first program requires a major and a minor field in order to give students the broadest possible education and preparation for professional flexibility in research and teaching. The second program does not require a minor and is designed to enable students to complete their studies toward the Ph.D. more expeditiously.

If you select the first program, you must, as soon as possible after admission, declare your major and minor fields. The field in which you plan to present a dissertation will be the major field and will be selected from the four fields in which the degree is offered: (1) German literature, (2) Germanic philology and linguistics, (3) Scandinavian literature and philology, or (4) Germanic folklore.
Written examinations may be repeated in case of failure. A repetition of the major examination includes both parts of the major field. When you have completed the written examinations successfully, the chair of the guidance committee will schedule the University Oral Qualifying Examination to be administered by the doctoral committee as soon as possible after completion of the written examinations.

Advancement to candidacy will take place when you have (1) passed the graduate reading examination in French; (2) passed a departmental reading examination either in a modern Scandinavian language or in Dutch-Flemish and Afrikaans or in Latin or in Yiddish (or an approved substitute language); (3) successfully completed three seminars; (4) passed the qualifying examinations. When you pass the oral examination, you advance to candidacy and proceed to the writing of the dissertation.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
After your completed dissertation is accepted by the certifying members of the doctoral committee, you may be required to defend the dissertation in a final oral examination.

German

Lower Division Courses
No credit will be allowed for completing a less advanced course after successful completion of a more advanced course in grammar and/or composition. Students with demonstrated preparation may be permitted to transfer to a more advanced course by consent of the instructor.

1. Elementary German. Lecture, five hours; laboratory, one hour. Not open for credit to students who have completed two years of high school German or equivalent with grades of C or better. Students are, however, credited with four units toward the minimum progress requirement.

2. Elementary German for Graduate Students. Provides preparation for the Graduate Division foreign language reading requirement. May not be applied toward degree requirements. S/U grading.

3. Elementary German. Lecture, five hours; laboratory, one hour. Prerequisite: course 2 or two years of high school German.

4. Intermediate German. Lecture, five hours. Prerequisite: course 3 or three years of high school German. Ms. Bopp

5. Intermediate German. Prerequisite: course 4 or four years of high school German. Ms. Bopp

6. Intermediate German. Prerequisite: course 5 or equivalent. Ms. Bopp

12. German Conversation (2 units). Prerequisite: course 1 or one year of high school German. The course utilizes German language teaching films; students receive the opportunity to practice spoken German in small groups. Ms. Bopp

14. Intermediate Conversation (2 units). Prerequisite: course 3 or three years of high school German. Students have the opportunity to practice spoken German in small groups. Ms. Bopp

95. Freshman Seminar. Course of variable content limited to topics of current interest and offered whenever a staff member is available.

Upper Division Courses
Prerequisite for all upper division courses (except 100A, 100B, 100G, 119A through 119G, 119J, 121A, 121B) is course 8 or equivalent or consent of instructor.

Courses in the German 119 literature series may not be applied toward completion of the major in German.

Courses Open to Majors and Nonmajors: No Credit to Graduate Students in German

100A. German Civilization and Culture before 1700. Lectures, discussions, and readings in English; knowledge of German is not required. A study of the development of German civilization and institutions from the earliest times to 1700. Study of German culture as represented in its literature, art, music, and architecture.

100B. Modern German Civilization and Culture from 1700 to 1919. Lectures, discussions, and readings in English; knowledge of German is not required. A study of the development of German civilization and institutions from 1700 to 1919. Study of German culture as represented in its literature, art, music, and architecture.

100C. German Civilization and Culture in the 20th Century. Lectures, discussions, and readings in English; knowledge of German is not required. A study of the development of German civilization and institutions from 1919 to the present, emphasizing developments in literature, the arts, and architecture.

101A. Introduction to German Poetry. Close analysis of selected examples of German lyric poetry from early as well as modern literary periods, including a systematic consideration of poetic conventions and forms, diction, tone, imagery, symbolism, and metrics. Course should be taken at the beginning of literary studies.

101B. Introduction to German Drama. Analysis of selected examples of drama (e.g., tragedy, comedy, one-act play, lyric drama, lyric theater, etc.), including a systematic introduction to dramatic forms, techniques, and theories. Texts are selected from modern literature as well as from older periods. Course should be taken at the beginning of literary studies.

101C. Introduction to German Narrative Prose. Analysis of significant examples of narrative prose (e.g., short story, novelle, novel, fairy tale, etc.), including a systematic introduction to narrative forms, techniques, and theories. Texts are selected from modern literature as well as from older periods. Course should be taken at the beginning of literary studies.

102. Business German. Prerequisites: courses 1, 2, 3, 4, 5, 6. German for business studies: exercises in German business correspondence, terminology of export and import, and readings and translations in selected business literature.

103. Introduction to German Enlightenment, Sturm und Drang, and Classicism. Reading and discussion of representative works by Lessing, Goethe, and Schiller literature historical context and social background, their relationship to music (Bach, Mozart) and philosophy (Leibniz, Kant), as well as their place in the history of ideas.

105. Introduction to 19th-Century German Literature. Reading and analysis of selected works from Romanticism to realism. Mr. Komar, Mr. Nehring

106. Introduction to Modern Literature. Analysis of selected works of the period from 1890 to 1945. Mr. Nehring, Mr. Wagener

107. Introduction to Contemporary Literature. Analysis of selected works of the period from 1945 to the present time. Mr. Steph an

108A. Composition and Conversation. Mr. Christy, Ms. Landa, Mr. Martinson

108B. Composition and Conversation. Prerequisite: course 108A or consent of instructor. Ms. Christy, Ms. Landa, Mr. Martinson

Courses Not Open for Credit to Majors or Graduate Students in German

119A. Older German Literature in Translation. (Formerly numbered 121A.) Analysis in English of works of German literature from the medieval period to baroque. May not be applied toward completion of the major in German.

119B. Classical German Literature in Translation. (Formerly numbered 121B.) Analysis in English of works of the classical period. May not be applied toward completion of the major in German.

119C. 19th-Century German Literature in Translation. (Formerly numbered 121C.) Readings and lectures in English on selected 19th-century authors.

119D. Modern German Literature in Translation — Narrative Prose I. (Formerly numbered 121D.) Readings, lectures, and discussions in English on selected modern authors, including Mann, Kafka, Hesse, and Rilke. May not be applied toward completion of the major in German.

119E. Modern German Literature in Translation — Narrative Prose II. (Formerly numbered 121E.) Readings, lectures, and discussions in English on post-1945 narrative prose. May not be applied toward completion of the major in German.

119F. Modern German Literature in Translation — Drama and Lyric Poetry. (Formerly numbered 121F.) Readings, lectures, and discussions in English on modern German drama and lyric poetry. May not be applied toward completion of the major in German.

119G. Modern German Jewish Literature in Translation. (Formerly numbered 121G.) Readings and lectures in English on selected authors, including Mendelssohn, Heine, Schnitzler, Kraus, Katka, Feuchtwanger, Anne Frank, Nelly Sachs. May not be applied toward completion of the major in German.

119J. The Faust Tradition from the Renaissance to the Modern Age. (Formerly numbered 121J.) Readings and discussions in English of the Faust theme and tradition in European literature and intellectual history, including the chapbook of Doctor Faustus, Christopher Marlowe's and Goethe's Faust dramas, as well as Thomas Mann's novel, Doctor Faustus: The Life of the German Composer Adrian Leverkuhn. May not be applied toward completion of the major in German.

Mr. Bahr, Mr. Martinson
Courses Open for Credit to Majors, Nonmajors, and Graduate Students in German

121A. Special Problems in Literature. (Formerly numbered 121H.) Prerequisite: upper division standing. Varying topics of current importance and immediate relevance to literary study. The course is designed to introduce the student to contemporary trends in literary study and is predominantly concerned with topics related to German literature and criticism. Lectures in English.

121B. The German Film in Cultural Context. (Formerly numbered 121I.) A survey of various aspects of the German film in relationship to literary, artistic, and political directions of the times, with emphasis on the film as a separate mode of artistic expression. Mr. Stephan

122. Studies in German Literature before 1750. Prerequisites: three upper division courses (including course 100A) or consent of instructor. Readings and analysis of major works from the Middle Ages to the baroque. Mr. Bäuml, Mr. Wagener, Mr. Ward

123. Goethe. Prerequisites: courses 100A or 100B and 105, or consent of instructor. Reading and discussion of representative works (except Faust) from Goethe's early period to his maturity and old age. Mr. Bahr, Mr. Martinson

124. Romanticism. Prerequisites: courses 100A or 100B and 105, or consent of instructor. Reading and analysis of major works of the Romantic period. Authors include Tieck, Nautilus, E.T.A. Hoffmann, and Eichendorff. Ms. Komar, Mr. Nehrings

125. Advanced Study in Modern Literature. Prerequisites: courses 100A, 100B, or 100C, and 106, or consent of instructor. Reading and analysis of a wide range of the literature from 1890 to 1945. Mr. Nehrings, Mr. Wagener

127. Advanced Study in Contemporary Literature. Prerequisites: courses 100A, 100B, or 100C, and 107, or consent of instructor. Analysis of a wide range of German literature from 1945 to the present. Mr. Stephan

128. Advanced Composition, Grammar, and Con- versation. Prerequisites: courses 106A and 106B, or consent of instructor. Mr. Christy, Ms. Land.

129. German Phonetics. Study of the articulatory basis of the sounds of German and practice in standardized pronunciation. Mr. Christy

130. Methodology of Literary Criticism. Prerequisite: senior standing or consent of instructor. Introduction to the methodology of literary criticism, including a survey of modern approaches to the study of the language and literary works. Mr. Bahr, Mr. Martinson

130. Methodology of Literary Criticism. Prerequisite: senior standing or consent of instructor. Introduction to the methodology of literary criticism, including a survey of modern approaches to the study of the language and literary works. Mr. Bahr, Mr. Martinson

133. Goethe's Faust. Prerequisites: courses 100A or 100B and 1023, or consent of instructor. Detailed interpretation of Goethe's Faust, Parts I and II, together with an introduction to movements and methods of research in the Faust theme in European literature. Mr. Bahr, Mr. Martinson

134. German Folklore. A survey of the various genres of German folklore. Mr. Ward

137. Language and Linguistics. (Formerly numbered 117.) Prerequisites: courses 100A or 100B, 108A. Introduction to the historical development of the German language; theories and methods of linguistics. Mr. Christy


199A-199Z. Special Studies (2 to 4 units). Prerequisite: consent of instructor. To be arranged with faculty member who will direct the study (course section to be identified by a two-letter code using initials of sponsoring instructor — see department for code). A course of independent study may be taken by a student with more intensive or specialized investigation of material covered in a regular course and who presents such a course as a prerequisite.

Graduate Courses

201A. Bibliography of German Literary History. Study of the various kinds of bibliographies, reference works, handbooks, lexica, series publications, journals, literary histories, and related materials necessary for advanced studies and research in literary and philological problems. Practical exercises in the analysis and compilation of bibliographical data.

201C. Theories of Literary Criticism. Analysis and discussion of the foundations of literary criticism and contemporary currents such as hermeneutics, positivism, psychology, sociology, intellectual history (Geistesgeschichte), New Criticism, Marxist Criticism, Russian and Czech Formalism, structuralism, and post-structuralism. Mr. Bahr, Mr. Bäuml

202A. Middle High German. Introduction to the grammar, syntax, and vocabulary of the Middle High German language. Exercises in reading Middle High German poetry. Mr. Stephan, Mr. Wagener

202B. Readings in Middle High German Literature. Students do extensive reading of the literary monuments of the medieval period in Germany. The course also introduces students to the cultural and literary history of the Middle Ages. Mr. Bäuml

203A. The Courtly Epic. Analysis of the major epics of the medieval period in Germany, such as Hartmann's Erec and Iwein, Wolfram's Parzival, and Gottfried's Tristan. A study of courtly society, as well as an introduction to methods of interpretation and analysis. Mr. Bär

203B. The Courtly Lyric. The medieval songs of courtly performers, beginning with Der von Kürnberg and ending with Johannes von Haldau, are analyzed. Study of the sociocultural context in which the songs were produced and performed, and an introduction to methods of interpretation and analysis. Mr. Bär

203C. The Heroic Epic. A survey of German heroic literature, beginning with the Hildebrandslied and including such works as the Nibelungenlied, Kriutun, and the Dietrich epic. Methods of analysis and interpretation, as well as an analysis of thematic and formal characteristics of the different epics. Mr. Bär

204. Renaissance and Reformation Literature. The literature of the 15th and 16th centuries, including an introduction to and the study of the early New High German language. Selected readings from the works of such authors as Sebastian Brant, Martin Luther, Hans Sachs, and Johann Fischhart. Mr. Bäuml, Mr. Wagener, Mr. Ward

205. Baroque Literature. Definition of the term baroque; development of modern baroque scholarship; influence of foreign models; analysis of sample theoretical writings (prosodies) and of representative poems, dramas, novels, and prose satires of the 17th century. Mr. Wagener

206A. Enlightenment and Sentimentalism. Study of representative authors of the earlier part of the 18th century from Gottsched through Lessing, including such authors as Gotthold Ephraim Lessing, Christoph Martin Wolf, and J.J. Rousseau. Mr. Bahr, Mr. Martinson

206B. Sturm und Drang. Study of representative authors of the Sturm und Drang period, such as Herder, Forster, Gerstenberg, Leisewitz, Klinger, Wagner, R.M. Lenz, Moritz, Heinse, Schubart, and the young Goethe and Schiller. Mr. Bahr, Mr. Martinson

207A. Classicism: Goethe. Selected topics from the works of Goethe in the period from 1776 to 1808, such as Iphigenie auf Tauris, Torquato Tasso, William Meisters Lehrjahre, Die natürliche Tochter, Pan- dora, and poetry selections. Mr. Bahr

207B. Classicism: Schiller. Selected topics from the critical and dramatic works of Schiller in the period from 1793 to 1805, such as Über Anmut und Würde, Über das Erhabene, Wallenstein, Maria Stuart, Jung- frau von Orleans, and Wilhelm Tell. Mr. Bahr, Mr. Martinson

208. Romanticism. Analysis of selected works of the Romantic period by authors such as Wackenroder, Tieck, the brothers Schlegel, Novalis, Hölderlin, Brentano, Arnim, the brothers Grimm, "Bonaven- tura," E.T.A. Hoffmann, Eichendorff, and others. Course may be genre or topic oriented. Ms. Komar, Mr. Nehrings

209A. 19th-Century Lyric. The development of German lyric poetry from the classic/Romantic period to symbolism. Discussion of forms, attitudes, tendencies, and stylistic features of poetry by Romantic authors, as well as Heine, Platen, the political poets of Vormärz, Droste-Hülshoff, Keller, Storm, C.F. Meyer, Nietzsche, George, and others. Ms. Komar, Mr. Nehrings

209B. 19th-Century Drama. Reading and analysis of selected dramas by Kleist, Büchner, Hebbel, Grillparzer, and others. Discussion and analyses may include topics such as Schicksalstragödie, bourgeois trivial drama, sociopolitical drama, historical drama, Viennese Volksoper. Ms. Komar, Mr. Nehrings

209C. 19th-Century Narrative Prose. Analysis of German prose works from Romanticism to naturalism. Discussion of the problem of reality and literary realism with respect to narrative techniques. Authors may include Heine, Böchner, Droste-Hülshoff, Stifter, Gotthelf, Keller, C.F. Meyer, Fontane, and the early naturalists. Ms. Komar, Mr. Nehrings

210A. Naturalism and Symbolism. Sociological and psychological theories concerning naturalism and symbolism. Analysis of representative poems, dramas, and shorter narratives by authors such as Holz, G. Hauptmann, George, Hofmannsthali, Rilke. Mr. Nehrings, Mr. Wagener

210B. Expressionism and Neorealism. Historical and sociological background in the period from 1910 to 1933. Literary magazines, theoretical writings, poetry of expressionism and Dadaism, expressionist dramas, and shorter narratives. Definition and representative works of neorealism. Mr. Stephan, Mr. Wagener

210C. 20th-Century Novel to 1945. Analysis of selected 20th-century novels written prior to 1945. Authors of different literary and historical eras, such as Broch, Döblin, Hesse, Kafka, Heinrich Mann, Thom- as Mann, and Rilke. Mr. Stephan, Ms. Komar, Mr. Wagener

211. Contemporary Novels. Study of selected novels in the period from 1945 to the present. Works by authors from West and East Germany, Austria, and Switzerland, such as Böll, Grass, Handke, Frisch, and Christa Wolf, are analyzed and placed in the context of literary, cultural, and political trends. Mr. Stephan

211B. Contemporary Lyric and Drama. A study of selected dramas and poems in the period from 1945 to the present. Works by authors from West and East Germany, Austria, and Switzerland, such as Dürrenmatt, Frisch, Handke, Celan, and Brecht, are analyzed and placed in the context of literary, cultural, and political trends. Mr. Stephan

COLLEGE OF LETTERS AND SCIENCE / Germanic Languages / 185
217. History of the German Language. A historical survey of the development of the standard literary German language from the Indo-European period through the medieval period, the Reformation, the baroque period, and the Enlightenment until its final codification at the end of the 19th century. Mr. Christy, Mr. Wilbur

230. Seminar of Germanic Philology. A systematic survey of the major problems in the field of Germanic linguistics: the origin and historical diffusion of the Germanic dialects and their classification; problems in the evolution of the nominal and verbal morphology of the various Germanic dialects; and the evolution of the various dialects. Mr. Wilbur

231. Gothic. A systematic study of the phonology and grammar of the Gothic language, with readings in Wulfila’s translation of the Bible and an introduction to the history of the Goths and their place in the development of modern Europe. Mr. Wilbur

232. Old High German. An introduction to the earliest phases of German literature, with extensive readings in the major documents of that period (750–1050). Emphasis on the grammatical interpretation of these documents and the identification of the dialects used in their composition. Mr. Christy, Mr. Wilbur

233. Old Saxon. An introduction to the study of the earliest documents in Old Low German. Readings in the Heliand and the study of the Old Saxon Genesis. Mr. Christy, Mr. Wilbur

240A. Theories, Methods, and History of Germanic Folklore. The history of Germanic folklore studied in the context of European cultural history. The evolution of the theories and methods of the discipline as developed by Heinrich Grimm, Boile, Meurer, Naumann, Bausinger, and others. Mr. Ward

240B. Folk Song and Ballad. Analysis of the poetic and musical aspects of German folk songs and ballads. Study of thematic and formalistic evolution of text and music, combined with an introduction to the theories and methods of analysis of music and the function of folk song in its social context. Mr. Ward

240C. Oral Prose Genres. Study of the thematic and formal characteristics of legends, folktales, jests, proverbs, and riddles. The role of popular narrative in its sociocultural context in German history and a survey of methods of analysis of narratives, texts, and contexts. Mr. Ward

245B. Germanic Antiquities. Survey of the prehistoric and early historic civilizations of the Bronze Age to the end of the migrations on the basis of archaeological, historic, and philological evidence. Methods of comparative ethnography, religion, and myth are used to interpret the evidence. Mr. Ward

251. Seminar in Syntax and Phonology of German. Topics selected from the field of contemporary German syntax and phonology according to the needs and preparation of the students enrolled (e.g., Dialektgeographie, generative phonology, generative syntax, Valenztheorie, Texttheorie). Mr. Wilbur

252. Seminar in Historical and Comparative German Linguistics. Topics selected from the field of historical Germanic phonology and syntax according to the needs and preparation of the students enrolled (e.g., the West Germanic problem and the classification of the Germanic languages, the development of Germanic verbal and nominal morphology, proto-Germanic syntax). Mr. Wilbur

253. Seminar in Medieval Literature. Seminar on topics in medieval literature, with emphasis on problems in literary analysis and the applicability of various types of analysis to medieval texts. Mr. Baum, Mr. Ward

254. Seminar in Renaissance and Reformation. Seminar on selected literary or philosophical texts, such as a particular genre, author, or theme. Studies on textual analysis or pertinent research to apply the methods of literary history to the literature of the 15th and 16th centuries. Mr. Baum, Mr. Ward

255. Seminar in Baroque Literature. Seminar on selected problems of German baroque literature, such as a particular author, aspects of genre, or theme. Textual analysis supplemented by critical review of research and the application of methods of literary analysis pertinent to the literature of this age. Mr. Wagener

256. Seminar in Enlightenment and Sturm und Drang. Selected topics in 18th-century literature, such as utopian literature, love and money as motifs, family structure and family life, image of women and women’s literature, Jacobin literature, seduction and betrayal as motifs, novelty and aims of class in 18th-century literature. Textual analysis and review of current research. Mr. Baehr, Mr. Martinson

257. Seminar in the Age of Goethe. Selected topics in German literature between 1775 and 1832, such as Schiller’s theoretical writings, Goethe’s Faust II, Goethe’s Wanderjahre and West-Östlicher Divan, Goethe’s Faust II and Hegel’s Phänomenologie des Geistes, the French Revolution and German classicism. Textual analysis and review of current research. Mr. Baehr, Mr. Martinson

258. Seminar in Romanticism. Discussion of a specific author or topic from the Romantic period, possibly in connection with course 208. Critical review of secondary works. Mr. Komar, Mr. Nehring

259. Seminar in 19th-Century Literature. Discussion of specific author or topic of 19th-century literature, possibly in close connection with course 209A, 209B, or 209C. Critical review of secondary works. Mr. Komar, Mr. Nehring

260. Seminar in the Modern Period. Seminar on a selected genre, author, or theme of 20th-century German literature prior to 1945. Mr. Baehr, Mr. Nehring, Mr. Wagener

261. Seminar in Contemporary Literature. Study of selected works, a specific author, genre, period, or topic from 1945 to the present. Texts are analyzed and placed in the context of literary, cultural, and political trends. Mr. Stephen

262. Seminar in Germanic Folklore. Detailed research on individual aspects of Germanic folklore. The topic selected generally is drawn from the course in the German 240 series that preceded the seminar. Emphasis on problems of theory and method. Mr. Ward

263. Seminar in Theories of Literature. Specialization in literary theories, such as Rezeptionsästhetik, New Criticism, Marxism, and the sociological approach to literature. Analysis of literary methods and the social, structural, and semiotic aspects of literature. Mr. Baehr, Mr. Baumi

270. The Teaching of German in Secondary Schools. Lecture, three hours; discussion periods. Prerequisite: graduate standing or consent of instructor. Required of all candidates for the general secondary credential in German. Mr. Ward

275. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for the course and training at the University. May be repeated for credit. S/U grading.

495A-495B. Preparation for College Teaching of German (2 units each). A survey of principles, methods and teaching methods in teaching German on the college level. Theory and classroom practice, observation, and critical evaluation. May not be applied toward the M.A. course requirements. In Progress and S/U grading.

596. Directed Individual Study or Research. To be arranged with faculty member who will direct the study or research (course section to be identified by a two-letter code using initials of sponsoring instructor — see department for code). May be taken only once before and only once after the M.A. degree; only one course in the 500 series may be counted toward the M.A. graduate course requirement. S/U grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. To be arranged with faculty member who will direct the study (course section to be identified by a two-letter code using initials of sponsoring instructor — see department for code). May be taken only once before and only once after the M.A. degree; only one course in the 500 series may be applied toward the M.A. graduate course requirement. S/U grading.

598. Research and Preparation of M.A. Thesis (4 to 12 units). To be arranged with faculty member who will direct the study (course section to be identified by a two-letter code using initials of sponsoring instructor — see department for code). Only one course in the 500 series may be applied toward the M.A. graduate course requirement. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation (4 to 12 units). To be arranged with faculty member who will direct the study (course section to be identified by a two-letter code using initials of sponsoring instructor — see department for code). May be repeated. S/U grading.

Dutch and Afrikaans

Upper Division Courses

103A. Elementary Dutch. (Formerly numbered 101A.) Lecture/laboratory. Introduction to the standard language of the Netherlands and one of the three standard languages of Belgium. Practice in grammar, listening, speaking, reading, and writing. Mr. Kirser

103B. Elementary Dutch. (Formerly numbered 101C.) Lecture/laboratory. Prerequisite: course 103A or equivalent. Mr. Kirser

103C. Intermediate Dutch. (Formerly numbered 101D.) Lecture/laboratory. Prerequisite: course 103B or equivalent. Grammar, conversation, reading and analysis of simple texts. Mr. Kirser

105A. Elementary Afrikaans. (Formerly numbered 101B.) Lecture/laboratory. Introduction to the sister language of modern Dutch and a national language of South Africa. Grammar, practice in listening, speaking, reading, and writing. Mr. Kirser

105B. Intermediate Afrikaans. (Formerly numbered 101E.) Lecture/laboratory. Prerequisite: course 105A or equivalent. Grammatical exercises; reading and linguistic analysis of texts from both literary and nonliterary sources. Mr. Kirser

112. Dutch, Flemish, Afrikaans Literature in Translation. Readings and analysis of selected works in the literature of the Netherlands and northern (Flemish) Belgium from the mid-1850s to the present, including novels by such writers as Multatuli, Couperus, Hermans, Mulisch, and Reve and poetry by such groups as the symbolist Beweging van Tachtig and the post-War Beweging van Vijftig. Mr. Kirser

131. Introduction to Modern Dutch Literature. Discussion, three hours. Prerequisite: course 103B or equivalent. Selected works of the literature of the Netherlands and northern (Flemish) Belgium from the mid-1850s to the present, including novels by such writers as Eybers, Opperman, W.E.G. Louw, Van Wyk Louw, and Breytenbach. Mr. Kirser

135. Introduction to Afrikaans Literature. Discussion, three hours. Prerequisite: course 103B or equivalent. Analysis of selected works from the founding of the Genootskap van Regte Afrikaners in 1875 to the present time, including novels by recent writers such as Leroux and Brink, as well as the work of poets such as Eybers, Opperman, W.E.G. Louw, Van Wyk Louw, and Breytenbach. Mr. Kirser

199. Special Studies in Dutch-Flemish and Afrikaans (2 to 4 units). Mr. Kirser
Graduate Courses

234. The Structure of Modern Standard Dutch. A detailed examination, from contrasting theoretical viewpoints, of central problems in Dutch phonology, grammar, and semantics, with attention to related phenomena in German, English, and Afrikaans. Course is equivalent to Linguistics 225. Mr. Kirsner

596. Directed Individual Study or Research in Dutch-Flemish and Afrikaans. To be arranged with faculty member who will direct the study or research (course section to be identified by a two-letter code using initials of sponsoring instructor — see department for code). May be repeated once. S/U grading. Mr. Kirsner

597. Preparation for Ph.D. Qualifying Examinations. To be arranged with faculty member who will direct the study. May be taken only once. S/U grading. Mr. Kirsner

Hungarian

Upper Division Courses

101A. Elementary Hungarian. Introduction to grammar and reading exercises with emphasis on the spoken language. Ms. Birnbaum

101B. Elementary Hungarian. Prerequisite: course 101A or equivalent. Grammatical exercises, conversation, and reading of texts. Ms. Birnbaum

101C. Elementary Hungarian. Prerequisite: course 101B or equivalent. Conversation and readings in literary texts. Ms. Birnbaum


10E. Advanced Hungarian. Prerequisites: courses 102 or 101D or equivalent. Conversation, reading, and discussion of literary texts. Ms. Birnbaum

10F. Advanced Hungarian. Prerequisites: courses 101A-101E or equivalent. Conversation and review of Hungarian grammar from a typological point of view. Ms. Birnbaum

120A-120B. Readings in Hungarian. Prerequisite: course 101C or equivalent. Selections of Hungarian prose and poetry read in the original. Ms. Birnbaum

120C. Readings in Hungarian Literature. Prerequisite: reading knowledge of Hungarian, course 101C or equivalent. Selections of Hungarian prose and poetry read in the original. Discussion is conducted in Hungarian. Ms. Birnbaum

121A-121B. Survey of Hungarian Literature in Translation. Intended for students in general and comparative literature, as well as students interested in Finno-Ugric studies. Main trends and contacts with other literatures are surveyed. Ms. Birnbaum

130. Hungarian Civilization and Culture. A study of Hungarian civilization and institutions from the earliest times to the present. Study of Hungarian culture as represented in its arts (literature, fine arts, music). Ms. Birnbaum

135. Hungarian Folklore and Mythology. (Same as Folklore M128.) A general course for the student in folklore and mythology with emphasis on typology of folktales and varieties of folklore research. Ms. Birnbaum

136. Folklore and Mythology of the Ugric Peoples. (Same as Folklore M129.) Survey of the traditions of the smaller Ugric nationalities (Voguls, Ostyaks, etc.). Ms. Birnbaum

199. Special Studies in Hungarian (2 to 4 units). Prerequisite: consent of instructor. A course of independent study for students who desire more intensive or specialized investigation of material covered in a regular course and who present such a course as a prerequisite. Ms. Birnbaum

Old Norse Studies

Lower Division Course

40. The Heroic Journey in Northern Myth, Legend, and Epic. (Formerly numbered Scand 40.) A comparison of the journeys of heroes. Readings in mythology, legend, folklore, and epic, including the Nibelungenlied, the Wolfsunga saga, the Eddas, and Beowulf. Cultural and historic backgrounds to the texts are considered. All readings are in English. Mr. Byock

Upper Division Courses

139. The Saga. Lecture, three hours. The sagas are the largest extant medieval prose literature. Texts are read in English, with selections from the different types of Icelandic sagas. Consideration is given to the history and culture that produced this literature. Mr. Byock

140. Viking Civilization and Literature. (Formerly numbered Scandinavian 141.) Readings in the history, society, and culture of the early Scandinavians. All texts are in English and include Old Norse saga, Eddic, and early ballad literature. Mr. Byock

145. Old Norse Literature and Society. Lecture, three hours. Readings in primary texts in conjunction with the critical literature. Specific issues in medieval Scandinavian studies are considered. May be repeated for credit. Concurrently scheduled with course C223. Mr. Byock

151. Elementary Old Norse. (Formerly numbered Scandinavian 151.) Introduction to the grammar and pronunciation of Old Norse. Selected readings from the sagas and the Prose Edda. Mr. Byock

152. Intermediate Old Norse. (Formerly numbered Scandinavian 152.) Prerequisite: course 151 or equivalent. Continued grammar, pronunciation, and readings from the Eddas and the sagas of the Icelanders, the Norwegian kings, and the legendary heroes. Mr. Byock

153. Modern Icelandic. (Formerly numbered Scandinavian 153.) Prerequisite: course 152 or equivalent. Grammar, readings, and conversation. Mr. Byock

199. Special Studies in Old Norse (2 or 4 units). Prerequisite: consent of instructor. A course of independent study for students who desire more intensive or specialized investigation of material covered in a regular course and who present such a course as a prerequisite. Mr. Byock

Graduate Courses

221. Advanced Old Norse Prose. Prerequisite: course 152 or equivalent. Readings of major saga texts. Also read are secondary sources which bear on specific issues in Old Norse literature and medieval Scandinavian history. Mr. Byock

222. Advanced Old Norse Poetry. Prerequisite: course 152 or equivalent. Readings of mythological and heroic poems from the Poetic Edda. Secondary sources used where appropriate. Mr. Byock

223. Old Norse Literature and Society. Lecture, three hours. Critical issues in medieval Scandinavian studies. May be repeated for credit. Concurrently scheduled with course C145. Mr. Byock

245A. Germanic and Scandinavian Mythology. Lecture, three hours. A study of Northern myth and religion through a close reading of the Eddic texts and secondary sources. Mr. Byock

596. Directed Individual Study or Research. To be arranged with faculty member who will direct the study. May be repeated once. S/U grading. Mr. Byock

Yiddish

Lower Division Courses

1. Elementary Yiddish. Introduction to grammar, instruction in listening, speaking, reading, and writing skills. Ms. Hadda

2. Elementary Yiddish. Prerequisite: course 1 or equivalent. Ms. Hadda

3. Elementary Yiddish. Prerequisite: course 2 or equivalent. Ms. Hadda

Upper Division Courses

104. Intermediate Yiddish. Lecture, five hours. Prerequisite: course 3 or equivalent. Grammatical exercises, reading and linguistic analysis of texts, conversation. Ms. Hadda

121A. 20th-Century Yiddish Prose in English Translation. Prerequisite: upper division standing or consent of instructor. Readings in 20th-century Yiddish prose and drama. Ms. Hadda

121B. 20th-Century Yiddish Prose and Drama in English Translation. Prerequisite: upper division standing or consent of instructor. Readings in 20th-century Yiddish prose. Ms. Hadda

121C. Special Topics in Yiddish Literature in English Translation. Varying topics of importance and relevance to Yiddish literary study. Reading and analysis of a wide range of 19th- and 20th-century literature. Ms. Hadda

131A. Modern Yiddish Poetry. Prerequisite: course 104 or consent of instructor. Readings in modern Yiddish poetry. Ms. Hadda

131B. Modern Yiddish Prose and Drama. Prerequisite: course 104 or consent of instructor. Readings in modern Yiddish prose and drama. Ms. Hadda

131C. Special Topics in Yiddish Literature. Prerequisite: course 131A or 131B. Varying topics of importance and relevance to Yiddish literary study. Reading and analysis of a wide range of 19th- and 20th-century literature. Ms. Hadda

199. Special Studies in Yiddish (2 to 4 units). Prerequisite: consent of instructor. A course of independent study for students who desire more intensive or specialized investigation of material covered in a regular course and who present such a course as a prerequisite. Ms. Hadda

Graduate Course

596. Directed Individual Study or Research in Yiddish. To be arranged with faculty member who will direct the study or research (course section to be identified by a two-letter code using initials of sponsoring instructor — see department for code). May be repeated once. S/U grading. Ms. Hadda

Scandinavian Section

332 Royce Hall, 825-2432

Professors

Ross P. Shideler, Ph.D.
Kenneth G. Chapman, Ph.D., Emeritus
Erik Wahlgren, Ph.D., Emeritus

Associate Professors

James R. Massengale, Ph.D., Vice Chair
Mary Kay Norseng, Ph.D.

Adjunct Lecturers

Inkeri A. Rank, M.A., M.Ed. (Finnish Studies)
Jules L. Zeninner, Ph.D.
Scope and Objectives

Scandinavia consists of five Northern European countries: Denmark, Finland, Iceland, Norway, and Sweden. Together with the Faroe Islands and Greenland, these countries form a geographic bridge between the American and European continents and a political bridge between the West and Eastern Europe. For all students of literature, history, and social planning, 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, as well as a strong set of course offerings in Finnish language, literature, and folklore. 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 will study the literatures of the other language areas.

Bachelor of Arts in Scandinavian Languages

Preparation for the Major

Required: Scandinavian 1, 2, 3, 4, and 5, or 11, 12, 13, 14, and 15, or 21, 22, 23, 24, 25, and 30, or equivalent.

The Major

Required: Twelve upper division courses in Scandinavian, including 105 and 106 or 110 for two quarters and 141, 142, 143. As an option, three upper division courses in a related field may be taken. These three courses must be 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.

Master of Arts in Scandinavian

Admission

In addition to the University minimum requirements, prospective students in the M.A. program in Scandinavian must have an undergraduate major in Scandinavian languages or equivalent. If you are deficient in the undergraduate major, you must complete it by taking the appropriate courses as recommended by the graduate adviser. A placement examination in the Scandinavian languages, as well as in German, may be required.

Three letters of recommendation are required by the Graduate Division.

For a brochure describing the program and requirements, write to the Scandinavian Section, 332 Royce Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

There are no clear major fields or subdisciplines in the M.A. program, but students emphasize one modern language and literature area in Danish, Norwegian, or Swedish.

Foreign Language Requirement

Reading knowledge of French or German is required (in addition, of course, to a knowledge of the Scandinavian languages). You must pass the Graduate School Foreign Language Test reading examination in French or German with a score of 500 or better or must pass at least one upper division course in French or German.

Course Requirements

A total of 12 courses is required for the M.A. degree. These include a minimum of nine upper division and graduate courses in Scandinavian languages, at least five of which must be graduate courses. Three courses on the upper division or graduate level may be taken in a related field of linguistic or literary study to be determined in consultation with the graduate adviser; at least one of these must be on the graduate level. Comparative Literature 200 or an equivalent course in methodology is required as one of the 12 courses.

Three 596 courses (12 units) may be applied toward the total course requirement, but only one (four units) may be applied toward the minimum graduate course requirement.

Comprehensive Examination Plan

A comprehensive examination, based on the required coursework and a reading list, will be required of all candidates for the M.A. degree. The examination is given whenever you have completed the course requirements and feel prepared to be examined on both the coursework and the reading list.

The comprehensive examination is both written and oral; students who fail may be reexamined once without petitioning.

For the Ph.D. degree in Germanic Languages with Scandinavian literature as a major or minor field, see the "Ph.D. in Germanic Languages."  

Lower Division Courses

No credit will be allowed for completing a less advanced course after successful completion of a more advanced course in 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 by consent of the instructor.
110. Advanced Danish and Norwegian. Prerequisite: course 30 or equivalent. Readings, composition, and conversations in Danish and Norwegian. May be repeated once for credit.

M123A. Finnish Folklore and Mythology. (Same as Folklore M123A.) The methods and results of Finnish folklore studies and the mythic traditions of the Finns. Special attention to the oral epic, beliefs, and legends.

Ms. Rank

M123B. Finnish Folk Song and Ballad. (Same as Folklore M123B.) Course M123A is not prerequisite to M123B. A survey of Finnish balladry and folk song, with attention to historical development, ethnic background, and poetic and musical values.

Ms. Rank

M125. Folklore and Mythology of the Lapps. (Same as Folklore M125.) Survey of Lappish beliefs, tales, legends, songs, and music. Attention also to the material manifestations of Lappish culture: arts and crafts, textiles, costume, folk technology.

Ms. Rank

130. Elementary Finnish. Introduction to pronunciation and grammar.

Ms. Rank

131. Intermediate Finnish. Prerequisite: course 130 or equivalent. Grammatical exercises and readings.

Ms. Rank

132. Advanced Finnish. Prerequisite: course 131 or equivalent. Readings, composition, and conversation.

Ms. Rank

133. Survey of Finnish Literature. Conducted in English, knowledge of Finnish is not required. Intended for students in general and comparative literature, as well as students interested in Finnish studies. Readings and discussions of selected works from the literature of Finland in the 19th and 20th centuries.

Ms. Rank

141. Backgrounds of Scandinavian Literature. Prerequisite for Scandinavian majors: course 30 or equivalent; for nonmajors: knowledge of a Scandinavian language is not required. Readings and discussions of selected works from the literature of the medieval, Renaissance, baroque, and Enlightenment periods.

Mr. Massengale

142. Scandinavian Literature of the 19th Century. Prerequisite for Scandinavian majors: course 30 or equivalent; for nonmajors: knowledge of a Scandinavian language is not required. Readings and discussions of selected works from the literature of Scandinavia in the 19th century.

Ms. Massengale, Ms. Norseng, Mr. Shideler

143. Modern Scandinavian Literature. Prerequisite for Scandinavian majors: course 30 or equivalent; for nonmajors: knowledge of a Scandinavian language is not required. Readings and discussions of selected works of modern Scandinavian literature.

Mr. Massengale, Ms. Norseng, Mr. Shideler

C144. Henrik Ibsen. Prerequisite for Scandinavian majors: course 30 or equivalent; for nonmajors: knowledge of a Scandinavian language is not required. Readings and discussions of selected plays by Henrik Ibsen. May be concurrently scheduled with course C251.

Ms. Norseng

C145. August Strindberg. Prerequisite for Scandinavian majors: course 30 or equivalent; for nonmajors: knowledge of a Scandinavian language is not required. Readings and discussions of selected plays by August Strindberg. May be concurrently scheduled with course C252.

Mr. Massengale, Mr. Shideler

C146. Soren Kierkegaard. Prerequisite for Scandinavian majors: course 30 or equivalent; for nonmajors: knowledge of a Scandinavian language is not required. Readings and discussions of selected works by Soren Kierkegaard. May be concurrently scheduled with course C253.

Mr. Massengale

C147. Knut Hamsun. Prerequisite for Scandinavian majors: course 30 or equivalent; for nonmajors: knowledge of a Scandinavian language is not required. Readings and discussions of selected works by Knut Hamsun. May be concurrently scheduled with course C254.

Ms. Norseng

C180. Literature and Scandinavian Society. Knowledge of one Scandinavian language may be required. Discussion of selected aspects of Scandinavian society based on readings of the contemporary literature as well as other documentary material. May be repeated for credit (as determined by undergraduate advisor). May be concurrently scheduled with course C263.

Mr. Massengale, Ms. Norseng, Mr. Shideler

181. Contemporary Swedish Literature. Prerequisite: reading knowledge of a Scandinavian language. Reading and analysis of selected texts by major 20th-century Swedish authors. The course covers not only specific novelists, playwrights, and poets, but places them within a social and historical milieu.

Mr. Shideler

C182. The Theory of the Scandinavian Novel. Prerequisite for Scandinavian majors: course 30 or equivalent; for nonmajors: knowledge of a Scandinavian language is not required. The course examines the predominant structures of the novel, the Scandinavian novel in particular, starting with its beginnings, concentrating on the rise of the novel in the 19th century, and following the novel's evolution in the 20th century. The works of such writers as Kierkegaard, Andersen, Almquist, Jacobsen, Hamsun, and Hansen are central to the course. May be concurrently scheduled with course C182.

Ms. Norseng, Mr. Shideler

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. To be arranged with faculty member who will direct the study or research. Twelve units may be applied toward the total course requirement, but only four units may be applied toward the minimum graduate course requirement. May be repeated twice. S/U grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations (4 to 8 units). To be arranged with a faculty member who will direct the study or research. May be repeated once. May not be applied toward the M.A. minimum course requirements. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation. To be arranged with a faculty member who will direct the study or research. May be repeated. S/U grading.
The course offerings in history at UCLA are designed to bring about an understanding of the past of our own society and the world. UCLA has one of the forces that have shaped the many cultures of this country and the world.

History is the study of the past of our own society and how it emerged out of the traditions that produced it. At the same time, self-knowledge for students of history comes not only from self-discovery, but from a comparison of their own tradition and experience with those of others. It is only by studying the history of other civilizations and cultures that we can hope to gain perspective on our own.

The course offerings in history at UCLA are designed to bring about an understanding of the forces that have shaped the many cultures of this country and the world. UCLA has one of the largest, most distinguished, and most diverse history faculties in the country. Its main emphasis is on the many aspects of social history, but intellectual, cultural, and political history are also strongly represented.

Of all undergraduate majors, history is probably the most flexible and far-reaching. Leading to a Bachelor of Arts degree, it is excellent preparation for a wide variety of careers — law, teaching, business, the communications media, public services, and medicine.

The department offers graduate programs leading to the M.A. and Ph.D. and accepts qualified applicants for either or both degrees. There is also a joint master's program with the Graduate School of Library and Information Science. Traditionally, the M.A. and Ph.D. in History have led to careers in high school, college, and university teaching. Increasingly, they are also being put to use in government service, international business, museum and archival work, and journalism.

Bachelor of Arts Degree

Preparation for the Major and the Major

The History Department's undergraduate program consists of 16 courses in history (six lower division — the "Preparation for the Major"; ten upper division — the "Major") and four courses in the social sciences outside the department. The following courses are required in the program:

(1) History 1A-1B-1C.
(2) Two courses in U.S. history.
(3) Two courses in non-Western history from the same area (i.e., Latin America, Asia, Near and Middle East, Africa) or in science and technology. Candidates for the California Standard Teaching Credential may not choose science and technology to fulfill their non-Western requirement.
(4) History 99 (for freshmen and sophomores), 101 (for juniors and seniors), or 100.
(5) History 197 or 199.
(6) Four courses in the social sciences outside of history or in other related disciplines as explained below.

The requirements for U.S. and non-Western history may be met with either upper or lower division courses. Normally only six lower division courses in history need to be included in your program, so if you meet the U.S. history requirement at the lower division level, you will have to meet the non-Western requirement at the upper division level (or vice versa). If you choose to meet both requirements at the lower division level, you will still be required to take ten upper division courses to fulfill upper division requirements. The department recommends the following lower division courses to meet the U.S. history and non-Western requirements: History 2; 3A-3B-3C; 3D; 6A-6B-6C; 7A-7B; 8A; 8B; 9A-9B-9C; 9D plus one suitable upper division course; 10A-10B. If only one non-Western course is taken in lower division, an appropriate upper division non-Western course must be included in the major.

All history majors are required to take at least four courses in other departments in the social sciences, whether lower or upper division (anthropology, geography, economics, political science, sociology, psychology). These courses may not be taken on a Passed/Not Passed basis. A one-quarter course from the History 6A-6B-6C sequence may be applied toward this requirement, provided the same quarter course is not used to satisfy any other requirement of the major.

By petition, you may replace up to two social science courses with courses in humanities, fine arts, or natural sciences relevant to your program in history. Courses in communication studies do not fulfill this requirement.

Only two courses offered outside the History Department may be applied as major courses without petition: Anatomy (Medical History) 107A-107B.

Transfer students with deficiencies in lower division courses may by petition substitute appropriate upper division courses in history for the lower division requirements. See the undergraduate counselor.

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: The College of Letters and Science allows ten quarter units toward the B.A. for each Advanced Placement Test in history. The History Department applies this credit to the "Preparation for the Major" as follows: AP European History fulfills History 1C; AP American History fulfills History 1A; AP U.S. History fulfills History 1B. AP American history allows eight units of History 7A-7B credit on the history preparation. The excess units may be applied only toward the degree.

Honors Program

The honors program is designed for history majors who are interested in carrying out a year-long independent research project that culminates in an honors thesis. Special honors seminars are also offered during the junior year. A 3.5 departmental grade-point average is normally required for admission, but students with a lower GPA may apply to the honors committee for admission. Application should be made at the beginning of the junior year.

History 101H is required, as are History 199HA-199HB-199HC, which count as three of the ten required upper division courses.
Course 199HA is taken in the Spring Quarter of the junior year; honors students then take courses 199HB and 199HC in the Fall and Winter Quarters of their senior year under the guidance of the sponsoring professor. The Justin Turner Prize is awarded for the outstanding honors thesis.

**Master of Arts Degree**

**Admission**

For admission to graduate standing in the Department of History, you should normally have completed the undergraduate major or its equivalent, have received a Bachelor of Arts degree or its equivalent from an accredited college or university, and have maintained at least a B+ average in upper division work. You also need three letters of recommendation and the scores of the Aptitude Test of the Graduate Record Examination (GRE) submitted to the department. Students not meeting the grade-point average requirements may be admitted in exceptional cases if their letters of recommendation, GRE scores, or other factors indicate unusual promise. Applicants with a year or more of graduate study at other institutions should have attained a GPA of 3.5 or better if they wish to work toward the Ph.D. degree. Applications should be submitted before December 30; notification will be made on or before May 1. Except for extraordinary cases, students are expected to begin their graduate work in the Fall Quarter.

There is no screening examination. Nonhistory majors may be required to take specified courses, depending on their background and fields of specialization. Because applicants are admitted to pursue graduate work in a specific field, a change of fields after admission requires the approval of the relevant field committee.

An annual Guide to Graduate Study in History which explains the requirements and procedures of the graduate program in detail is mailed to all new graduate students who have filed an Intent to Register (prior to registration). The guide lists faculty, their representative publications, and descriptions of courses offered during the year, and is available from the Graduate Adviser, Department of History, 6265 Bunche Hall, UCLA, Los Angeles, CA 90024.

**Major Fields or Subdisciplines**

The comprehensive examination covers one of the following fields: (1) ancient (includes ancient Near East); (2) medieval (includes Byzantine and medieval Jewish history); (3) Europe, 1550 to present (includes British history and the British Empire); (4) Africa; (5) Near East (includes Armenia); (6) India and Southeast Asia; (7) East Asia; (8) Latin America; (9) United States; (10) history of science; (11) special fields (students in the history of religions, Russian history, and modern Jewish history will normally be examined in one of the above fields, but with the consent of the faculty in these fields may petition the graduate guidance and curriculum committee for an M.A. examination in their field of specialization).

**Foreign Language Requirement**

If you are contemplating graduate work in history, you should begin study of a foreign language as an undergraduate since reading knowledge of one foreign language approved by the department is required. For French, German, Russian, or Spanish, a score of 500 on the GSFLT is required. Students of United States, Near East, and African history may use departmentally administered translation examinations in French, Spanish, or German in place of the GSFLT. Students of European history must pass departmentally administered examinations in these three languages. For other languages, certification is required by the department teaching the language according to that department’s standards.

**Course Requirements**

The department requires a minimum (and preferably a maximum) of nine upper division and graduate courses in history, at least six of which must be graduate courses. No course in the 300 series may be applied toward this requirement, and only one in the 500 series may be applied. For students in United States history, a minimum of seven of the nine courses must be at the 200 level, including at least one two-quarter seminar and History 245. Students in European history must include course 225, and Africanists must take course 275.

**Comprehensive Examination Plan**

The department follows the comprehensive examination plan. Individual fields specify fulfillment of the examination requirement by (1) a three-hour written examination designed to assess your ability to synthesize a broad field of knowledge or (2) the submission of three essays written for at least two different professors as part of your program of study. At least two of these papers must have been submitted for graduate courses in the 200 series. Students in the United States field must submit the paper from the two-quarter research seminar in United States history.

Field examiners administer the M.A. comprehensive examinations in November, March, and May of each academic year. The committee will recommend the following examination results: pass to continue, pass subject to reevaluation, terminal pass, fail. In cases where the M.A. is awarded pass subject to reevaluation, the field M.A. committee will reevaluate your progress after an additional three quarters of study. Only in exceptional cases are oral examinations required for the M.A. degree.

M.L.S./M.A.-History

This concurrent degree program of the Department of History and the Graduate School of Library and Information Science allows you to combine historical study with the tools of the information professional and to obtain two degrees — the M.L.S. and the M.A. in History. The best sequence of coursework should be discussed with the advisers from this department and the Graduate School of Library and Information Science.

**Ph.D. Degree**

**Admission**

Admission requirements for the Ph.D. program are the same as those for the M.A., but applicants for the doctorate are urged to seek an interview or to correspond with a member of the faculty in the field in which they intend to work. Students may be admitted with subject deficiencies, but such deficiencies must be removed by completing courses in addition to the requirements for an advanced degree.

While no examination is required for admission to a Ph.D. program, evaluation examinations are given to determine your continuance to the Ph.D. degree.

An annual Guide to Graduate Study in History which explains the requirements and procedures of the graduate program in detail is mailed to all new graduate students who have filed an Intent to Register (prior to registration). The guide lists faculty, their representative publications, and descriptions of courses offered during the year, and is available from the graduate adviser.

**Major Fields or Subdisciplines**

Ancient Greece; ancient Rome; medieval constitutional and legal; medieval social and economic; medieval ecclesiastical and religious; medieval intellectual and cultural (medieval history specialists may offer no more than two of these fields in medieval history); Byzantine; Russia since 862; Southeast Europe (Balkans); England, 1485-1763; England since 1763; the British Empire; the Near East, 500-1500; the Near East since 1500; ancient Near East; Armenian; survey of African history; topics in African history (preferably on a regional basis); history of science to 1600; history of science since 1600; Europe, Renaissance-Reformation; Europe, Renaissance to the French Revolution; Europe since 1740; European socioeconomic history; European intellectual and cultural history; psychohistory; China, 900-1800; China since 1800; modern Japan; South Asia; Southeast Asia; Latin America, 1492-1830; Latin America since 1759; history of religions; Jewish history; history of Christianity; comparative history; United States: (1) mastery of the general field of United States history sufficient to teach a college-level survey course and (2) a specialized field
selected from the following: Afro-American, American diplomatic, American West, American Indian, California, history of the South, Civil War and Reconstruction, Colonial, cultural, economic, immigration, intellectual, Jeffersonian and Jacksonian American (1800-1850), labor, Mexican-American, social, the new nation (1763-1800), 20th century, urban, women's history. Both the general and a specialized field must be offered by specialists in United States history and only two fields in United States history are permitted. Either field 1 or 2 or both may be selected as minor fields for the Ph.D.

Candidates offering a field in comparative history as a fourth field for the Ph.D. degree should select a topic for comparison which would usually coincide with time-area spans of the other three fields defined for the Ph.D. qualifying examinations.

Candidates in the history of science program must select three of the above fields and either the history of medicine or an allied field. If it is not an examination of the prescribed language(s) (one for U.S. history, and a second for European history), an examination in the second language must be offered by specialists in the history of science or an allied field. You should select fields in consultation with your faculty sponsor and must receive the department's approval of all four fields. If you fail the oral qualifying examination, you may repeat it once (normally within a period of six months) with the consent of the doctoral committee.

After passing the oral qualifying examination, you are advanced to candidacy and may begin work on the dissertation.

Candidate in Philosophy Degree

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination

If required by the qualifying examination committee, a final oral examination will be conducted after completion of the dissertation to cover the field within which the dissertation falls. After approving a dissertation, the chair of the doctoral committee may, with the unanimous consent of the entire committee, recommend a waiver of the final oral examination.

Lower Division Courses

1A-1B. Introduction to Western Civilization. Lecture/discussion. A 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 to acquaint them, through reading and critical discussion, with representative contemporary documents and writings of enduring interest.

2. History of Technology from Antiquity to the 20th Century. (Formerly numbered 2A-2B-2C.) Designed for students in the natural sciences, social sciences, and fine arts. A survey of the development of man's ability to understand more fully and to utilize more efficiently the natural environment, stressing technology's changing social, economic, scientific, and cultural relationships.

3A-3B-3C. Introduction to the History of Science. History majors may not apply these courses on the science breadth requirements.

3A. The Scientific Revolution. A survey of the beginnings of the physical sciences involving the transformation from Aristotelian to Newtonian cosmology, the mechanization of the natural world, the rise of experimental science, and the origins of scientific societies.

Mr. Westman, Mr. Wise

3B. The Physical Sciences since the Enlightenment. A broad survey of the development of ideas in classical and modern physical science since Newton. The unifying theme is theories of matter, but more specifically, chemistry, thermodynamics, electromagnetism, theory of light, energy conservation, relativity, and quantum mechanics are discussed.

Mr. Wise

3C. The Biological Sciences, 1800-1955. A survey of the development of the biological sciences from the period of Bichat and MÜller to the discovery of the double helix.

Mr. Frank

3D. Themes in the History of Medicine. Lecture, three hours. Prerequisite: sophomore standing. Limited to 30 students. The course examines, through illustrated lectures and focused discussion of primary sources, five important themes in the development of modern medicine: the nature of diagnosis, the emergence of surgery, epidemics, the conception and treatment of insanity, and the use of medical technology.

Mr. Frank

4. Introduction to the History of Religions. A discussion of the various systems, ideas, and fashions of thought that have dominated Western approaches to the religions of the world since antiquity. The course surveys the development of theideas from classical Greek and early Christian theories to modern history with its discoveries of the religions of India, China, the ancient Near East, etc., and the problem of the encounter of various religions in the 19th and 20th centuries.

Mr. Bolle

5A-5B. Survey of British History. Lecture, three hours. Designed for students wanting a general orientation to British history and those in English literature and prelaw. A survey of the history of England (and after the union between England and Scotland) Great Britain. 5A covers the period from the Middle Ages to the Glorious Revolution in 1688; 5B from 1688 to the 20th century.

Mr. Rouse, Mr. Waugh

6A-6B-6C. History of the American Peoples. A survey of the American peoples from the advent of aboriginal society to the present, emphasizing racial and ethnic interaction, industrialization, urbanization, and cultural change.

Ms. Appleby, Mr. Nash, Mr. Saxton

6BH. History of the American Peoples (Honor). A survey of the American peoples from the advent of aboriginal society to the present, emphasizing racial and ethnic interaction, industrialization, urbanization, and cultural change.

Mr. Monkkonen

7A-7B. Survey of the Political History of the U.S. This sequence (or two quarters of course 6) is strongly recommended for history majors planning to take more advanced courses in U.S. history. Designed for students in the social sciences and other departments who desire a thorough grounding in American political culture. A survey of the history of the U.S. from the Revolutionary era to the present. Emphasis on political developments and the social, cultural, and economic bases of American politics.

Ms. Appleby, Mr. Gatell, Mr. Howe, Mr. Saxton

8A. Latin America: Reform and Revolution. A general introduction to Latin America emphasizing those institutions from the past which have shaped the present and the struggle for change in the 20th century. Major themes and discussions complement the topics lectures.

Mr. E.B. Burns and the Staff

8B. Latin American Social History. Course 8A is not prerequisite to 8B. The historical and contemporary perspective of the role of ordinary people in Latin American society. Each lecture/film session centers on a major Latin American movie illustrative of a theme in social history.

Mr. E.B. Burns and the Staff
### Upper Division Courses

Preliminary for all upper division courses is upper division standing or consent of instructor, unless otherwise stated. Certain graduate courses (200 series) are open to students with upper division standing and consent of instructor.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Notes</th>
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<tbody>
<tr>
<td>101H</td>
<td>Introduction to Historical Practice (Honors)</td>
<td>101</td>
<td>Limited to juniors and seniors in the history honors program. The course is for students in discussion classes of not more than 15 students meeting with a faculty member. They focus on problems in the philosophy of history, historiography, and historical method.</td>
</tr>
<tr>
<td>102</td>
<td>Explorations in Psychoanalysis and History</td>
<td></td>
<td>Limited to 35 students. The course studies the art of psychological and historical interpretation and assesses recent writings in the field of psychohistory.</td>
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**9A-9D. Introduction to Asian Civilizations**

9A. History of India. An introductory survey for beginning students of the major cultural, social, and political ideas, traditions, and institutions of Indian civilization.

9B. History of China. Survey of the history of China: the evolution of characteristic Chinese institutions and modes of thought from antiquity to 1950; the problem of political change and its response to the Western impact in modern times.

9C. History of Japan. A survey of Japanese history from earliest recorded time to the present, with emphasis on the development of Japan as a cultural daughter of China. Attention to the manner in which Chinese culture was Japanized and the aspects of Japanese civilization which became unique. The creation of the modern state in the last century and the impact of Western civilization on Japanese culture are treated.

9D. History of the Near and Middle East. An introduction to the history of the Muslim world from the advent of Islam to the present day.

10A-10B. Introduction to the Civilizations of Africa. Intended for students with a general interest in Africa, but also strongly recommended for those intending to take upper division courses in African history. Explores African cultures on a thematic basis within a wider framework of political change over time.

10A. Introduction to African History. Limited to freshmen and sophomores. The course takes the form of a discussion class of not more than 15 students meeting with a faculty member. They explore how works of history are written by focusing on problems of historiography and method.

10B. From 1578 to the Present. Ms. Marsot

109. Introduction to Historical Practice (Honors). Limited to freshmen and sophomores. The course takes the form of a discussion class of not more than 15 students meeting with a faculty member. They explore how works of history are written by focusing on problems of historiography and method.

109H. Introduction to Historical Practice (Honors). Limited to juniors and seniors in the history honors program. The course emphasizes the formality of discussion classes of not more than 15 students meeting with a faculty member. They focus on problems in the philosophy of history, historiography, and historical method.

110A. From 1578 to the Present. Ms. Marsot

110B. From 1578 to the Present. Ms. Marsot

111A. Origins to 1808. Mr. Banani

111B. History of the Turks. A survey of the society, government, and political history of the Turks from earliest times to the present.

112A. Armenia in Ancient and Medieval Times, 2nd Millennium B.C. to A.D. 11th Century. Mr. Hovannisian

112B. Armenia from the Cilician Kingdom through the Periods of Foreign Domination and National Stirrings, 11th-17th Centuries. Mr. Hovannisian

112C. Armenia in Modern and Contemporary Times, 19th and 20th Centuries. The Armenian question and genocide, national republic, Soviet Armenia, and the dispersion. Mr. Hovannisian

113. The Caucasus under Russian and Soviet Rule. A survey of the political, economic, social, and cultural history of the Caucasus region since 1801. The Georgian, Armenian, and Azerbaijani response to Russian and Soviet rule; the nationality question and the Soviet national republics. Mr. Hovannisian

115A-115B-115C. History of the Ancient Mediterranean World:

115A. A survey of the history of the ancient East from earliest times to the foundation of the Persian Empire. Mr. Melior

115B. The history and institutions of the Greeks from their arrival to the death of Alexander. Mr. Chambers, Mr. Melior

115C. The history and institutions of Rome from the founding of the city to the death of Constantine. Mr. Chambers, Mr. Melior

116A-116B. History of Ancient Greece:

116A. The Rise of the Greek City-State. Emphasis on the archaic period and the early classical age through the Persian Wars. Mr. Chambers

116B. The Classical Period. The clash between Athens and Sparta, the consequent rise of Macedonia, and the aftermath of Alexander the Great. Mr. Chambers

117A-117B. History of Rome:

117A. To the Death of Caesar. Emphasis on the development of imperialism and on the constitutional and social struggles of the late republic. Mr. Melior

117B. From the Death of Caesar to the Time of Constantine. The early empire is treated in more detail supplemented by a survey of the social and economic changes following the 3rd century. Mr. Melior

118. Introduction to Roman Law. The course provides a survey of the public (constitutional), criminal, and private law of the Romans. Topics include the social context of Roman law, the historical evolution of Roman law, mechanisms and procedures by which the law was administered, and the content of private law. Mr. Melior

119. The Christian Church, 100-1517. Lecture, three hours. Constitutional, political, and economic history of the Church: Christianization of the Roman Empire and the Germanic kingdoms; governance and institutions of the Church; relations between Church and monarchy; the high tide of papalism; crises of authority on the eve of the Reformation. Mr. Benson

120. The Christian Religion, 100-1530. Lecture, three hours. The religious experience of Christians—conversion, doctrine, belief, heresy, spirituality, worship, liturgy, and art. Examines the religious life of lay Christians, as well as that of the Church’s institutional, political, intellectual and spiritual leaders. Mr. Melior

121A-121B. Medieval Europe. Recommended prerequisite: Western civilization. A basic introduction to Western Europe from Latin antiquity to the age of discovery, with emphasis on the use of medieval sources. Mr. Reilly

121A. 400 to 1000. Mr. Rouse

121B. 1000 to 1500. Mr. Rouse
121C. Medieval Civilization: The Mediterranean Heartlands. A survey of Western Mediterranean Europe, social-economic-cultural within a political framework, including its relation with other cultures. Mr. R.I. Burns

121D. Medieval People: The 13th Century. Movements and creative contributions to Western culture in this central century of the Middle Ages, as seen in its representative men and works. Mr. R.I. Burns

M122A-M122B. Byzantine Civilization: History and Society. (Same as Classics M170A.) Emphasis on Byzantine theology. Mr. Dyck

M122B. (Same as Classics M170B.) Literature, relations with Rome, and the Renaissance. Mr. Dyck

123A-123B. Byzantine History. The course stresses the political, socioeconomic, religious, and cultural continuity of the medieval Byzantine Empire. It begins with the reforms of Diocletian and includes such topics as Byzantium’s relations with Latin Europe, Slavs, Sassanids, Arabs, and Turks. Mr. Vryonis

125A-125F. History of Modern Europe. (Formerly numbered 125A-125E.)

125A. The Renaissance: Power and Culture in the Italian City-States. Mr. Martin

125B. The Reformation: Church and Religion in Early 16th Century. Revolutionary tendencies in German society. The peasant uprising. Theology and political thought of Erasmus, Luther, Zwingli, Calvin, and the Anabaptists. The new churches. The effects of the Reformation on society. Mr. Clasen

125C. Absolutism and Enlightenment: Europe under the Old Regime. State, society, and culture in Europe from the mid-17th century until the eve of the French Revolution. Mr. Sabeen

125D. Europe, 1789-1900. The French Revolution and Napoleon. The Industrial Revolution. The uprisings of 1848. The unification of Germany and Italy. Industrialization and imperialism. The rise of socialism. Population growth and changes in industrial structure. Mr. Reill, Mr. Silverman

125E. Europe in the 20th Century. International rivalries. The First World War and its impact on thought and society. Fascism and Communism. World War II: European recovery and integration. Mr. Loewenberg, Mr. Wohl


126A-126E. Cultural and Intellectual History of Modern Europe. Climates of taste and climates of opinion. Educational, moral, and religious attitudes; the art, thought, and manners of the time in a historical context:

126A. 16th Century. Mr. Clasen, Mr. Westman

126B. 17th Century. Mr. Funkenstein

126C. 18th Century. Mr. Reill

126D. 19th Century. Mr. Loewenberg, Mr. Weber

126E. 20th Century. Mr. Loewenberg, Mr. Weber, Mr. Wohl

127A-127B. War and Diplomacy in Europe:

127A. 1560 to 1815. Survey of military and diplomatic history, seen in relation to social and economic development, and the growth of the state. Mr. Symcox

127B. 1815 to 1945. The balance of power; the growth of the nation state; imperial and colonial rivalries; the two World Wars. Mr. Symcox

128A-128D. History of Modern France:


128B. France, 1620-1770. Political and intellectual history of France, principally in the 17th century, with special emphasis on the role of Richelieu and Louis XIV. Mr. Krekic

128C. A Time of Revolutions, 1770-1871. Social and political history of three kingdoms, three republics, and two empires. Mr. Weber

128D. The Making of a Modern France, 1871 to the Present. From oligarchy to democratic bureaucracy in two wars and three republics. Mr. Weber

129A-129C. History of Modern Germany and Austria:

129A. 1500 to 1648. The political structure of empire and territories, the economy, social classes, daily life, book publishing and universities, the Reformation and Counter Reformation, the Thirty Years’ War; military entrepreneurship, population losses, the Peace of Westphalia. Mr. Clasen

129B. 1648 to 1848. Survey of social, economic, cultural, and political history, including the rise of absolutist and bureaucratic government, Enlightenment and reform, the emergence of Austro-Prussian dualism, the transformation of the German economy, the impact of the French Revolution and the German reform movement, Restoration and Metternichian reaction, the movements of Restoration and the causes of the failure of the Revolutions of 1848. Mr. Reill

129C. 1848 to Present. Revolutions of 1848, Prussian constitutional struggle, German unification, the Bismarckian and Wilhelmine eras in Germany and the Ausgleich in Austria, liberalism, industrialism, anti-Semitism, social democracy, the World Wars, revolutions, republics, Fascism and Nazism, occupation, and the Austrian, German Federal, and German Democratic Republics. Mr. Loewenberg

131A-131D. History of Russia. Lecture, three hours:

131A. From the Origins to the Rise of Muscovy. Kingship, Russia, and its culture; Appanage principalities and towns; the Mongol invasion; the unification of the Russian state by Muscovy. Autocracy and its Servodom. Mr. Krekic, Mr. Lossky

131B. Imperial Russia from Peter the Great to Nicholas II. Westernization of state and society; centralization at home and expansion abroad; the peasant problem; beginnings of industrialization; movements of political and social protest; the non-Russian peoples; political reforms and social changes; the Revolution of 1905; Russia in World War I; the end of the old regime. Mr. Roger

131C. Revolutionary Russia and the Soviet Union. The Revolutions of 1917. Civil War, consolidation of the Bolshevik regime; succession crisis and ascendency of Stalin; collectivization and industrialization; foreign policy and World War II; death of Stalin, de-Stalinization, developments since; stagnation or stability? Mr. Roger

131D. Intellectual History. Social thought and movements in modern Russia, late 18th to early 20th century.

132A-132B. History of Italy:

132A. 1530 to 1815. Survey of social, economic, political, and cultural history covering the eclipse of the Italian economy and the city-state, the rise of absolutism, the growth of Enlightenment reform as the origin of the Risorgimento. Mr. Symcox

132B. 1815 to the Present. Political, economic, social, diplomatic, and ideological developments. Mr. Wohl

133A-133B. The Social History of Spain and Portugal:

133A. The Age of Silver in Spain and Portugal, 1479-1798. The course deals with the development of popular history in the Iberian Peninsula. Emphasis on peasants and urban history, gold routes, slave trade, history of women, and the development of different types of collective violence

133B. Rebellion and Revolution in Modern Spain and Portugal, 1789 to the Present. Spain’s position in Europe and its potentialities for social change are discussed through investigations of urban history, agrarian problems, history of women, problems of slow industrial development, imperialism, anarchism, and labor history.

134A. Southeastern Europe, 500-1500. A political, economic, and cultural survey of the independent Balkan states in the Middle Ages.

134B. Southeastern Europe, 1500-1918. The Balkans under Ottoman rule, movements of national liberation, and the formation of nation states.

135A-135B. Marxist Theory and History. Course 135A is generally prerequisite to 135B. Introduction to Marxist philosophy and method; conception of historical stages; competing Marxist analyses of transition from feudalism to capitalist economy via reading Capital; theory of politics and state in relationship to historical interpretation of 19th-century European revolutions; capitalist crises. Mr. Brenner

136A-136Z. Topics in European History. The individual courses in this series aim to provide students with an integrated introduction to important aspects of European history. Focusing on a specific topic within a broad framework:

136A. Social Movements.

136B. Peasants and Agrarian Society. Mr. Brenner

136C. Urban Society. Mr. Symcox

136F. The Family. The social history of the family in Western Europe since the Middle Ages. Households and family organization of peasants, artisans, and aristocrats; kinship, child-rearing, parental authority, marriage and inheritance systems; attitudes toward love, sex, and children.

136G. Psychohistory. Mr. Loewenberg, Mr. Wohl

136I. Special Topics.

136J. Women.

137A-137B. Survey of English History. Lecture, three hours. A basic survey of English history from the Wars of the Roses to the present, dealing with changes in society, economics, and ideas from an agrarian, medieval monarchy to an industrial national and social democracy.

137A. 1450 to 1660.

137B. 1660 to the Present.

138A-138B. Medieval England:

138A. Anglo-Saxon England and the Norman Conquest, 900-1215. The nature of the society that emerged from the Viking invasions; the conquest and colonization by the Normans; the principles of lordship by which they ruled, to the Magna Carta (1215). Mr. Rouse

138B. England in the High Middle Ages: Magna Carta to 1400. Emphasis on the social and economic developments that underlay constitutional change, peasant revolt, the Black Death, and the Hundred Years’ War. Mr. Rouse

139. Renaissance England. Culture and society. Emphasis on literary culture (Elizabethans, Jacobins, Caroines), with readings and lectures on different aspects of political and economic life as required for a sound understanding of culture.

140A-140B. Early Modern England, 1450-1700:

140A. The Development of Capitalism in England, Especially the Countryside, 1450-1700. The transformation of agricultural societies; the emergence Mr. Krekic; conflicts; state centralization and military aristocracy; Crown versus Parliament, the English Revolution.

140B. Analysis of the Transformation of Religious and Political Ideology in Relationship to Socioeconomic and Political Conflicts. Recommended prerequisite: course 140A. The English Reformation and the development of the State; Protestantism and political opposition; religious radicalism and the English Revolution.

Mr. Brenner
141A-141B. Modern England. Analysis of the English economy, society, and polity since 1688, focusing on the dynamics of both stability and change.

141A. 16th and 19th Centuries. 1688-1832.

141B. 18th and 20th Centuries, 1832 to World War II and its Aftermath.

142A-142B. The British Empire since 1783. The political and economic development of the British Empire, including the evolution of colonial nationalism, the development of the commonwealth idea, and changes in British colonial policy. Mr. SarDesai

143. History of Canada. A survey of the growth of Canada into a modern state from its beginnings under the French and British colonial empires.

144. History of Australasia. The history of Australia and New Zealand from the European settlement, with emphasis on the interrelationships between the settlers and the aborigines; comparisons and contrasts between the Australian and New Zealand experience.


145B. Revolutionary America, 1760-1800. An inquiry into the origins and consequences of the American Revolution, the nature of the revolutionary process, the creation of a constitutional national government, and the development of a capitalist economy.

146A-146B. The United States, 1800-1850.

146A. Jeffersonian America. Jeffersonian Republican ascendency and the Era of Good Feelings. 1800-1828: disintegration of the Federalist opposition; the testing of American nationalism in the second war with Britain; beginnings of the transportation and industrial revolutions; restructuring of politics in an increasingly egalitarian age.

146B. Jacksonian America and Beyond. The "Jacksonian Revolution" and its aftermath, 1825-1850; the problem of national power versus state sovereignty; problems of rapid social change through industrialization and urbanization; reform impulse; antislavery movements; territorial expansion as focus for sectional rivalry.

147A. The United States: Civil War and Reconstruction. Topics include the rise of sectionalism, the antislavery crusade; the formation of the Confederate States; the war years; political and social reconstruction.

147B. The United States, 1875-1900. American political, social, and institutional history in a period of great change. Emphasis on the altering concepts of the role of government and the responses to that alteration.


149A-149B. Modern Social History, 1750-1960. A historical analysis of American society and culture, with emphasis on the religious, cultural, and labor relations of the United States since 1750. Mr. Yeager

150A-150B. Intellectual History of the United States. Flow of principal ideas about humanity and God, nature and society, which have been at work in American history. Includes the sources of these ideas, their connections with one another, their relationship to American life, and their expression in great documents of American thought. Mr. Howe

150C. History of Religion in the United States. Consideration of the religious dimension of people's experience in the United States. A number of religious traditions which have been important in this country are examined, and attention is devoted to relating developments in religion to other aspects of American culture.

151A-151B. Constitutional History of the United States:


151B. Constitutionalism since the Civil War. Particular emphasis on the development of the Supreme Court, the due process revolution, the Court and political questions, and the fact of judicial supremacy within self-prescribed limits.

152A-152B. American Diplomatic History:

152A. The establishment of an independent foreign policy, the territorial expansion of the United States, and the emergence of a world power. Mr. Dallek

152B. The Role of the United States in the 20th-Century World. Mr. Dallek

153. The United States and the Philippines. Knowledge of Southeast Asian or United States history, or both, is recommended. An examination of the interrelationships of immigration and of colonialism and independence between the United States and the Philippines, focused mainly within the time period of 1898 to the present. Mr. Saxton

154A-154B. United States Urban History:

154A. The Preindustrial and Early Industrial City. Focuses on the social, spatial, and economic development of U.S. cities. Special attention to the social consequences of the preindustrial and early industrial economic relations.

154B. The Industrial and Postindustrial City. Course 154A is not prerequisite to 154B. Focuses on the mature urban network, with concentration on social, spatial, and economic interaction. The issues of mass society, neighborhood, crime, poverty, ethnicity, and racial discrimination are covered.

154C-154D. History of American Architecture and Urban Planning: 1600 to the Present. Aspects of American cultural history as explored through architecture, urban planning, and the allied arts. The focus is on the development of an architectural consciousness in America, ways in which the built environment has affected its users and observers, and the extent to which it has reflected their values and ways of living. 154C covers the period from 1600 to 1890; 154D covers 1890 to the present. Mr. Hines

155A-155B. American Social and Cultural History since 1865.

155A. American and European Working Class Movements. Examines major episodes in the industrial, economic, social, and cultural development of the American working class from Colonial times to the present, emphasizing both organized and unorganized labor in a comparative context. A.F. of L., rise of industrial unionism, and labor politics are also discussed.

155B. American Upper Class and Social Movements since 1865. Focusing on the United States and Europe, this course explores the role of wealth and status in shaping social, political, and cultural developments.

156A-156B. American Social History, 1750-1960. A historical analysis of American society and culture, with emphasis on the religious, cultural, and labor relations of the United States since 1750. Mr. Yeager

156A. American Social History, 1750-1960. A historical analysis of American society and culture, with emphasis on the religious, cultural, and labor relations of the United States since 1750. Mr. Yeager

156B. American Social History, 1750-1960. A historical analysis of American society and culture, with emphasis on the religious, cultural, and labor relations of the United States since 1750. Mr. Yeager

156C-156D. Social History of American Women. A survey of the major demographic, economic, social, and intellectual factors shaping the lives of women in families, at work, and in larger social collectivities. Class, regional, racial, and ethnic comparisons are emphasized.

156C. Colonial and Early National, 1600-1820. Ms. Sklar

156D. Victorian and Industrial, 1800-1920. Ms. Sklar

156E. 20th Century, 1900-1975. Ms. Sklar

157A-157B. American Social History, 1832 to World War II and its Aftermath. A survey of the major demographic, economic, social, and intellectual factors shaping the lives of women in families, at work, and in larger social collectivities. Class, regional, racial, and ethnic comparisons are emphasized.

157A. Colonial and Early National, 1600-1820. Ms. Sklar

157B. 1760 to 1860. Ms. Sklar

157C. 1860 to the Present. Ms. Sklar

158A. Comparative Slavery Systems. An examination of the slavery experience in various New World slave societies. The course focuses on outlining the similarities and differences among the legal status, treatment, and slave cultures of North American, Caribbean, and Latin American slave societies.

158B. Introduction to Afro-American History: A survey of the Afro-American experience. Focuses on the three great transitions of Afro-American life: the transition from Africa to New World slavery, the transition from slavery to freedom, the transition from rural to urban milieus. Ms. Creel, Mr. Hill

158D. Afro-American Urban History. An examination of Afro-American urban life prior to 1945. The course focuses on the transformation from slavery to freedom, and the shift from Southern to Northern areas. It looks closely at the forces which both propelled Afro-Americans to the cities and which also inhibited their adjustment to them.

158E. Afro-American Nationalism in the First Half of the 20th Century. An examination of the Afro-American search in the first half of the 20th century for national/group cohesion through collectively built institutions, associations, organized protest movements, and ideological self-definition. Mr. Hill

159A. History of the Chicano Peoples. (Formerly numbered 159A.) (Same as Chicano Studies 159A.) A survey lecture course on the historical development of the Mexican (Chicano) community and people of Mexican descent (Indo-Mestizo-Mulato) north of the Rio through the 17th, 18th, and 19th centuries, with special focus on labor and politics. Provides an integrated understanding of change over time in the Mexican community by inquiry into the major formative historical forces affecting the community. Deals with social structure, economy, labor, culture, political organization, conflict, and international relations. Emphasis is on social forces. Topics discussed include class formation, conflict, ideas, domination and resistance. Developments are related to historical events of significance occurring both in the United States and Mexico. Course involves lectures, special presentations, reading assignments, written examinations, library and field research, and submission of a paper.

Mr. Gómez-Quiniones
218. Medieval Latin Literary History. Recommended prerequisite: reading knowledge of Latin and German or French. An examination of aspects of medieval history through the study of paleography, medieval libraries, and the transmission of ancient medieval authors. Mr. Rouse (alternate years)

219A. Paleography I. Prerequisite: reading knowledge of Latin and German or French. A history of the manuscript book from antiquity through the Carolingian renaissance, with emphasis on dating and localization as well as on proficiency in reading. Mr. Rouse (alternate years)

219B. Paleography II. Prerequisite: reading knowledge of Latin and German or French. A history of the manuscript book from the Carolingian renaissance through the invention of printing, with emphasis on dating and localization as well as on proficiency in reading. Mr. Rouse (alternate years)

220A-220B. Seminar in Church and Monarchy in the Middle Ages. Textual studies and interpretative problems in the constitutional, legal, and intellectual history of the Latin church and of the Western European monarchies, with special attention to the German monarchy from the 11th to the 14th century. Mr. Benson

221A-221B. Seminar in Medieval History. Mr. R.I. Burns

222A-222B. Seminar in Medieval Intellectual History and History of Science. Selected problems from medieval and early modern philosophy, science, political theory, theology. Mr. Funkenstein

225. Colloquium for Entering Graduate Students in Modern European History. Normally limited to and required of all modern European history graduate students. An introduction to the topics, methods, and historiography of modern European history. 226A-226B. Seminar in the Italian Renaissance. Mr. Martines

227A-227B. Seminar in the Reformation. Mr. Clasen

229A-229B. Seminar in Early Modern European History. Mr. Lossky, Mr. Martines, Mr. Symcox

230A-230B. Seminar in Modern European History. Mr. Loewenberg and the Staff

231A-231B. Seminar in Modern European Intellectual and Cultural History. Mr. Loewenberg, Mr. Weber, Mr. Wohl

232A-232B. Seminar in French History of the 19th and 20th Centuries. Mr. Weber

233A-233B. Seminar in Russian History. Mr. Roger

234A-234B. Seminar in the Modern History of Spain, Portugal, and Italy. Mr. Wohl

239A-239B. Seminar in English History: Middle Ages.

240A-240B. Seminar in English History: Modern History.

244A-244B. Seminar in British Empire History.

245. Colloquium in U.S. History. Normally limited to and required of all entering graduate students in U.S. history. A critical introduction to the historical method, with emphasis on new methodological and conceptual approaches, the use of source materials, and the current state of U.S. historiography. Mr. Finken

246A-246B-246C. Introduction to United States History. A graduate survey of the significant literature dealing with United States history from the Colonial period to the present. Each course may be taken independently for credit.

246A. Colonial Period. Ms. Appleby, Mr. Nash

246B. 1790 to 1900. Mr. Gattell, Mr. Howe, Mr. Saxton

246C. 20th Century. Mr. Coben, Mr. Dallek, Mr. Weiss

247A-247B. Seminar in Early American History. Ms. Appleby, Mr. Nash

249A-249B. Seminar in Jacksonian America. Mr. Gatell

250A-250B. Seminar in United States History of the Middle 19th Century. Mr. Gatell

252A-252B. Seminar in Recent United States History to 1930. Mr. Coben, Mr. Hines

253A-253B. Seminar in Recent United States History since 1930. Mr. Hines, Mr. Weiss

254A-254B. Seminar in United States Social and/or Intellectual History. Mr. Howe, Mr. Saxton

256A-256B. Seminar in American Diplomatic History. Mr. Gómez Quinones

257A-257B. Seminar in United States Urban History. Mr. Hines, Mr. Monkkonen

258A-258B. Seminar in Working Class History. Mr. Laslett, Mr. Saxton

259A-259B. Seminar in Social History of Women in the U.S. Ms. Sklar

260A-260B. Seminar in Native American History. Mr. Funkenstein

261A-261B. Seminar in Afro-American History. Social and political history of the Afro-American, including emphasis on the development and structure of race relations in America: racial concepts and dilemmas, black and white. Ms. Creel, Mr. Hill

262A-262B. Seminar in Chicano History. Mr. Gómez-Quinones

263A-263B. Seminar in the History of the American West. Mr. Hurdley

264. History of American Education. (Same as Education M201C.) The aim is to depict the intellectual and social forces impinging on American education from the 1860s to the present and to analyze the relationship between these forces and the values, curriculum, structural organization, and functions of education. Mr. S. Cohen

265. Latin American Research Resources. (Same as Latin American Studies M200 and Library and Information Science M225.) The course acquaints students with general and specialized materials in fields concerned with Latin American studies. Library research techniques provide the experience and competency required for future bibliographic and research sophistication as the basis for enhanced research results. Mr. Lauerhass

266A-266B. Seminar in Colonial Latin American History. Mr. Lockhart

267A-267B. Seminar in Latin American History: 1960 and 20th Centuries. Mr. Burr

268A-268B. Seminar in Recent Latin American History. (Formerly numbered 268A-268B.) (Same as Latin American Studies M268A-M268B.) Seminar three hours. Reading knowledge of Spanish and Portuguese is normally required. A seminar devoted to selected topics of an interdisciplinary nature. In Progress grading. Mr. Wikle

275. Introduction to the Professional Study of African History. Required of all entering graduate students in African history. Strongly recommended for students with a history concentration in the African Area Studies M.A. program. Source identification, research methodologies, historiographical traditions, historical interpretation, and approaches to teaching are examined. Mr. Posnansky

276. African Archaeology: Field Techniques (2 to 8 units). Prerequisite: any introductory course in archaeology and preferably an African history course. A field course on an African excavation to provide the basic skills-reconnaissance, surveying, excavation techniques, conservation, and scientific sampling required by an archaeologist in Africa, together with an introduction to ethnographic survey and oral data collection. Mr. Posnansky

277. African Archaeology: Data Analysis (2 to 8 units). Prerequisite or corequisite: course 276. A field course to equip a student to handle finds from excavations. The course involves analysis, description, illustration, and interpretation of an actual archaeological and/or ethnographic collection. Mr. Posnansky

278A-278B. Seminar in African History. Mr. Farquhar, Mr. Huang

282A-282B-282C. Seminar in Chinese History. Mr. Rouse (alternate years)

285A-285B. Seminar in Modern Japanese History. Mr. K. Okada

286A-286B. Seminar in South Asia. Mr. Wolpert

289A-289B. Seminar in Southeast Asia. Mr. SarDesai

291A-291B. Seminar in Jewish History. Studies in the intellectual and social history of the Jewish people from ancient times to the modern period. Mr. Funkenstein

292A-293B. Seminar in the History of Religions. Mr. Bolte

295. Theories of Scientific Change. Historical and philosophical perspectives on science, focusing on the rationality of scientific change and the logic and psychology of scientific discovery. Readings and seminar-style discussions of such authors as Popper, Kuhn, Toivlin, Lakatos, Holton, Buchdahl, Feyerabend, and others. Mr. Westman

297A-297B. Seminar in the History of Science. Mr. Weis, Mr. Wise

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

490. Writing Workshop for Graduate Students (2 units). Prerequisite: consent of instructor. Writing workshop on students' papers-in-progress. Analysis and group discussion of rhetorical and stylistic principles, illustrated in students' own and in professional historians' work; help students improve their own writing. May be repeated once. S/U grading.

495. The Teaching of History. Prerequisite: graduate standing. Required of all new teaching assistants. Consists of lectures, readings, discussions, and practice teaching sessions within the structure of a seminar. Students receive credit toward full-time equivalence but not toward the nine-course requirement for the M.A. degree. S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor, department Chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596. Directed Studies (1 to 8 units). Prerequisites: graduate standing, consent of instructor. 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 the graduate studies committee. S/U or letter grading.


599. Ph.D. Research and Writing (1 to 8 units). Prerequisite: advancement to Ph.D. candidacy.
Honors Collegium

A311 Murphy Hall, 825-1553

The Honors Collegium is a unique and innovative educational alternative designed primarily for students in their freshman and sophomore years. Refer to "Honors" earlier in this chapter for a complete description of the program.

Humanities

334D Royce Hall, 825-7650

Professors

Arnold J. Band, Ph.D. (Hebrew and Comparative Literature)
A. R. Braunmuller, Ph.D. (English)
Phillip Levine, Ph.D. (Classics)
Ross P. Shidei, Ph.D. (Scandinavian and Comparative Literature), Chair
Pier-Maria Pasinetti, Ph.D., Emeritus (Italian and Comparative Literature)

Associate Professors

Albert D. Hutter, Ph.D. (English)
Kathleen L. Kornar, Ph.D. (German and Comparative Literature)

Assistant Professors

Katherine C. King, Ph.D. (Classics and Comparative Literature)
Lucia Re, Ph.D. (Italian and Comparative Literature)

Lower Division Courses

The following courses are made up of selected masterpieces of world literature. They are recommended to satisfy the humanities breadth requirements in the College of Letters and Science.

1A. World Literature: Antiquity to Early Middle Ages. Lecture, three hours; discussion, one hour. Prerequisite: satisfaction of Subject A requirement. Students with credit for course 2A will not receive credit for this course. A study of major works in world literature, with emphasis on Western civilization. Texts include major works and authors such as Homer, Virgil, Petronius, St. Augustine, and other texts such as Gilgamesh or Tristan and Yseult.

1B. World Literature: Late Middle Ages to the 17th Century. Lecture, three hours; discussion, one hour. Prerequisite: satisfaction of Subject A requirement. Students with credit for course 2B will not receive credit for this course. A study of major texts in world literature, with emphasis on Western civilization. Texts include works and authors such as Chaucer's Canterbury Tales, Dante's Divine Comedy, Boccaccio's Decameron, Cervantes' Don Quixote, Shakepeare, Calderon, Moliere, and Racine.

1C. World Literature: Age of Enlightenment to the 20th Century. Lecture, three hours; discussion, one hour. Prerequisite: satisfaction of Subject A requirement. Students with credit for course 2C will not receive credit for this course. A study of major works in world literature, with emphasis on Western civilization. Texts include major works and authors such as Swift, Voltaire, Diderot, Rousseau, Goethe, Flaubert, Ibsen, Strindberg, Dostoevsky, Kafka, Joyce, Woolf, and Stevens.

2A. Survey of Literature: Antiquity to Early Middle Ages. Lecture, two hours; discussion, two hours. Prerequisite: satisfaction of Subject A requirement. Students with credit for course 1A will not receive credit for this course. A study of selected texts from antiquity to the Middle Ages, with emphasis on the development of texts in world literature, with emphasis on Western civilization. Texts include works and authors such as the Iliad, Greek tragedies, the Aeneid, Petrarch, Shakespeare, Calderon, Moliere, and Racine.

2B. Survey of Literature: Late Middle Ages to the 17th Century. Lecture, two hours; discussion, two hours. Prerequisite: satisfaction of Subject A requirement. Students with credit for course 1B will not receive credit for this course. A study of selected texts from the Middle Ages to the 17th century, with emphasis on the development of texts in world literature, with emphasis on Western civilization. Texts may include works and authors such as Chaucer, Dante's Divine Comedy, Cervantes' Don Quixote, Shakespeare, Calderon, Moliere, and Racine.

2C. Survey of Literature: Age of Enlightenment to the 20th Century. Lecture, two hours; discussion, two hours. Prerequisite: satisfaction of Subject A requirement. Students with credit for course 1C will not receive credit for this course. A study of selected texts from the Age of Enlightenment to the 20th century, with emphasis on the development of texts in world literature, with emphasis on Western civilization. Texts may include works and authors such as Swift, Voltaire, Diderot, Rousseau, Goethe, Flaubert, Ibsen, Strindberg, Dostoevsky, Kafka, and James Joyce or Wallace Stevens.

Upper Division Courses

101. The Romantic Dilemma. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C, or English 3, or consent of instructor. A study of the development of Romanticism in the 19th century. May be concurrently scheduled with Comparative Literature C211.

104. The 20th Century. Lecture, three hours; discussion, one hour. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C, or English 3, or consent of instructor. A study of the development of 20th-century literature. May be concurrently scheduled with Comparative Literature C265.

105. The Comic Spirit. Prerequisites: upper division standing, literature major, and consent of instructor. A study of the development of the comic spirit in world literature, with emphasis on Western civilization. Texts include works and authors such as Chaucer's Canterbury Tales, Dante's Divine Comedy, Boccaccio's Decameron, Cervantes' Don Quixote, Shakepeare, Calderon, Moliere, and Racine.

106. Hebrew Literature in English — The Literary Traditions of Ancient Israel: Bible and Apocrypha. (Same as Jewish Studies M105A.) Lecture, three hours. A study of the literary culture of ancient Israel through an examination of the principal genres of the Hebrew Bible and the Apocrypha (read in translation).

M107. The Classical Tradition: Epic. Seminar, three hours. Prerequisites: upper division standing, literature major, and consent of instructor. A study of the development of the classical tradition in world literature, with emphasis on ancient and contemporary societies and to the literary traditions. Emphasis on the development of the work of their predecessors. May be concurrently scheduled with Comparative Literature C207.

C109. The Crisis of Consciousness in Modern Literature. Prerequisites: upper division standing, literature major. A study of modern European and American works which are concerned both in subject matter and artistic methods with the growing self-consciousness of human beings and their society, focusing on the works of Kafka, Rilke, Woolf, Sartre, and Stevens. May be concurrently scheduled with Comparative Literature C209.

110. Man and His Fictions. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C, or English 3, or consent of instructor. A study of the development of literary works as a means to explore the nature of human beings and their society, focusing on the works of Kafka, Rilke, Woolf, Sartre, and Stevens. May be concurrently scheduled with Comparative Literature C209.

111. The Classical Tradition: Tragedy. Seminar, three hours. Prerequisite: upper division standing, literature major. A study of the development of the classical tradition in world literature, with emphasis on ancient and contemporary societies and to the literary traditions. Emphasis on the development of the work of their predecessors. May be concurrently scheduled with Comparative Literature C211.

114. The Short Novel. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C, or English 3, or consent of instructor. A study of the development of short stories as a means to explore the nature of human beings and their society, focusing on the works of Kafka, Rilke, Woolf, Sartre, and Stevens. May be concurrently scheduled with Comparative Literature C211.

115. Four Modern Dramatists. A study of the development of modern drama, with emphasis on the development of the plays of Pirandello, Beckett, Ionesco, and Pinter. May be concurrently scheduled with Comparative Literature C211.

116. Man and Society in the Renaissance. Lecture, three hours; discussion, one hour. Prerequisite: one course from Humanities 1A, 1B, 1C, 2A, 2B, 2C, or English 3, or consent of instructor. A study of the development of the development of the plays of Pirandello, Beckett, Ionesco, and Pinter. May be concurrently scheduled with Comparative Literature C211.


C129. Archetypal Heroes in Literature. Lecture, three hours; discussion, one hour. Prerequisite: upper division standing, literature major. A study of the development of archetypal heroes as a means to explore the nature of human beings and their society, focusing on the works of Boccaccio, Dante, and Chaucer. May be concurrently scheduled with Comparative Literature C229.

C130. The Themes of Ancient Israel: Bible and Apocrypha. (Same as Jewish Studies M130A.) Lecture, three hours. A study of the literary culture of ancient Israel through an examination of the principal genres of the Hebrew Bible and the Apocrypha (read in translation).
138. Ancient and Medieval Oral Poetry. Prerequisites: upper division standing, literature major. A study of primary texts believed to be orally composed, their origins, characteristic forms, and function. Readings include such primary texts as the Odyssey, Beowulf, The Song of Roland, and selections of Norse poetry, as well as comparative material such as the Aeneid, the Norse sagas, and discussions of modern African and Yugoslavian oral poetry.

C139. Early Medieval Literature. Prerequisites: upper division standing, literature major. A survey of the Latin and Germanic literatures from the fall of Rome to the beginning of the 12th century. May be concurrently scheduled with Comparative Literature C239. Undergraduates read all works in translation.

Mr. Calder

C140. Medieval Epics. Prerequisites: upper division standing, literature major. The seminar considers five medieval epics: Beowulf, El Cid, Chanson de Roland, Nibelungenlied, and the Roman de la Rose. Texts are approached historically: first, a critical understanding of each work, and second, an understanding of the nature of epic literature. Assignments consist of an extended seminar paper and short oral reports. May be concurrently scheduled with Comparative Literature C240. Undergraduates read all works in translation.

Mr. Condren

C141. The Literary Mediation of History in the Renaissance. Seminar, three hours. Prerequisites: upper division standing, literature major. An analysis of the presence and the treatment of history in the rhetoric of Renaissance authors ranging from the Italian humanists to Machiavelli and Shakespeare. Other authors include Petrarca, Boccaccio, and Lorenzo de’ Medici. May be concurrently scheduled with Comparative Literature C241. Undergraduates read all works in translation.

Ms. Re

C145. Renaissance Drama. Prerequisites: upper division standing, literature major, or consent of instructor. The course offers a broad introduction to the subject matter and types of plays in the Renaissance. Historical and literary influences on the plays are considered. Readings include works of such dramatists as Tasso, Marlowe, Lodge, and Shakespeare. Jonson, Shakespeare. May be concurrently scheduled with Comparative Literature C245. Undergraduates read all works in translation.

Mr. Braunmuller

C168. Romantic Autobiography. Discussion, three hours. Prerequisites: upper division standing and literature major, or consent of instructor. The course traces the evolution of the autobiography from spiritual (Augustine) and secular (Celtic) sources to the transition in the 18th century which blended features of the epic poem and the quest-romance. Wordsworth’s Prelude came to represent the best example of this mixture. Major examples of the Romantic autobiography to be studied include Rousseau’s Confessions, Wordsworth’s Prelude, and Goethe’s Wilhelm Meister’s Apprenticeship. Later novels that develop and extend the genre include Joyce’s Portrait of the Artist as a Young Man and Proust’s Swann’s Way. May be concurrently scheduled with Comparative Literature C268. Undergraduates read all works in translation.

Ms. Packer

C170. The Dream in English and German Romantic Literature. Lecture, three hours. Prerequisites: upper division standing and literature major, or consent of instructor. A study of the use of the dream as a standard narrative technique in English and German Romantic literature. May be concurrently scheduled with Comparative Literature C270. Undergraduates read all works in translation.

Mr. Faron

C172. The Grotesque in Romantic Literature and Art. Prerequisites: upper division standing and literature major, or consent of instructor. A study of the grotesque in the visual and verbal arts of the Romantic period; interpretation addresses the aesthetics of tragicomic interaction, the demonic vision, and the satirical sketches of man’s abnormality and perversity. May be concurrently scheduled with Comparative Literature C272. Undergraduates read all works in translation.

Mr. Burmester

C173. Theory and Texts of the Fantastic. Seminar, three hours. Prerequisites: upper division standing, literature major. An attempt to define the fantastic as a theoretical genre separate from the wider genre of fantasy. Critical texts by Todorov and Brocke-Rose. Primary texts by Hoffman, Nerval, James, Poe, Borges, Casares, Cortazar, Landolfi, and Calvino. May be concurrently scheduled with Comparative Literature C273. Undergraduates read all works in translation.

Mr. Re

C175. The 19th-Century Novel. Seminar, three hours. Prerequisites: upper division standing, literature major. A comparative study of the 19th-century novel in England and on the continent. Novels are selected so as to give the student a chance to concentrate on a particular tradition or critical problem. May be concurrently scheduled with Comparative Literature C275. Undergraduates read all works in translation.

Mr. Lehan

C176. Fiction and History. Seminar, three hours. Prerequisites: upper division standing, literature major, or consent of instructor. The course analyzes the use of historical events, situations, and characters in literary works of the Renaissance and/or the modern period. Texts and individual assignments range from Renaissance historical narratives (the Italian Humanists, Machiavelli) to 19th- and 20th-century novels by authors such as Stendahl, Verga, Turgenev, Dostoevsky, and James. Use of fictional methods by historians may also be analyzed. Emphasis on how aesthetic, ideological, and political factors influence the authors’ choice and use of historical material. May be concurrently scheduled with Comparative Literature C276.

Ms. Passinetti, Ms. Re

C178. Darwinism and Literature. (Formerly numbered 178.) Seminar, three hours. Prerequisites: upper division standing, literature major, or consent of instructor. The course studies the impact of Darwin’s theories on European and American literature. While texts include major works in the development of naturalism, such as novels by Zola, Hardy, Crane, and Dreiser and plays by Strindberg and Ibsen, the course moves forward into the continuing influence of other “determinist” and behaviorially oriented theories in works by authors such as Mann, Sartre, Camus, Stevens, and Skinner. May be concurrently scheduled with Comparative Literature C278.

Mr. Shideler

C180. The Symbolist Tradition in Poetry. Prerequisites: upper division standing and literature major, or consent of instructor. A study of the symbolist tradition in 19th- and 20th-century English, French, and German poetry. May be concurrently scheduled with Comparative Literature C280. Undergraduates read all works in translation.

Mr. Shideler

C181. Poetry and Poetics of the Post-Symbolist Period. Prerequisites: upper division standing and literature major, or consent of instructor. A study of some of the dominant poetic trends and figures in American and European poetry in the first half of the 20th century, including such surrealists as Pound, Eliot, Valery, Rilke, George, and Stevens. May be concurrently scheduled with Comparative Literature C281. Undergraduates read all works in translation.

Ms. Komar, Mr. Shideler

182. The Semiotics of Story and Film: An Introduction to Narrative Semiotics. Discussion, three hours. Prerequisites: upper division standing and literature major, or consent of instructor. An investigation of the theoretical aspects of semiotics and their application to specific narratives in prose and film.

Mr. Haidu

C183. Novel, Crime, Ritual. Discussion, three hours. Prerequisites: upper division standing and literature major, or consent of instructor. An investigation of a range of novels dealing with ritual and crime and their relation to the novel form. Readings include such texts as de Avila’s Belenmundo and Apocalipsis, Sempé’s The Magician of Lublin, selected stories from Babel’s Red Cavalry, a Dickens’ novel, and Lacroix’s Liaisons Dangereuses. Concurrently scheduled with Comparative Literature C283. Undergraduates read all works in translation.

Mr. Baumann

Indo-European Studies
(Interdepartmental)

1037 Graduate School of Management, 825-4242

Professors
Raimo A. Anttila, Ph.D. (Linguistics)
Henrik Birnbaum, Ph.D. (Slavic Languages and Literatures)
Patrick K. Ford, Ph.D. (Celtic Languages and Literatures)
Marija Gimbutas, Ph.D. (Slavic Languages and Literatures, Archaeology)
Bengt T. M. Löfstedt, Ph.D. (Classics)
Joan Puhvel, Ph.D. (Classics, Indo-European Studies)
Harmitu E. F. Scharfe, Ph.D. (East Asian Languages and Cultures)
Hannes-Peter Schmidt, Ph.D. (Near Eastern Languages and Cultures)
Alan H. Timbrelake, Ph.D. (Slavic Languages and Literatures)
Donald J. Ward, Ph.D. (Germanic Languages, Folklore and Mythology)
Terence H. Wilbur, Ph.D. (Germanic Languages and Literatures)

Associate Professor
Joseph F. Nagy, Ph.D. (Celtic Languages and Literatures)

Scope and Objectives
The prime aim of this graduate 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 three alternative major emphases: Indo-European linguistics, Indo-Iranian or other specialized language area studies, and European and related archaeology.

Ph.D. Degree
Admission
Students admitted to graduate standing must have a B.A. degree with a major in an Indo-European language field (e.g., German, Slavic, Celtic, Romance languages, Latin, Greek), linguistics (with concentration in historical and comparative linguistics), anthropology, or archaeology. Letters of recommendation (at least two, preferably three or four) are required; Graduate Record Examination (GRE) scores are not required. Potential applicants may request a brochure by writing to the Indo-European Studies Program, c/o Folklore and Mythology Center, 1037 GSM, UCLA, Los Angeles, CA 90024.

Admission to the program itself constitutes admission to the doctoral program; there is no master’s degree offered. Should deficiencies exist in prerequisites to specific work at the graduate level, you may be granted provisional admission and directed to remove those deficiencies in the initial period of enrollment.
Major Fields or Subdisciplines
The Ph.D. in Indo-European Studies is offered with three alternative major emphases: (1) Indo-European linguistics; (2) Indo-Iranian or other specialized language area studies; (3) European and related archaeology.

Foreign Language Requirement
French and German are required, one during the first year. A third language is added only when relevant to your field of specialization. Proficiency in a language may be demonstrated by (1) passing the Educational Testing Service (ETS) examination with a score of 600 or better, (2) completing a level five course with a grade of B or better, or (3) passing a departmental reading examination.

Course Requirements
The course requirements vary among the three major fields of specialization. General requirements for all students regardless of specialization include knowledge of Vedic Sanskrit and Homeric Greek, basic competence in Indo-European linguistics (including Indo-European Studies M150 and 210), mythology (e.g., Classics 160), archaeology (including Indo-European Studies 131, 132). Additional requirements by field are as follows:

(1) Linguistics: An advanced seminar in comparative grammar, a minimum of four ancient Indo-European languages from different subbranches, and additional units in courses offered by Linguistics (e.g., phonetics, structural linguistics) and related departments. These additional units should be selected in consultation with your adviser.

(2) Indo-Iranian or Other Specialized Language Area: An advanced seminar in comparative grammar, a minimum of two ancient Indo-European languages from different subbranches, and additional units in the area of specialization, to be selected in consultation with your adviser.

(3) European and Related Archaeology: A minimum of one ancient Indo-European language, an advanced seminar in European archaeology, a course in analytical methods in archaeology, and additional units in archaeology, anthropology, and related fields, to be selected in consultation with your adviser.

Teaching Experience
Teaching experience is highly desired, but not available within the program and therefore is not required. The program works closely with its constituent departments in an attempt to provide some teaching experience.

Qualifying Examinations
When you have completed the required coursework, a series of written examinations covering the major and minor fields will be administered. These will consist of translation and analysis of set texts from the ancient Indo-European languages and diagnostic examinations in the other fields. Following successful completion of the written examinations, the University Oral Qualifying Examination, based on the written examinations and the dissertation prospectus, will be administered by the doctoral committee. It is intended to probe your grasp of the entire field. Should you fail either the written or oral examinations, the interdisciplinary degree committee may allow re-examination. After successful completion of the written and oral examinations, you will be advanced to doctoral candidacy and begin work on the dissertation.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
The final oral examination is designed to allow the committee to evaluate the dissertation within the discipline and within your own specialization. Although it is stated as a requirement, individual circumstances have on occasion dictated waiver of the final oral examination.

Upper Division Courses

131. European Archaeology: Proto-Civilizations of Europe. A survey of European cultures from the beginning of the food-producing economy in the 7th Millennium B.C. to the beginning of the Bronze Age in the 3rd Millennium B.C. Mrs. Gimbutas

132. European Archaeology: The Bronze Age. Prerequisite: course 131 or consent of instructor. A survey of European cultures from around 3000 B.C. to the period of the destruction of the Mycenaean culture about 1200 B.C. The course covers the Aegean area and the rest of Europe. Mrs. Gimbutas

150. Introduction to Indo-European Linguistics. (Same as Linguistics M150) Prerequisites: one year of college-level study (course 3 or better, eight units minimum) of either Greek or Latin and either German or Russian. A survey of the Indo-European languages from ancient to modern times; their relationships; and chief characteristics. Mr. Anttila (Sp)

199. Special Studies (2 to 8 units).

Graduate Courses

210. Indo-European Linguistics: Advanced Course. Prerequisite: course M150 or equivalent. Comparative study of phonology, morphology, syntax, and lexicon. Problems in analysis and reconstruction. Mr. Anttila (F)

250A-250B. European Archaeology. (Formerly numbered M250A-M250B) Prerequisite: consent of instructor. Studies in ancient European archaeological materials and their relationship to the Near East, Western Siberia, and Central Asia. May be repeated for credit. In Progress grading. Mrs. Gimbutas


596. Directed Individual Studies (2 to 8 units).

597. Preparation for Ph.D. Qualifying Examinations (2 to 8 units).

599. Research for Ph.D. Dissertation (2 to 8 units).

Related Courses in Other Departments


161A-161B-161C. Archaeology of Mesopotamia

260. Seminar in Ancient Near Eastern Archaeology

261. Practical Field Archaeology

Anthropology 110. World Archaeology

112. Old Stone Age Archaeology

115Q. Archaeological Research Techniques

115R. Strategy of Archaeology

116P. Laboratory Analysis in Archaeology

M116Q. Dating Techniques in Environmental Sciences and Archaeology

183. History of Archaeology

Archaeology 259. Fieldwork in Archaeology

Armenian (Near Eastern Languages) 130A-130B. Elementary Classical Armenian

131A-131B. Intermediate Classical Armenian

132A-132B. Advanced Classical Armenian

Classics 161. Introduction to Classical Mythology

165A. Greek Religion

166B. Roman Religion

168. Introduction to Comparative Mythology

180. Introduction to Classical Linguistics

230A-230B. Language in Ancient Asia Minor

251A. Seminar in Classical Archaeology: The Aegean Bronze Age

260. Topics in Ancient Religion

268. Seminar in Comparative Mythology

East Asian Languages and Cultures 160. Elementary Sanskrit

161. Intermediate Sanskrit

162. Advanced Sanskrit

165. Readings in Sanskrit

214A-214B. Pali and Prakrits

221A-221B. Introduction to Panini's Grammar

247. Selected Readings in Sanskrit Texts

English M1110. Celtic Mythology

M111E. Survey of Medieval Celtic Literature

M111F. Celtic Folklore

211. Old English

216A-216B. Old Irish

217A-217B. Medieval Welsh

218. Celtic Linguistics

263. Celtic Literature

Folklore and Mythology M112. Survey of Medieval Celtic Literature

M122. Celtic Mythology

M126. Baltic and Slavic Folklore and Mythology

M127. Celtic Folklore

228. Seminar: Topics in Celtic Folklore and Mythology

German (Germanic Languages) 230. Survey of Germanic Philology

231. Gothic

232. Old High German

233. Old Saxon

245B. Germanic Antiquities

252. Seminar in Historical and Comparative German Linguistics

Greek (Classics) 240A-240B. History of the Greek Language

242. Greek Dialects and Historical Grammar

243. Mycenaean Greek
International Relations

4256 Bunche Hall, 825-3862

Scope and Objectives

The Special Undergraduate Program in International Relations can only be taken jointly with a major in political science, and all requirements for the political science major must be met by or in addition to meeting the requirements of this program. Students completing the program will 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 science in the secondary schools. These students should structure their programs primarily to meet the preparation requirements of the professional school or teaching credential of their choice.

Courses in management and administration, and in oral and written communications, will ordinarily increase the career options of students in this program.

Special Undergraduate Program

Preparation for the Program

Required: Political Science 20, 50, and two courses from 10, 40, 70, 80; History 1A-1B-1C or any three courses from 5A, 5B, 8A, 8B, 8C, 9A, 9B, 9C, 9D, 10A, 10B; Economics 1 and 2, or 100; Sociology 1; Anthropology 5 or 22; Geography 3 or 5.

Upper Division

The political science major should be completed as follows: any four upper division political science courses in each of Fields I and IV and two additional courses both in Field I, Field III, Field V, or Field VI.


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 Portuguese, Italian, Germanic Languages, Near Eastern Languages and Cultures, African Languages, and East Asian Languages and Cultures. Arabic, Chinese, French, German, Japanese, Russian, and Spanish are the languages of widest career utility in international affairs.

All courses 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 Latin America, Africa, the Atlantic area, the Soviet sphere, East Asia, Southeast Asia, South Asia, or the Middle East.

For further information, contact Vicki Waldman, Political Science Counselor, in the program office.

Islamic Studies

(Interdepartmental)

10286 Bunche Hall, 825-1181

Professors

Amin Banani, Ph.D. (Near Eastern Languages and Cultures and History)
Andras Bodrogielgi, Ph.D. (Near Eastern Languages and Cultures)
Seeger A. Bonehaker, Ph.D. (Near Eastern Languages and Cultures)
Robert I. Burns, S.J., Ph.D. (History)
Herbert A. Davidson, Ph.D. (Near Eastern Languages and Cultures)
Richard Hovannisian, Ph.D. (History)
Nikki Keddie, Ph.D. (History)
John G. Kennedy, Ph.D. (Anthropology and Psychiatry)
Arafat Masouti, D.Phil. (History)
Ismael Poonawala, Ph.D. (Near Eastern Languages and Cultures), Chair
Georges Sabagh, Ph.D. (Sociology)
Damodar R. Sardeval, Ph.D. (History)
Stanford J. Shaw, Ph.D. (History)
Speros Vryonis, Jr., Ph.D. (History)
Stanley A. Wolpert, Ph.D. (History)

Associate Professors

Gerry A. Hale, Ph.D. (Geography)
Michael G. Morony, Ph.D. (History)
Thomas Penchoen, Ph.D. (Near Eastern Languages and Cultures)
A. Jihad Racy, Ph.D. (Music)

Assistant Professors

Irene Bierman, Ph.D. (Art History)
Ioli Kalavrezou-Maxeiner, Ph.D. (Art History)

Scope and Objectives

The undergraduate major in this discipline is called "Near Eastern Studies." For details, see the program by that name later in this chapter.

The interdepartmental program for the Master of Arts and Ph.D. degrees in Islamic Studies is designed primarily for students desiring to prepare for an academic career. It may, however, be found useful for students seeking a general education and desiring a special emphasis in this particular area or for those who plan to live and work in this area, whose career will be aided by a knowledge of the people, languages, and institutions. (Such a career might be centered on teaching, research, business, engineering, journalism, librarianship, or government service.) Subject to the limitations of this program, the special course of studies is formulated for candidates according to their experience and requirements.
Master of Arts Degree

Admission
In addition to the general University requirements, a Bachelor of Arts degree in Near Eastern Studies or equivalent is required. The interdepartmental degree committee will pass on your application for admission to the program. You are normally expected to have completed the equivalent of Arabic 102A-102B-102C and German 102A-102B-102C or Turkish Languages 102B-102C. In addition, you should have completed the equivalent of two years of Near Eastern history (classical and modern). Some coursework in Islamic culture and institutions may be applied toward the history requirement. Deficiencies in any of these prerequisites will have to be removed by taking the appropriate courses without credit toward the advanced degree. No special application form is required.

The Graduate Record Examination (GRE) is required of graduates of American universities and recommended for overseas applicants. No screening examination is required.

A departmental brochure may be obtained by writing to the G.E. von Grunebaum Center for Near Eastern Studies, 10286 Bunche Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines
Arabic, Persian, Turkish, history of the Near East, political science, anthropology, sociology, Islamic art, music.

Foreign Language Requirement
You will be required to show proficiency in either French or German. You are expected to pass the Educational Testing Service (ETS) graduate foreign language reading examination in French or German by the end of your third quarter in residence.

Course Requirements
A minimum of nine courses is required, five of which must be graduate. You must take no fewer than four courses on the appropriate level in the two Near Eastern languages of your choice, and no fewer than five courses selected from the relevant upper division and graduate courses in history, political science, or any of the other fields represented in the program. The selection must be limited to two of these disciplines. The omission of history may be approved only in exceptional cases. Eight units of 500-series courses may be applied toward the total course requirement, as well as toward the minimum graduate course requirement, provided they are not in the same discipline.

Comprehensive Examination Plan
The thesis plan is not available in this program. You must pass written examinations in two Near Eastern languages and literatures, the history of the Near East, and one other social science. The examinations are constructed by the instructor responsible for each discipline. Reexamination in exceptional cases will be determined by the interdepartmental degree committee. The examiner or examiners will be appointed by the Chair of the interdepartmental degree committee.

Ph.D. Degree

Admission
Students intending to work for the Ph.D. in Islamic Studies are normally expected first to fulfill all requirements for the M.A. degree. Those who enter the program with an M.A. from another university should have attained a level of preparation in languages, history, and social sciences equivalent to that required for the M.A. at UCLA. Those who have not done so should make up any deficiencies by taking the appropriate courses without credit toward the degree. No special application form is required, but applications must be accompanied by three letters of recommendation.

The Graduate Record Examination (GRE) is required of graduates of American universities and recommended for overseas applicants.

A departmental brochure may be obtained by writing to the G.E. von Grunebaum Center for Near Eastern Studies, 10286 Bunche Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines
Arabic, Persian, Turkish, history, anthropology, sociology, political science, Islamic art, music.

Foreign Language Requirement
At the beginning of your first quarter in residence, you must present to the Chair of the interdepartmental degree committee a written statement explaining your preparation in one of the two modern languages required by the University (generally French and German). You are expected to pass the graduate foreign language reading examination in both languages by the end of your second year in residence. For work in some fields, a reading knowledge of Italian, Spanish, or Russian may be substituted for one of the above European languages after satisfactory advisement. The Educational Testing Service (ETS) examination is acceptable.

Course Requirements
If you are entering directly into the Ph.D. program, course requirements are the same as in the M.A. program. Beyond this, you will continue advanced courses in your two Near Eastern languages, Near Eastern history, and in one of the social sciences, on specific advisement of the interdepartmental degree committee.

Qualifying Examinations
Written qualifying examinations in four fields are required: two Near Eastern languages and literatures as approved by the advisory committee, the whole range of Near Eastern history, and one other social science field (anthropology, political science, sociology). After successfully completing the written examinations, you must pass the University Oral Qualifying Examination in order to be advanced to doctoral candidacy. Reexamination in any field is at the discretion of the doctoral committee in consultation with the Chair of the program.

Research proposals, dissertations, research papers, propositions, etc., are not permitted as alternatives to the written qualifying examinations.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
With the approval of the doctoral committee at the time of the oral qualifying examination, the final oral examination may be waived.

Islamic Studies Course List


Archaeology 259. Fieldwork in Archaeology
596. Individual Studies for Graduate Students
597. Preparation for Ph.D. Qualifying Examinations
Armenian (Near Eastern Languages) 130A-130B. Elementary Classical Armenian
131A-131B. Intermediate Classical Armenian
132A-132B. Advanced Classical Armenian
210. History of the Armenian Language
220. Armenian Literature of the Golden Age (A.D. 5th Century)
259. Fieldwork in Archaeology
Armenian
221 A. Introduction to the Study of the French-African
Classics
170. Religion in Ancient Iran
190A-190B. Introduction to Modern Iranian Studies
199. Special Studies in Iranian
220A-220B. Classical Persian Texts
221. Rumi, the Mystic Poet of Islam
250. Seminar in Classical Persian Literature
251. Seminar in Contemporary Persian Literature
596. Directed Individual Study
597. Examination Preparation
599. Ph.D. Dissertation Research and Preparation
Islamic (Near Eastern Languages) 110. Introduction to Islam
596. Directed Individual Study
597. Examination Preparation
598. M.A. Thesis Research and Preparation
599. Ph.D. Dissertation Research and Preparation
Jewish Studies (Near Eastern Languages) 110. Social, Cultural, and Religious Institutions of Judaism
Linguistics 220. Linguistic Areas
225. Linguistic Structures
Music 282. Music of Iran and Other Non-Arabic-Speaking Communities
284. Music of the Arabic-Speaking Near East
Near Eastern Languages 200. Bibliography and Method of Near Eastern Languages and Literatures
210. Survey of Afro-Asiatic Languages
M241. Folklore and Mythology of the Near East
290. Seminar in Paleography
596. Directed Individual Study
597. Examination Preparation
599. Ph.D. Dissertation Research and Preparation
Philosophy 104. Topics in Islamic Philosophy
Political Science 132A-132B. International Relations of the Middle East
164. Government and Politics in the Middle East
165. Government and Politics in North Africa
C250F. Seminars in Regional and Area Political Studies: Middle Eastern Studies
250K. Seminars in Regional and Area Political Studies: North African Studies
Semiotics (Near Eastern Languages) 215A-215B. Syrian
Sociology 132. Population and Society in the Middle East
133. Comparative Sociology of the Middle East
151. Culture and Personality
236. Social Change in the Middle East
237. Social Stratification in the Middle East
Turkish Languages (Near Eastern Languages) 101A-101B-101C. Elementary Turkish
102A-102B-102C. Intermediate Turkish
111A-111B-111C. Elementary Uzbek
112A-112B-112C. Advanced Uzbek
114A-114B-114C. Bashkir
160. Cultural History of the Turks
180. Modern Turkic Languages and Peoples
199. Special Studies in Turkic Languages
210A-210B-210C. Introduction to Ottoman
211. Ottoman Diplomatics
220A-220B-220C. Chagatai
230A-230B-230C. A Historical and Comparative Survey of the Turkish Languages
235A-235B. Middle Turkish
240A-240B-240C. Advanced Ottoman
250A-250B-250C. Islamic Texts in Chagatai
280A-280B. Seminar in Modern Turkish Literature
290A-290B. Seminar in Classical Turkish Literature
596. Directed Individual Study
597. Examination Preparation
599. Ph.D. Dissertation Research and Preparation

Italian
340 Royce Hall, 825-1940
Professors
Franco Betti, Ph.D., Chair
Giovanni Cecchetti, Ph.D., Dottore in Lettere
Fred Chiappelli, Dottore in Lettere, Dott. Lett. "Honors Causa"
Margherita Cottino-Jones, Ph.D., Dottore in Lettere
Edward F. Tuttle, Ph.D.
Pier-Maria Pasinetti, Ph.D., Dottore in Lettere, Emeritus
Assistant Professor
Lucia Re, Ph.D., Dottore in Lettere
Lecturers
Mirella Cheeseman, Dottore in Legge
Althea Reynolds, B.A.

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 programs in Romance Linguistics and Literature, Comparative Literature, and Folklore and Mythology.

Bachelor of Arts in Italian
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. While literature courses constitute the bulk of the program, a good knowledge of the language is prerequisite to all upper division literature courses credited toward the major in Italian. The use of Italian is stressed at all levels of study. Detailed information on programs and specific degree requirements are available in the department publication, Programs in Italian Studies, and in the department office.

Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 25, or equivalent.
The Major

Required: Fourteen upper division courses out of 16 courses regularly offered every year or every other academic year, including Italian 101, 102A-102B-102C, 113A-113B, 190. An additional seven are to be selected from courses 114A through 122.

Three upper division courses from other departments are strongly recommended, as follows: Classics 143, History 132A or 132B, and English 110. Also recommended: Art History 106A, 106B, or 106C; upper division courses in another literature and philosophy and a second language (Latin, French, Spanish, or German, at least on level three). Programs must be organized in consultation with the departmental undergraduate adviser.

Study in Italy

You 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. You are also urged to take advantage of summer language workshops and study programs, either at American campuses or in Italy. The Department of Italian offers an intensive, eight-week summer Italian studies program. For information on Casa Italiana, contact the department or the Summer Sessions Office, 1257 Murphy Hall.

Honors Program

Majors with an overall grade-point average of 3.25 and a 3.5 grade-point average or better in Italian are eligible to participate in the honors program. Prerequisites: Italian 102A-102B-102C.

Candidates will select three upper division literature courses in which additional readings are required. In the last quarter of your senior year, you are required to write a thesis on a subject related to one of the three above-mentioned courses. The average for the three courses should not fall below A-. Applications should be made during the last quarter of your junior year.

Bachelor of Arts in Italian and Special Fields

Study programs fulfilling requirements for the major have been developed with the Departments of Anthropology, Art, Design, and Art History, Classics (Latin), English, French, History, Linguistics, Music, Philosophy, Political Science, Spanish and Portuguese, and Theater Arts. Consult the Italian undergraduate adviser for requirements in the various fields of specialization.

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, or equivalent, plus additional required courses associated with the field of specialization selected in consultation with the undergraduate adviser.

The Major

Required: Fourteen upper division courses, seven of which must be in Italian. Italian 102A-102B-102C are required, while the remaining four may be selected from courses 113A through 122 as determined by your area of specialization. The other seven courses are to be selected from offerings in another department, as determined by the field of specialization.

Study Lists each quarter must be planned in consultation with the undergraduate adviser. Courses will be assigned in accordance with your needs as determined by the area of specialization pursued. In certain cases, as many as two courses (eight units) at the graduate level may be applied toward the 14-course minimum requirement.

Master of Arts Degree

Admission

Three letters of recommendation should be sent to the Graduate Adviser, Department of Italian, 340 Royce Hall, UCLA, Los Angeles, CA 90024.

Flies of prospective graduate students meeting the University minimum requirements are screened by the departmental committee on admissions. Admission on a provisional basis may be recommended in case of deficiencies in preparation.

Major Fields or Subdisciplines

The M.A. degree is available with specializations in Italian literature and language.

Foreign Language Requirement

Reading knowledge of one other foreign language approved by the graduate adviser or successful completion of courses through at least level three is required. This requirement must be met at least one quarter before the comprehensive examination.

Course Requirements

Italian Literature Specialization

(1) For the thesis plan, 12 courses are required, including Italian 200A, 200B, 200C, 259A-259B, Latin 232, and Linguistics 100 or 140 or both. At least six courses must be in the 200 series.

(2) For the comprehensive examination plan, 12 courses are required, including Italian 200A, 200B, 200C, and 205B. The other eight courses must be distributed in three main literary periods — Middle Ages, Renaissance, modern (at least two courses in each period). Three of these courses may be upper division if approved by the graduate adviser. Related courses in other departments, such as History 205A-205B and Art History 230, are strongly recommended.

Italian Language Specialization

(1) For the thesis plan, 12 courses are required, including Italian 200A, 200B, 200C, 259A-259B, Latin 232, and Linguistics 100 or 140 or both. At least six courses must be in the 200 series.

(2) For the comprehensive examination plan, 12 courses are required, including Italian 130, 200A, 200B, 200C, 259A-259B, and Latin 232 or Italian 210A or both. The others should be courses on the Middle Ages (seminar on Dante strongly recommended), Renaissance, and modern times.

No 500-series courses may be applied toward the M.A. course requirements.

Thesis Plan

This plan is recommended for research-orientated students of exceptional merit. If you have completed your first year of graduate work with at least a 3.7 grade-point average, you may be nominated by one of the faculty members of the department for application to the thesis plan.

At this point you must have completed Italian 200A, 200B, 200C, 205B, and at least two other graduate courses in Italian. On acceptance, the guidance committee will help you select three more graduate courses in preparation for the thesis.

The thesis must be at least 50 pages long and follow the rules and style of the UCLA Ph.D. dissertation regulations. It must be submitted in the Spring Quarter of your second year of graduate work. After completion of the thesis, you must pass an oral examination testing your knowledge in the field of the thesis and your general competence in Italian literature.

Comprehensive Examination Plan

In general, the department favors the comprehensive examination plan, which consists of a minimum four-hour written examination to be given before the final examination period of the Fall and Spring Quarters. The examination tests your general competency and does not have major and minor fields of emphasis. After the written examination, you are required to take an oral examination. In case of failure, you may be reexamined once, subject to approval by the examination committee and the Chair of the department.

Ph.D. Degree

Admission

Three letters of recommendation from professionals in the field of Italian studies should be sent to the Graduate Adviser, Department of Italian, 340 Royce Hall, UCLA, Los Angeles, CA 90024.

Prerequisite for entering the department's doctoral program is an M.A. from UCLA or another
university in the United States or the equivalent. Students with a master's degree from another institution, or the equivalent, will be required to pass part 1 of the Ph.D. qualifying examinations by the end of their third quarter in residence. They should expect to take part 2 of the examinations after approximately eight quarters.

Students admitted to the Ph.D. program without the M.A. degree must take the qualifying examinations (part 2) at the end of the twelfth quarter. Normally taken six quarters after the M.A. degree must take the qualifying examinations after approximately eight quarters.

Students holding the M.A. from UCLA will normally take part 2 of the qualifying examinations at the end of their sixth quarter in residence.

Major Fields or Subdisciplines

Two centuries of Italian literature in the medieval, Renaissance and baroque, or modern areas comprise the major fields, while two centuries of Italian literature from any of these areas make up the minor fields.

You may select a major in a literary genre or a minor outside the department, provided that it relates to your major field of specialization and has the department's approval.

Foreign Language Requirement

This requirement is normally met by passing courses through level three in at least two of the following languages: Latin, French, German, Spanish (subject to departmental approval). A foreign language used to satisfy the requirement for the master's degree in Italian may be applied toward fulfillment of this requirement. The language requirement must be satisfied before taking part 2 of the qualifying examinations, either by Educational Testing Service (ETS) or departmental examinations or by petition for course credit to the Graduate Division.

Course Requirements

In addition to those required for the master's degree, at least ten other quarter courses, of which no more than two 596 courses may apply, are required. You also may take such courses as your guidance committee may prescribe for the qualifying examinations (such as Italian 596 or 597). All courses from Italian 201 on may be applied toward the Ph.D. degree.

Qualifying Examinations

The comprehensive examination for the M.A. in Italian at UCLA corresponds to part 1 of the Ph.D. qualifying examinations.

The department also requires both written and oral qualifying examinations (part 2), which must be taken during the same academic year, although not necessarily during the same quarter. Normally taken six quarters after the M.A. degree, the written examination consists of two parts: an eight-hour examination in your major field and a six-hour examination in your minor field. Additionally, a two-hour University Oral Qualifying Examination is required for advancement to doctoral candidacy. A summary of requirements entitled "Regulations for the Ph.D. Examination" is available in the department. In case of failure, you may be reexamined on unanimous approval of the guidance committee, after at least one academic quarter of additional residence.

Candidate in Philosophy Degree

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination

After acceptance of the dissertation in its final form, you may be required to take an oral examination which will cover principally the field within which the dissertation falls.

Lower Division Courses

Enrollment in the Italian open language laboratory is required of all students in Italian 1, 1A, 2, 2A, and 3.

1. Elementary Italian — Beginning. Lecture, five hours; laboratory, one hour.
   Mrs. Cheeseman in charge

2A. Elementary Italian — Accelerated (8 units). Lecture, ten hours; laboratory, two hours. Designed for those students having the capacity and desire to learn the language at a much faster pace than normal. Encompasses material ordinarily intended for courses 1 and 2.
   Mrs. Cheeseman in charge

1G. Special Reading Course. Readings, three hours. Open to graduate students in other fields. The course prepares students for the Graduate Division foreign language reading requirement. S/U grading.

2. Elementary Italian — Continued. Lecture, five hours; laboratory, one hour. Prerequisite: course 1 or one year of high school Italian.
   Mrs. Cheeseman in charge

2A. Elementary Italian — Accelerated (Continued) (8 units). Lecture, ten hours; laboratory, two hours. Prerequisite: course 1A or 2 or two years of high school Italian. Designed for those students having the capacity and desire to learn the language at a much faster pace than normal. Encompasses the material ordinarily intended for courses 3 and 4.
   Mrs. Cheeseman in charge

2G. Special Reading Course. Readings, three hours. Open to graduate students in other fields. The course prepares students for the Graduate Division foreign language reading requirement.

3. Elementary Italian — Continued. Lecture, five hours; laboratory, one hour. Prerequisite: course 2 or two years of high school Italian.
   Mrs. Cheeseman in charge

3A. Intermediate Italian — Accelerated (8 units). Lecture, six hours; laboratory, two hours. Prerequisite: course 2A or 3 or three years of high school Italian. Designed for those students having the capacity and desire to learn the language at a much faster pace than normal. Encompasses the material ordinarily intended for courses 4 and 5.
   Mrs. Cheeseman in charge

4. Intermediate Italian. Lecture, five hours; laboratory, one hour. Prerequisite: course 3 or three years of high school Italian.
   Mrs. Cheeseman in charge

5. Intermediate Italian. Lecture, five hours; laboratory, one hour. Prerequisite: course 4 or four years of high school Italian.
   Mrs. Cheeseman in charge

8A-BB-BC. Italian Conversation (2 units each). Prerequisite: consent of instructor. Intended for students who have taken three to six quarters of language instruction and have developed considerable skills in Italian, the courses help students to improve further their spoken proficiency through constant exposure and practice of the language. Each course may be repeated once for credit.
   Mrs. Reynolds in charge

25. Advanced Italian. Lecture, five hours. Prerequisite: course 5. An advanced grammar and composition course with readings from select literary works.
   Mrs. Cheeseman in charge

42A-42B. Italian Civilization or Italy through the Ages. Lecture, three hours. A general survey of the history, literature, art, music, and architecture visually illustrated, with emphasis on Italy's cultural contributions to Western civilization. A service course designed to meet the breadth requirements:
   42A. From the Origins through the Renaissance.
   Mrs. Cottino-Jones, Mr. Tuttle
   42B. From the Enlightenment to Modern Italy.

46. Italian Cinema and Culture. (Formerly numbered 46A–46B–46C). Lecture, two hours; discussion, one hour; film screenings, two to three hours. A survey of the development of Italian cinema and culture from the 1900s to the present through an analysis of the principal aesthetic, literary, artistic, and philosophical movements in Italy as reflected in the works of the nation's filmmakers and writers.
   Ms. Re (F.W.Sp)

50A-50B. Main Trends in Italian Literature:

50A. Italian Literature to the Baroque Period. A study of selected works of the major writers of the period, including Dante, Petrarch, Boccaccio, Ariosto, Machiavelli, Castiglione, Tasso, Bruno, Galilei, Marino.

50B. Italian Literature from 1700 to the Present. A study of selected works by the major writers of the period, including Vico, Parini, Alfieri, Foscolo, Leopardi, Manzoni, Verga, Pirandello, Svevo, Moravia, Ungaretti, Montale.

Upper Division Courses

Sixteen quarter units in Italian or equivalent are required for admission to any upper division course. Upper division courses for the majors will be conducted in Italian, will all be four-unit courses, and will meet three hours weekly.

101. Preparation for Advanced Italian Studies. A course designed to acquaint juniors with the research tools fundamental to the study of Italian culture. Focuses on how to find texts and collateral material, how to utilize bibliographies, dictionaries, encyclopedias, manuals, and periodicals, and how to proceed in literary analysis.
   Mr. Chiappelli

102A-102B-102C. The Italian Cultural Experience. A study of the cultural development of Italy conducted especially with a view to contemporary situations:

102A. From the Disruption of Roman Unity to Feudal and Communal Society and Culture.
102B. From Renaissance Civilization to the Baroque Age.
102C. Historical and Cultural Issues from the Age of Enlightenment to Our Day.

105. Tradition and Innovation in Italian Culture. Italy's basic social structures and cultural institutions are delineated through their historical development and as they are manifested in the processes of the industrializing state currently is subject.
   Mr. Tuttle

110A-110B. The Divine Comedy in English. Lecture, three hours.
113A. Dante's Divine Comedy. The course focuses on the Divine Comedy. Selected readings from one-act plays by Petrarca and Boccaccio. Prerequisite: course 114A-B. American studies major, or permission of instructor.

114A–114B. Italian Literature of the Middle Ages. Lecture, three hours. Emphasis on minor works, Leopardi, and Boccaccio. Prerequisite: course 114A-B. American studies major, or permission of instructor.

116A–116B. Italian Literature of the Renaissance. Emphasis on Lorenzo de' Medici, Poliziano, Castiglione, Machiavelli, Anoasto, Tasso. Prerequisite: course 114A-B. American studies major, or permission of instructor.

118. Italian Literature of the 18th Century. Emphasis on Goldoni, Parini, Aliieri. Prerequisite: course 114A-B. American studies major, or permission of instructor.

119. Italian Literature of the 19th Century. The course surveys the Romantic age as it expresses values and national aspirations of 19th-century Italy. Emphasis on the innovative approach to poetry as seen in the works of Fooscolo and Lepardi and to the sociohistorical novels of Fooscolo, Manzoni, and Verga. Prerequisite: course 114A-B. American studies major, or permission of instructor.

120. Italian Literature of the 20th Century. Following a brief introduction to Italian literature after unification of the country, the course concentrates on selected writers seen in their political, social, and artistic context. Prerequisite: course 114A-B. American studies major, or permission of instructor.

121. Italian Cinema. A comparative study of specific literary works and their translations into films and of the different techniques in the two forms of expression. Texts include literary works, screenplays, and works of literary and film criticism. Prerequisite: course 114A-B. American studies major, or permission of instructor.

122. The Italian Theater. The course concentrates on what is alive today (read and performed) in the Italian theater. Texts range from the Renaissance to the present. Prerequisite: course 114A-B. American studies major, or permission of instructor.

130. Advanced Grammar and Composition (Teaching). A study in depth of the idiomatic phenomena of the language from both the grammatical and syntactical points of view. Prerequisite: course 114A-B. American studies major, or permission of instructor.

131. Reading and Reciting. Prerequisite: consent of instructor based on sufficient knowledge of Italian. Emphasis on diction, interpretation, and performance of one-act plays as vehicles for perfection of pronunciation, comprehension, and fluency. May be repeated twice for credit. Prerequisite: course 114A-B. American studies major, or permission of instructor.

200A. Readings in Italian Literature. Lecture, three hours. Prerequisite: graduate standing. The course covers the literature of the generation dominated by the Franciscan movement and proceeds through the culture of Frederick II's court to the three crises of combining two disciplines of study. May be graded by an ad hoc committee of faculty from the department, with the Chair in charge. Prerequisite: course 114A-B. American studies major, or permission of instructor.

200B. Readings in Italian Literature. Lecture, three hours. Prerequisite: course 200A, graduate standing. The course covers the literature of the High Renaissance of central Italy in its three most powerful genres (lyric poetry, chivalric poem, and theater) and proceeds through the counter-reformist culture, especially of northern and southern Italy. Finally, it encompasses the main Enlightenment figures and the cultural evolution stemming from them. Prerequisite: course 114A-B. American studies major, or permission of instructor.

200C. Readings in Italian Literature. Lecture, three hours. Prerequisite: course 200B, graduate standing. The course covers the literature of the Romantic era and proceeds through a study of the literary figures of the Italian "Risorgimento." Finally, it encompasses the various "novocentisti" movements, the literature between the two wars, and the contemporary generation. Prerequisite: course 114A-B. American studies major, or permission of instructor.

204A–204B. Methods of Literary Criticism. Lecture, three hours: 204A. Bibliography and Methods of Research. Lecture, three hours. Prerequisite: course 114A-B. American studies major, or permission of instructor. 204B. Brief History of Literary Criticism. Lecture, three hours. Prerequisite: course 114A-B. American studies major, or permission of instructor.

205A–205B. Methods of Literary Criticism. Lecture, three hours: 205A. Discussion of Modern Critical Approaches. Lecture, three hours. Prerequisite: course 114A-B. American studies major, or permission of instructor.

206A. Readings in Italian Literature. Lecture, three hours. Prerequisite: course 200A, graduate standing. The course covers the literature of the Romantic era and proceeds through a study of the literary figures of the Italian "Risorgimento." Finally, it encompasses the various "novocentisti" movements, the literature between the two wars, and the contemporary generation. Prerequisite: course 114A-B. American studies major, or permission of instructor.

207A. Readings in Italian Literature. Lecture, three hours. Prerequisite: course 200A, graduate standing. The course covers the literature of the Romantic era and proceeds through a study of the literary figures of the Italian "Risorgimento." Finally, it encompasses the various "novocentisti" movements, the literature between the two wars, and the contemporary generation. Prerequisite: course 114A-B. American studies major, or permission of instructor.

210. History of the Italian Language. Examines the main forces which have shaped literary or standard Italian and specific ways in which the language has evolved. Traces its changing relations with other European languages and surveys the effects wrought by historical events, changes in taste, and altered social functions. Prerequisite: course 114A-B. American studies major, or permission of instructor.

215. Special Fields Research (2 units). Limited to senior Italian and special fields majors. Unscheduled tutorial in which a paper (15 to 20 pages) is to be written in either Italian or English which requires students to unify and synthesize their experience of combining two disciplines of study. Paper is graded by an ad hoc committee of faculty from the department, with the Chair in charge. Prerequisite: course 114A-B. American studies major, or permission of instructor.

219. Special Studies (2 to 4 units). Prerequisite: consent of instructor. A course of independent study for advanced undergraduates who wish to pursue a special research project under the direction and close supervision of a faculty member.
259A. History of the Italian Language. Prerequisite: graduate standing. A historical survey of the development of the language from medieval times to the unification of the country (1861). Questione della lingua, general acceptance of Florentine speech, and its evolution into the national language. Mr. Tuttle

259B. The Structure of Modern Italian. Prerequisite: graduate standing. Various tendencies in modern and contemporary Italian. Foreign influences in today's Italian language. Relationship between the national language and the various dialects. Mr. Tuttle

259C. Italian Dialectology: The historical differentiation of the Italian dialects is considered in its areal dimension. Specific geolingustic problems and solutions illustrate the growth of the discipline up to its present merging with sociolinguistics as Italian dialects become more vertically defined. Mr. Tuttle

259D. Research and Writing. Preparation for comprehensive examinations. May be repeated twice. S/U grading.

Emeritus Professors
Serena E. Arnold, Ed.D.
Camille Brown, Ed.D.
Donald T. Handy, Ed.D.
Valerie V. Hunt, Ed.D.
Wayne W. Massey, Ph.D.
Ben W. Miller, Ph.D.
Norman P. Miller, Ed.D.
Laurence E. Morehouse, Ph.D.
Raymond A. Snyder, Ed.D.

Associate Professors
Robert J. Gregor, Ph.D.
Tara K. Scanlan, Ph.D.
Ronald F. Zernicke, Ph.D.
Marjorie E. Latchaw, Ph.D., Emeritus

Assistant Professors
Scott H. Chandler, Ph.D. (Neuroscience)
Diane Shapiro, Ph.D.
Arthur C. Vailas, Ph.D.

Lecturer
Dorothy Phillips, M.S.

Adjunct and Visiting Assistant Professors
Joan L. Duda, Ph.D., Visiting
Alan J. Garfinkel, Ph.D., Adjunct

Scope and Objectives
Kinesiology is the study of the biochemical, morphological, and general physiological responses of the human to exercise and environmental conditions; the description of movement and the neuromuscular and biomechanical determinants of motor performance; and the development, acquisition, and modification of motor performance. The purpose of this study is intended to develop and integrate principles and concepts of human movement.

Bachelor of Science Degree

Pre-Kinesiology Major
All students intending to major in kinesiology are identified as pre-kinesiology majors until the premajor requirements have been satisfied. Students must complete all premajor courses and petition for major standing by the time they attain 120 units and prior to enrollment in upper division kinesiology courses.

The pre-kinesiology major requirements are Kinesiology 12A, 12B, 14; Chemistry 11A, and 15/15L or 23; Biology 5 or 7; Physics 3A and 3B (or 6A and 6B, or 8A and 8C); one introductory statistics course; Psychology 10; and an additional introductory course from one of the following departments: Anthropology, Psychology, or Sociology.

Premajor courses outside the department may be taken for a letter grade or on a P/NP basis; Kinesiology 12A, 12B, and 14 must be taken for a letter grade (certain certification and graduate programs also require letter grades for courses). All premajor courses must be passed with a grade of C or better or a P and must be completed with an overall grade-point average of 2.5 or better. Repetition of more than one premajor course in which a grade of D, F, or NP was received or repetition of any course more than once may result in dismissal from the major.

In addition to the preparation courses required in the premajor, additional courses are strongly recommended or required as prerequisites for some upper division courses.

After completing the premajor courses, you must petition for admission into the kinesiology major. Petitions are initiated through the Student Affairs Office in 2834 Slichter Hall.

If you are in the kinesiology major or premajor, you must confer with the departmental counselor on a regular basis. If you are interested in this major and are transferring from another college or university, you should consult with the departmental counselor at least six months prior to the expected enrollment date at UCLA. Call the Student Affairs Office for an appointment.

The Major
Required Core Courses: Kinesiology 120, 122, 124, 126.

A total of seven upper division electives (28 units) is required. Although all seven courses may be taken in kinesiology, five upper division courses (20 units) must be taken in the department. Courses 193, 196A-196B, and 400-level courses may not be applied toward this requirement. One or two of the seven courses (up to eight units) may be taken in other departments related to your course of study. A list of approved extra-departmental courses is available in the Student Affairs Office.

A C average must be maintained in all upper division courses taken in the department. Repetition of more than one required core course in which a grade of D or F was received or repetition of any core course more than once may result in dismissal from the major. All upper division courses required for the major (including extra-departmental electives) must be taken for a letter grade.

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 3.5 GPA in upper division kinesiology courses, completion of four upper division kinesiology courses, and identification of a sponsoring faculty adviser. After completion of all requirements and with the recommendation of the faculty adviser, the undergraduate affairs committee will confer departmental honors at graduation.

Preparation for Graduate Study
Undergraduate students who plan to do doctoral studies in kinesiology are advised to complete Mathematics 3A and 3B. Students who wish to pursue doctoral studies in biomechanics must complete two full years of calculus.
Students interested in graduate study (master’s degree or Ph.D.) in areas of physiological kinesiology must complete two full years of chemistry (11A, 11B/11BL, 11C/11CL, 21, 23, 25). Consult the Student Affairs Office for additional information.

Graduate Study

The department offers Master of Science and Doctor of Philosophy degrees in the following fields:

1. Exercise physiology — cardiovascular adaptations of exercise, environmental factors influencing work capacity, neuromuscular and metabolic adaptations to exercise, and neuromotor control.

When applying for graduate work, you should specify an interest in one of these general fields.

Admission

Applicants for graduate study are expected to have completed an undergraduate degree in kinesiology or the equivalent as outlined below under the master’s and doctoral programs. A grade-point average of at least 3.0 (B) in all upper division undergraduate coursework is required. A departmental faculty committee considers applicants on the following bases:

1. Prior scholastic performance,
2. Three letters of recommendation, and
3. Applicant’s statement of purpose, which should include (a) relevant background or preparation, (b) field of emphasis, specific study interests, and type of research sought, (c) expectations, goals, degree objective, (d) specific courses in the department to be taken and one or two departmental faculty members whose research area parallels the study interest.

A list of faculty names and research interests is available from the Department of Kinesiology, 2834 Slichter Hall, UCLA, Los Angeles, CA 90024. Applicants are encouraged to communicate directly with the faculty, and personal interviews are encouraged.

Aptitude tests, including the Graduate Record Examination (GRE) or Miller’s Analogies, are not required but may be submitted for consideration.

Applications for all quarters must be submitted by Fall Quarter deadlines, since applications for all quarters are reviewed only in January/February each year.

Master of Science Degree

Applicants without an undergraduate degree in kinesiology will receive serious consideration, particularly if undergraduate or other experiences provide a strong relationship to kinesiology. However, applicants are expected to complete minimum undergraduate preparation prior to graduate work. Completion of course deficiencies may take as much as an additional year of coursework, which may not be applied toward the master’s degree. Required undergraduate preparation is equivalent to the following: (1) four required courses selected from cellular biology, inorganic chemistry, organic chemistry, introductory psychology, physics (mechanics), physics (electricity), calculus (differential), and calculus (integral), (2) one course each in statistics, human anatomy, and human physiology required for the B.S. degree in Kinesiology, (3) the four kinesiology core courses required for the B.S. degree and their laboratories, and (4) one elective from the proposed area of graduate study. Additionally, applicants in the field of exercise physiology should have completed one year of inorganic chemistry, one year of organic chemistry/biochemistry, and two quarters of calculus.

Course Requirements

The Master of Science in Kinesiology requires nine courses: five graduate-level kinesiology courses; two courses from a related field; one second-level statistics or research design course; one other course from either kinesiology or a related field.

A minimum of six of the nine courses must be graduate-level (200) courses, toward which one 596 course may be applied. Lists of approved related field and statistics or research design courses may be obtained from the department.

A total of eight units of Kinesiology 596 may be taken for credit; only one course (four units) may be applied toward the minimum course requirement for the master’s degree. Courses 597 and 598 may not be applied toward any of the course requirements for the degree. There is no limit on the number of times a master’s student may enroll in course 597 or 598.

Thesis Plan

Students who elect the thesis plan for the master’s degree must report the results of an original research investigation. Under the guidance of the thesis committee, you must propose a problem area or outline of study, conduct original research in a specific area, and report the results. With committee approval, you may submit either a thesis manuscript or a manuscript suitable for publication.

Comprehensive Examination Plan

Students who elect this plan must achieve a passing mark on a comprehensive examination. The general purpose of the plan is that students acquire a thorough understanding of a reasonably broad problem area, which must be specified in consultation with an adviser. The selection of courses in the department and the related field must be pertinent to the problem area, and justification is required with the petition for advancement to candidacy.

While a written examination is required, the committee may use additional means to evaluate the competency of the candidate.

If you fail the comprehensive examination, you may not repeat it until the following quarter. Only one repetition is allowed.

Ph.D. Degree

Doctoral students are expected to have the basic preparation coursework in kinesiology required of master’s students. Six of the eight preparation courses required for the M.S. are required of doctoral students. You must show a solid educational background in one of three general fields of kinesiology, and undergraduate and prior graduate work will be evaluated in terms of your declared field of interest.

Major Fields or Subdisciplines

From the three general content fields of the department’s instructional and research programs, six areas of concentration have been identified: (1) biomechanics; (2) cardiorespiratory function and adaptation; (3) movement performance and learning; (4) musculoskeletal function and adaptation; (5) neural control of movement; (6) social psychological aspects of human movement.

You will select one of the six areas of concentration as a major and one area as a minor. These areas are expected to relate to your proposed dissertation problem.

Course Requirements

Fourteen courses are specified for the doctoral degree, some of which may be satisfied by prior graduate work. Selection of all courses must be approved by the guidance committee and will be determined in part by the selection of major and minor areas of concentration.

A total of eight departmental courses is required, two of which must be seminars. One seminar course requirement may be met by enrolling in two quarters of Kinesiology 290. Two 596 courses may be applied toward the degree requirements.

A minimum of three courses or 12 units in a related field outside the department is required. An approved list of courses in anatomy, biological chemistry, biology, biomathematics, education, engineering, neuroscience, pharmacology, physiology, psychology, public health, and radiological sciences is maintained by the department. A fourth course, either departmental or in a related field outside the department, and two department-approved advanced statistics courses are also required.
First-Year Doctoral Review
After completion of three quarters of coursework, the graduate affairs committee will conduct a doctoral review to determine whether you (1) continue in the doctoral program, (2) enter the master's program, or (3) discontinue graduate study in the department. The review must be completed by the end of the fourth quarter of graduate work as a doctoral student.

Teaching Experience
Each candidate will serve in an instructional capacity for a minimum of two quarters. All teaching evaluations will become a permanent part of your departmental record.

Qualifying Examinations
Each doctoral student must take two written qualifying examinations: one in a major area and one in a minor area. Written qualifying examinations may be taken when the student and guidance committee consider appropriate. These examinations, administered in Fall and Spring Quarters, will be scored (1) passed at the Ph.D. level of achievement, (2) passed at the master's level of achievement, or (3) failed. To continue in the doctoral program, you must pass each examination at the Ph.D. level of achievement. If you fail to do so, you may (1) complete the master's degree, (2) discontinue graduate work in the department, or (3) reschedule the area examinations once at the discretion of the guidance committee.

After successfully passing the departmental written qualifying examinations, a University Oral Qualifying Examination will be conducted by the doctoral committee. Normally, the examination will be held the quarter following the completion of written examinations, all coursework, and two quarters of research work with your major professor. If you do not pass, the examination may be rescheduled at the discretion of the doctoral committee.

After advancement to candidacy, you must complete and submit a dissertation which meets the approval of the doctoral committee.

Final Oral Examination
A final oral examination is generally required, although the members of the doctoral committee who are to approve the dissertation have the option to waive it in exceptional cases. The major emphasis in this examination will be a defense of the dissertation.

Lower Division Courses
12A. Introduction to Human Physiology. (Formerly numbered 12.) Lecture, three hours; laboratory, 90 minutes. Prerequisites: Biology 5 or 7, Chemistry 15 and 15L or 23, Physics 3B. An introduction to human physiology. Topics include cell and muscle physiology, cellular neurophysiology, and endocrinology.

Mr. Chandler; Mr. Vailas (F,Sp)

12B. Introduction to Human Physiology. (Formerly numbered 12.) Lecture, three hours; laboratory, 90 minutes. Prerequisites: Biology 5 or 7, Chemistry 15 and 15L or 23, Physics 3B. An introduction to human physiology. Topics include respiration and cardiovascular, renal, and gastrointestinal physiology.

Mr. Chandler; Mr. Vailas (F,Sp)

13. Introduction to Human Anatomy (6 units). Lecture, four hours; laboratory, four hours. Not intended for kinesiology majors; a combination of courses 13 and 14 is equivalent to course 13. A structural survey of the human body, including the skeleton, muscular, nervous, circulatory, respiratory, digestive, and genitourinary systems. Laboratory includes examination of human cadaver specimens. Mr. Phillips (W)

14. Human Neuromuscular Anatomy (6 units). Lecture, four hours; laboratory, four hours. A thorough study of the skeletal, articular, muscular, and nervous systems. Special emphasis on relating these body structures to human movement capabilities. Laboratory includes examination of prosected human cadaver specimens. Ms. Phillips (F,Sp)

Upper Division Courses
115. Aquatic Kinesiology. Lecture, three hours; laboratory, two hours. Prerequisite: course 124. A study of man's adaptation to the aquatic environment.

Mr. Egstrom (W)


Mr. Barnard, Mr. Gardner (Sp)

117. Conditioning for Maximum Performance. Prerequisite: course 124. Study of factors and conditions accelerating and retarding levels of performance and work under various physiological and environmental conditions.

Mr. Egstrom

118. Cellular Dynamics of Exercise. Prerequisites: courses 124, 126. Cellular responses to acute and chronic exercise.

Ms. Vailas (F)

120. Behavioral Bases of Movement (6 units). Lecture, four hours; laboratory, three hours. Prerequisite: completion of premajor coursework. An examination of motor performance and motor learning and the influence of selected psychological variables on human movement.

Ms. Duda, Ms. Scanlan, Mr. Schmidt, Ms. Shapiro (W)

121. Biomechanical Bases of Movement (6 units). Lecture, four hours; laboratory, three hours. Prerequisite: completion of premajor coursework. Kinematic and kinetic principles underlying human movement, focusing on the human neuromuscular and skeletal systems.

Mr. Gregor; Mr. Zernicke (F,Sp)

124. Biomechanical and Environmental Factors Affecting Movement (6 units). Lecture, four hours; laboratory, three hours. Prerequisite: completion of premajor coursework. Response of the cardiovascular and respiratory systems to acute and chronic exercise, environmental stress, and adaptation.

Mr. Barnard, Mr. Egstrom, Mr. Gardner (F,Sp)

126. Neuromuscular and Metabolic Bases of Movement (6 units). Lecture, four hours; laboratory, three hours. Prerequisite: completion of premajor coursework. Metabolic, muscular, and neural processes underlying movement and adaptation to exercise.

Mr. Chandler; Mr. Edgerton, Ms. Smith (W)

132. Biomechanics of Musculoskeletal Injury. Prerequisites: courses 122, consent of instructor. Anatomical, physiological, mechanical, and mechanical characteristics of cartilaginous, fibrous, and bony tissues are examined in normal and abnormal stress situations. Connective tissue growth processes, normal physiology, and repair mechanisms are analyzed in conjunction with musculoskeletal injuries and effects of exercise and physical activity.

Mr. Zernicke (W)

134. Electromyographic Assessment. (Formerly numbered 134.) Lecture, two hours; laboratory, three hours. Prerequisite: course 122. Techniques of electromyographic analysis combining theoretical aspects with laboratory experiences.

Mr. Gregor (W)

139. Dissection Anatomy. Lecture, two hours; laboratory, six hours. Prerequisites: course 122, consent of instructor. Study and dissection of upper and lower extremities of human cadavers; dissection of thorax and abdomen limited to musculature and neurovascular structures. Mr. Chandler, Ms. Smith (F,Sp)

C153. Acquisition of Motor Skills. Prerequisite: course 120. An investigation into the principles of the acquisition of motor skills, such as those applicable to industry, musical performance, or sport. Major topics include methodological considerations, the structure of practice sessions, feedback and knowledge of results, theories of motor learning, and retention of skills. May be concurrently scheduled with course 253.

Mr. Schmidt; Ms. Shapiro (F,Sp)

C156. Motor Behavior and Motor Control. Prerequisite: course 120. An analysis of primarily human movement behavior and control, with emphasis on a behavioral level of analysis. Topics include methodological issues, open- and closed-loop control, and individual differences. May be concurrently scheduled with course 256.

Mr. Schmidt; Ms. Shapiro (Sp)

160. Human Movement Development. Prerequisites: course 120. Movement development throughout life, with emphasis on individual and societal determinants.

Mr. Crafty; Mr. Keogh (F,W)

165. Perceptual Motor Education. Prerequisites: courses 120, 160. Movement problems of the minimally-neurologically handicapped, with emphasis on the clumsy child syndrome.

Mr. Crafty, Mr. Keogh (W,Sp)

C178. Group Dynamics in Sport. (Formerly numbered 178.) Prerequisite: course 120 or consent of instructor. Examination of group dynamics in sport. Topics include group productivity, group structure, leadership, motivational factors, cohesion, conflict, etc. May be concurrently scheduled with course 278.

Mr. Crafty, Ms. Scanlan (W)

191A-191Z. Proseminars in Kinesiology. Prerequisites: upper division standing, consent of instructor. Limited to 15 students. Advanced study of special topics. May be repeated for credit with topic change.

193. Field Studies in Kinesiology (2 units). Lecture, one hour; fieldwork, six hours. Prerequisites: courses 120, 122, 124, 126, or equivalent, consent of instructor via course application. Supervised field studies in specific careers related to kinesiology. May be repeated once but may not be applied toward the major. P/NP grading.

Mr. Keogh (W,Sp)

196A-196B. Laboratory Practicum in Kinesiology (2 units each). Laboratory, four hours. Prerequisites or corequisites: course 139, consent of instructor. Supervised practicum and training for advanced students who serve as undergraduate assistants in the basic anatomy course in the preparation of laboratory materials and innovative projects. May not be applied toward the major.

197A-197Z. Variable Topics in Kinesiology. Prerequisite: consent of instructor. A variable topics course which covers specific subjects of special interest to undergraduate students. Eight units may be applied toward the B.S. degree requirements.
206. Metabolism of Organ Systems Affected by Exercise. Prerequisite: Chemistry 23. The course focuses on the key regulatory mechanisms of metabolism involved in the exercise response and adaptation.

Mr. Vailas (W)

207. Respiratory Function during Exercise. (Formerly numbered 210A.) Prerequisite: course 124. Topics include the acute and chronic effects of exercise on pulmonary gas exchange, gas mixing, as well as temperature factors, as they affect work performance; adaptation to unusual environments.

Mr. Gardner (F)

208. Neuromuscular and Metabolic Factors in Exercise. (Formerly numbered 210B.) Prerequisite: course 118 or consent of instructor. Fundamental aspects of skeletal muscle contraction and metabolic demands under various exercise and training conditions, including neural and endocrine mechanisms potentially involved in inducing specific training effects on skeletal muscle, liver, kidney, gastrointestinal tract, and brain.

Mr. Edgerton (Sp)

209. Environmental Factors in Exercise. (Formerly numbered 210C.) Prerequisites: courses 118, 124, and/or consent of instructor. Environmental pressures at high altitude and underwater diving, as well as temperature factors, as they affect work performance; adaptation to unusual environments.

Mr. Egstrom

211. Exercise Cardiovascular Physiology. Prerequisite: Physiology 111. Attention to cardiovascular adaptations to exercise, including adaptations associated with regular exercise training.

Mr. Barnard (W)

212. Cardiovascular Research Techniques. Lecture, one hour; laboratory, four hours. Prerequisites: course 211, consent of instructor. Course provides experience in working with experimental animals, in conducting surgery, and in understanding the use of flow meters, radioactive microspheres, pressure transducers, and other techniques commonly used in cardiovascular research.

Mr. Barnard

221. Underwater Kinesiology. Prerequisites: courses 122 and 124, or consent of instructor. Biomechanical, physiological, methodological, and behavioral limitations to underwater activities.

Mr. Egstrom

230A. Muscle Dynamics. Prerequisite: course 122. Recommended: course 134. Integrated 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.

Mr. Gregor (F)

230B. Musculoskeletal Mechanics. Prerequisites: course 122, Mathematics 3A, 3B. Mechanical parameters of the moving human musculoskeletal system, including the use of cinematographic work. Prerequisites: courses 230A and 230B.

Mr. Zernicke

233A-233B. Dynamical Systems Modeling (2 units, 4 units). Prerequisite: consent of instructor. Concepts of dynamical systems as applied to systems studied by biomechanics, motor control, and behavioral theories. Six units may be taken for credit; however, only four units may be applied toward the minor in graduate course requirement. Mr. Garfinkel

240. Neural Systems for Motor Control. Prerequisites: course 140, Psychology 115 (or equivalent). Prerequisites, the skeletalmotor and fusimotor systems and their control by spinal reflexes and supraspinal centers, including the cerebellum, basal ganglia, and cortical cortices.

Ms. Smith

241. Theories of Voluntary Motor Control. Prerequisites: courses 240, 250. Exploration and discussion of neural control systems for voluntary movement, including alpha-gamma linkage and closed loops. Some attention to neural models for motor learning and memory.

Ms. Shapiro, Ms. Smith

M243. Brainstem Control of Rhythmic Movements. (Same as Anatomy M226; lecture is the same as Oral Biology 207, which is 2 units only.) Lecture, two hours; discussion, two hours. Discussion of the central nervous system mechanisms which coordinate and control the contraction patterns of the muscles which are involved in behaviors such as sucking, chewing, swallowing, speech, respiration, and locomotion. Emphasis on the interaction among brainstem reflexes, pattern generators, and "motor neocortex" control of movement.

Mr. Chandler, Mr. Goldberg (Sp)

250. Behavioral Approach to Motor Control. Prerequisite: course 120, consent of instructor. An information processing approach to skill acquisition and performance. Particular emphasis on current theories of motor control from the behavioral literature.

Ms. Shapiro

253. Acquisition of Motor Skills. Prerequisite: course 120. An investigation into the principles of the acquisition of motor skills, such as those applicable to industry, musical performance, and sport. Major topics include methodological considerations, the structure of practice sessions, feedback and knowledge of results, theories of motor learning, and retention of skills. May be concurrently scheduled with courses 118 and 208, or consent of instructor.

Ms. Schmidt, Ms. Shapiro (F,Sp)

C256. Motor Behavior and Motor Control. Prerequisite: course 120. An analysis of primarily human movement behavior and control, with emphasis on a behavioral level of analysis. Topics include methods, relevant issues, closed-loop control, and individual differences. May be concurrently scheduled with course C156.

Mr. Schmidt, Ms. Shapiro (Sp)

260. Motor Development. Prerequisite: course 160. Analysis of behavioral approaches in the formulation of motor development theory. Mr. Keogh

262. Movement Disorders in Children. Prerequisite: course 160 or 165 or consent of instructor. Current research in developmental and behavioral aspects of movement disorders in children. Topics include early identification and intervention, perceptual and cognitive relationships, and evaluation of movement training programs.

Ms. Cratty, Mr. Keogh

272. Motivation in Movement Contexts. Prerequisites: course 120, one course in psychology, or/and consent of instructor. Current theories of achievement motivation and related research and personal, group, and social issues of practical contemporary concern are discussed; methodologies and motivation intervention techniques are reviewed. Specific attention to sex, age, and environment-related influences on motivation and achievement patterns.

Ms. Duda, Ms. Scanlan (Sp)

273. Social Psychological Aspects of Competitive Youth Sport. Prerequisite: course 120 or consent of instructor. Instructor. Research is reviewed concerning the social psychological aspects of competitive sport for children. Sport is presented as a major achievement domain for young participants. Topics include social-cognitive influences, competitive anxiety, significant adult influences and interactions, predictors of performance, determinants of participation and dropping out, and socialization through sport.

Ms. Duda, Ms. Scanlan (W)

C278. Group Dynamics in Sport. Prerequisite: course 120 or consent of instructor. Examination of group dynamics in sport. Topics include group productivity, group structure, leadership, motivational factors, cohesion, conflict. May be concurrently scheduled with course C178.

Mr. Cratty, Ms. Scanlan (W)

290. Research Issues in Kinesiology (2 units). Seminar. Prerequisite: consent of instructor. Discussion of current research issues. Topics are selected by participants in the class. Two 290 courses may be used to satisfy one seminar course requirement for the graduate program.

291A-291B-291C. Seminars in Cardiorespiratory Function and Adaptation (2 to 4 units each). Prerequisites: courses 140 and either 240 or M243. Selected topics on the neural determinants of movement behavior. Students are required to present a two-hour seminar.

292A-292B-292C. Seminars in Biomechanics (2 to 4 units each). Prerequisite: courses 250 or C253 and C256, or consent of instructor. Selected topics on current issues in biomechanics of movement. Students are required to present a two-hour seminar.

293A-293B-293C. Seminars in Musculoskeletal Function and Adaptation (2 to 4 units each). Prerequisites: courses 118 and 208, or consent of instructor. Selected topics on the muscular determinants of movement, the metabolic aspects of exercise, and the mechanics of connective tissue. Students are required to present a two-hour seminar.

294A-294B-294C. Seminars in Control of Movement (2 to 4 units each). Prerequisites: courses 140 and either 240 or M243. Selected topics on the neural determinants of movement behavior. Students are required to present a two-hour seminar.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: Apprentice personnel employment as a teaching assistant or fellow. A two- to four-year apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

379. In-Service Practicum for Teaching Assistants in Kinesiology (2 units). Prerequisite: consent of instructor. Required of all teaching assistants. Supervised practicum in teaching laboratory courses in kinesiology; material preparation and use of teaching aids. May be repeated toward degree requirements. S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor, department Chair, and the University of California, Los Angeles. A course work stipend to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.
John G. Kennedy, Ph.D. (Anthropology and Psychiatry)
Frederick C. Kintz, Ed.D. (Education)
William J. Knapp, Sc.D. (Materials Science and Engineering)
David M. Kunzle, Ph.D. (Art History)
Thomas J. La Belle, Ph.D. (Education)
James Lockhart, Ph.D. (History)
C. Raynai Lynn, Ph.D. (Biology)
Gerardo Luzuriaga, Ph.D. (Spanish), Chair, M.A. Committee
Robert Hal Mason, Ph.D. (Management)
Clement W. Meigian, Ph.D. (Anthropology)
Frank G. Mittelbach, M.A. (Management)
Pamela L. Munro, Ph.D. (Linguistics)
Alfred K. Neumann, M.D. (Public Health)
Henry B. Nicholson, Ph.D. (Anthropology)
Park S. Nobel, Ph.D. (Biology)
Anthony R. Orme, Ph.D. (Geography)
C. P. Otero, Ph.D. (Spanish and Romance Linguistics)
José Miguel Oviado, Ph.D. (Spanish)
Amado M. Padilla, Ph.D. (Psychology)
Richard L. Perrine, Ph.D. (Civil Engineering)
Stanley L. Robe, Ph.D. (Spanish), Chair, B.A. Committee
Milton R. Roemer, M.D., M.P.H. (Public Health)
Jonathan D. Sauer, Ph.D. (Psychology)
Carol Scortihn, M.A. (Dance)
Allegria Snyder, M.D. (Dance)
Edward W. Soja, Ph.D. (Architecture and Urban Planning)
Robert M. Stevenson, Ph.D. (Music)
Norman J. W. Thower, Ph.D. (Geography)
Hartmut Walter, Ph.D. (Geography)
Louis Jolyon West, M.D. (Psychiatry)
Johannes Wilbert, Ph.D. (Anthropology)
James W. Wilkie, Ph.D. (History)
Telford H. Work, M.D., M.P.H. (Public Health)
Joe Yamamoto, M.D., in Residence (Psychiatry)
Maurice Zeitlin, Ph.D. (Sociology)
Henry J. Bruman, Ph.D., Emeritus, (Geography)
Mildred E. Mathias, Ph.D. (Biology)
Romulus E. Zamora, M.F.A. (Theater Arts)

Jeffry A. Frieden, Ph.D. (Political Science)
Barbara Geddes, M.A., Acting (Political Science)
Susanna B. Hecht, Ph.D. (Architecture and Urban Planning)
Robert A. Hill, M.Sc. (History)
Rebecca Morales, M.A. (Architecture and Urban Planning)
Sylvia Rodriguez, Ph.D. (Anthropology)
Michael Stopper, Ph.D. (Architecture and Urban Planning)

Lecturers
José M. Cruz-Salvadores, M.A. (Spanish)
Ludwig Lauerhass, Ph.D. (History)
Linda Rodriguez, Ph.D. (History)
George L. Veyl, J.D. (Spanish)

Adjunct and Visiting Associate Professors
Jorge Schement, Ph.D. (Library and Information Science), Visiting Carlo Velez-I.; Ph.D. (Anthropology), Adjunct

Visiting Lecturers
Clifford A. Behrens, Ph.D. (Anthropology)
Emilio Pulido-Huizar, B.A.C. (Dance)

Scope of Objectives
UCLA has been in the forefront of U.S. universities with significant teaching and research interests in Latin American studies for more than fifty years. More than 100 faculty members from 22 departments and professional schools regularly offer a broad range of courses with an emphasis on Latin America. These course offerings in the humanities, social sciences, fine arts, and professional fields provide students with unique opportunity to focus on Latin America, a region of growing importance.

The Latin American Studies Program, coordinated through UCLA’s Latin America Center, 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 Architecture and Urban Planning, Education, Engineering and Applied Science, Library and Information Science, Management, and Public Health provide the opportunity to combine the M.A. in Latin American Studies with a master’s degree in a professional field.

Bachelor of Arts Degree
Undergraduate studies of the Latin American region are designed to serve the needs of (1) students desiring a general education focused on the Latin American cultural region; (2) students planning to enter business, government, or international agency service; (3) students preparing to teach social science or language; and (4) students preparing for advanced academic study of Latin America.
Preparation for the Major
You must complete all preparation courses with a C (2.0) in each course; the courses are applicable toward the Letters and Science lower division breadth 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, you may take Portuguese 102A-102B which is designed for students with a background in Spanish. An indigenous language of Latin America may be substituted for the minor language.

Course Limitations
You may not take more than eight units of Latin American Studies 199 for letter-grade credit nor more than eight units in any single term. No course taken on a Passed/Not Passed basis may be applied toward the B.A. degree requirements. In order to register in a 199 course, you must have advanced junior standing and an overall GPA of 3.0, or senior standing.

Double Majors
Through judicious use of electives, you 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 undergraduate adviser in Latin American Studies.

Study in Latin America
You 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 will be granted according to the individual programs arranged in consultation with the undergraduate adviser. Proposals must be presented in writing to the interdepartmental committee.

Core Areas
You will choose one of three core areas as the focus of your major: arts and humanities, social sciences, or ecology and environment. Requirements for each core area are listed below.

Core I: Arts and Humanities
Preparation: Two courses from History 8A, 8B, 8C; Latin American Studies 99 (or 197 by department consent): Spanish and Portuguese M44; Art History 55 or Music 81K and Dance 73B.

Core Area: Ten upper division courses from the approved list distributed as follows:
(1) Core Concentration: Five courses from literature and folklore or fine arts (art, music, dance, theater arts) or linguistics. Only one course from the electives list may be applied toward the core concentration.
(2) Theory and Methods: One course from theory and methods.
(3) Internal Breadth: Four additional courses from the arts and humanities core area but outside the core concentration. No more than two of these may be electives.

External Breadth: From the approved list, six upper division courses outside the arts and humanities core area distributed as follows: two courses in each of two core concentrations such that at least one core concentration is selected from the social sciences core (e.g., history) and at least one is developed within the ecology and environment core (e.g., public health). No more than three external breadth courses may be electives.

Approved Undergraduate Course List
(1) Literature and Folklore
Folklore and Mythology M149. Folk Literature of the Hispanic World
History 169. Latin American Ethnology
Portuguese (Spanish and Portuguese) 130A-130B. Survey of Brazilian Literature
C131. Colonial Brazilian Literature
C132. Romanticism in Brazilian Literature
C133. Naturalism, Realism, and Symbolism in Brazilian Literature
C134. 20th-Century Brazilian Literature: Poetry and Drama
C135. 20th-Century Brazilian Literature: Novel
Spanish (Spanish and Portuguese) 136A-136B. Survey of Spanish-American Literature
137. The Literature of Colonial Spanish America
139. Romanticism and Realism in Spanish-American Literature
142. 20th-Century Spanish-American Literature: Fiction and the Essay
143. 20th-Century Spanish-American Literature: Poetry and Drama
144. Mexican Literature
M149. Folk Literature of the Hispanic World
170B. Senior Honors Seminar: Topics in Spanish-American Literature

Theory and Methods
Folklore and Mythology 101. Introduction to Folklore
190. Selected Topics in Folklore and Mythology Studies
199. Special Studies in Folklore
Portuguese (Spanish and Portuguese) 199. Special Studies
Spanish (Spanish and Portuguese) 119A. Introduction to the Study of Literature: Prose
119B. Introduction to the Study of Literature: Poetry and Drama
199. Special Studies

(2) Fine Arts
Art History (Art, Design, and Art History) C117A. Advanced Studies in Pre-Columbian Art: Mexico
C117B. Advanced Studies in Pre-Columbian Art: Central America
C117C. Advanced Studies in Pre-Columbian Art: The Andes
118B. The Arts of Pre-Columbian America
Dance 173B. Dance of Mexico
183A. Dance in Latin America
Music 131A-131B. Music of Hispanic America
157. Music of Brazil
Theater Arts 106C. History of African, Asian, and Latin American Film

Theory and Methods
Anthropology *118A, 118B. Museum Studies
*133R. Aesthetic Anthropology
*137. Ethnography on Film
Art History (Art, Design, and Art History) *199. Special Studies in Art
Dance *199. Special Studies in Dance
*190A-C190B. Proseminar in Ethnomusicology
*199. Special Studies in Music
Theater Arts 199. Special Studies in Theater Arts

(3) Linguistics
Portuguese (Spanish and Portuguese) 100A. Phonology and Morphology
*100B. Syntax
*118. History of the Portuguese and Spanish Languages
Spanish (Spanish and Portuguese) *100A. Introduction to the Study of Spanish Grammar: Phonology and Morphology
*100B. Introduction to the Study of Spanish Grammar: Syntax
*115. Applied Linguistics
*118A. The History of Portuguese and Spanish: Phonology
*118B. The History of Portuguese and Spanish: Morphology and Syntax
*119A. Introduction to the Study of Literature: Prose
*119B. Introduction to the Study of Literature: Poetry and Drama
170C. Senior Honors Seminar: Topics in Hispanic Linguistics

Theory and Methods
Anthropology *143A, 143B. Field Methods in Linguistic Anthropology
Linguistics *100. Introduction to Linguistics
*103. Introduction to General Phonetics
*110. Introduction to Historical Linguistics
*120A. Linguistic Analysis: Phonology
*120B. Linguistic Analysis: Grammar
*164. Modern Theories of Language
*165A. Linguistic Theory: Phonology
*165B. Linguistic Theory: Grammar
*170. Language and Society: Introduction to Sociolinguistics
*199. Special Studies in Linguistics
Portuguese (Spanish and Portuguese) *199. Special Studies
Spanish (Spanish and Portuguese) *199. Special Studies

(4) Electives
Anthropology *M140. Language in Culture
Folklore and Mythology *118. Folk Art and Technology
Latin American Studies 197. Interdisciplinary Topics in Latin American Studies
199. Special Studies in Latin American Studies
Music *M154A-M154B. The Afro-American Musical Heritage
Philosophy *190. Third World Political Thought
Theater Arts 112. Film and Social Change

Spanish courses do not have any exclusive focus on Latin America but provide an opportunity for the student to relate a particular perspective or phenomenon to Latin America.

Core II: Social Sciences

Preparation: Two courses from History 8A, 8B, 8C; Latin American Studies 99 (or 197 by department consent); Economics 1 and 2, or 100; Economics 40 or Sociology 18.

Core Area: Ten upper division courses from the approved list distributed as follows:

(1) Core Concentration: Five courses from anthropology and sociology or economics or geology or history or political science. Only one course from the electives list may be applied toward the core concentration.

(2) Theory and Methods: One course from theory and methods.

(3) Internal Breadth: Four additional courses from the social sciences core area but outside the core concentration. No more than two of these may be electives.

External Breadth: From the approved list, six upper division courses outside the social sciences core area distributed as follows: two courses in each of two core concentrations such that at least one core concentration is selected from the arts and humanities core (e.g., fine arts) and at least one is developed within the ecology and environment core (e.g., public health). No more than three external breadth courses may be electives.

Approved Undergraduate Course List

(1) Anthropology and Sociology

Anthropology 114P. Ancient Civilizations of Western Middle America (Nahuatl Sphere)
114Q. Ancient Civilizations of Eastern Middle America (Maya Sphere)
114R. Ancient Civilizations of Andean South America
173P. Cultures of Middle America
173Q. Latin American Communities
174P. Ethnography of South American Indians
174Q. Ethnology of South American Indians
Sociology 131: Latin American Societies

Theory and Methods

Anthropology 115P. Archaeological Field Training
115Q. Archaeological Research Techniques
115R. Strategy of Archaeology
116P. Laboratory Analysis in Archaeology
*M116Q. Dating Techniques in Environmental Sciences and Archaeology
*118A, 118B. Museum Studies
*136P. Ethnology: Field Training
*M136Q. A Laboratory for Naturalistic Observations: Developing Skills and Techniques
*137. Ethnography on Film
*138. Methods and Techniques of Ethnography

*186A-186B. Quantitative Methods and Models in Anthropology
*199. Special Studies in Anthropology
Sociology *109. Introduction to Sociological Research Methods
*115. Experimentation and Laboratory Methodology in Sociology
*116. Introduction to Mathematical Sociology
*199. Special Studies

(2) Economics

Economics *110. Economic Problems of Underdeveloped Countries
*111. Theories of Economic Growth and Development
*112. Policies for Economic Development
190. International Economics
191. International Trade Theory
192. International Finance

Theory and Methods

Economics *103A-103Z. Upper Division Research Seminar: Applications of Economic Theory
*M135. Economic Models of Public Choice
*199. Special Studies in Economics

Management *197. Special Topics in Management

(3) History

History 165A-165B. Colonial Latin America
165C. Indians of Colonial Mexico
166. Latin America in the 19th Century
167A-167B. Latin America in the 20th Century
168. History of Latin American International Relations
169. Latin American Elitism
170A. Latin American Cultural History
170B. The Classic Travel Accounts of Latin America since 1735
171. The Mexican Revolution since 1910
173. Modern Brazil
174. Brazilian Intellectual History
197. Undergraduate Seminar: Latin America

Theory and Methods

History *101. Introduction to Historical Practice
199. Special Studies in History

Library and Information Science 111C. Ethnic Groups and Their Bibliographies: Latino History and Culture

(4) Political Science

Political Science 131. Latin American International Relations
*139A-139Z. Special Studies in International Relations: Latin America
149A-149Z. Special Studies in Politics: Latin America
163A-163B. Government and Politics in Latin America
169A-169Z. Special Studies in Comparative Politics: Latin America
199. Readings in Political Science: Latin America

Theory and Methods

Political Science *102. The Statistical Analysis of Political Data
*104A-104B. Introduction to Survey Research
*M105. Economic Models of Public Choice
*119A-119Z. Special Studies in Political Theory
*C137A-137B. International Relations Theory
*146. Political Behavior Analysis
*168S. Comparative Political Analysis

*Special courses which may be applied toward the M.A. degree requirements by advanced departmental approval. These courses do not have any exclusive focus on Latin America but provide an opportunity for the student to relate a particular perspective to Latin America.

(5) Geography

Geography *121. Conservation of Resources: Underdeveloped World
*128. The World's Ecosystems: Problems and Issues
*142. Population Geography
181. Middle America
182A. Spanish South America
182B. Brazil
199. Special Study

Theory and Methods

Geography *171. Quantitative Analysis

(6) Electives

Anthropology *132. Technology and Environment
*134. Personality and Cultural Systems: Enculturation
*150. Comparative Society
*153A-153B. Production and Exchange in Traditional Societies
*161. Development Anthropology
*M163. Women in Culture and Society
167. Urban Anthropology
*M168. Health in Culture and Society
Economics *120. Introduction to Urban and Regional Economics
*121. Urban Economic Analysis
*180. Comparative Economic Systems

Geography *108. World Vegetation
*129. Problems of the Environment: Seminar
*140. Political Geography
*148. Economic Geography
*150. Urban Geography
*152. World Cities

History M159A, M159B. History of the Chicoano People

Latin American Studies 197. Interdisciplinary Topics in Latin American Studies
199. Special Studies in Latin American Studies

Political Science *124. International Political Economy
*167. Ideology and Development in World Politics
*183. Administration of International Agencies and Programs
*188A. Comparative Public Administration
188B. Comparative Urban Government
*191. Urban and Regional Planning and Development

Sociology *120. Social Change
*123. Social Stratification
*126. Social Demography
*140. Political Sociology

*Special courses which may be applied toward the M.A. degree requirements by advanced departmental approval. These courses do not have any exclusive focus on Latin America but provide an opportunity for the student to relate a particular perspective to Latin America.

Core III: Ecology and Environment

Preparation: Two courses from History 8A, 8B, 8C; Latin American Studies 99 or Geography 5; Mathematics 50; Computer Science 10S.

Core Area: Ten upper division courses from the approved list distributed as follows:

(1) Core Concentration: Five courses from the core area. Only one course from the electives list may be applied toward the core concentration.

(2) Theory and Methods: One course from theory and methods.
(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: From the approved list, six upper division courses outside the ecology and environment core area distributed as follows: two courses in each of two core concentrations such that at least one core concentration is selected from the arts and humanities core (e.g., fine arts) and at least one is developed within the social sciences core (e.g., history). No more than three external breadth courses may be electives.

Approved Undergraduate Course List

Geography 121, Conservation of Resources: Underdeveloped World
128. The World's Ecosystems: Problems and Issues
*142. Population Geography
181. Middle America
182A. Spanish South America
182B. Brazil
*199. Special Study

Public Health M115. Disease Problems of Socioeconomic and Political Impact in Latin America
174E. Health, Disease, and Health Services in Latin America
*186. The World's Population and Food

Theory and Methods

Anthropology *186A-186B. Quantitative Methods and Models in Anthropology

Geography *171. Quantitative Analysis

Public Health 100A, 100B, 100C. Introduction to Biostatistics
181. Introduction to Social Research Methods in Health

Electives

Anthropology *132. Technology and Environment
*153A-153B. Production and Exchange in Traditional Societies
155. Illness in Non-Western Societies
*167. Urban Anthropology
M168. Health in Culture and Society

Economics *120. Introduction to Urban and Regional Economics

Geography *108. World Vegetation
129. Problems of the Environment: Seminar
*140. Political Geography
*148. Economic Geography
*150. Urban Geography
*152. World Cities

Latin American Studies 197. Interdisciplinary Topics in Latin American Studies
199. Special Studies in Latin American Studies

Public Health *161. Nutrition and Health
186. The World's Population and Food

Sociology *126. Social Demography

Master of Arts Degree

Admission

In addition to University minimum requirements, the B.A. degree in Latin American Studies constitutes the normal basis for admission. Applicants with a degree in another field can be admitted but must complete certain undergraduate prerequisites subsequent to admission. Applicants with Latin American field experience or special methodological studies will be given special consideration. All applicants should meet minimum requirements in at least one language of Latin America. The following items are required:

(1) Three academic letters of recommendation, unless you have been away from school for some time, in which case one of the letters may be from an employer.

(2) A minimum of a 3.0 or B average in the junior/senior years of college.

(3) A statement of purpose discussing your background in Latin American studies, proposed program of study, and future career plans.

(4) A minimum score of 1000 on the Aptitude Test (combined verbal and quantitative sections) of the Graduate Record Examination (GRE).

(5) A resume or curriculum vitae describing academic and Latin American experience.

Students are admitted each quarter. Application deadlines are November 1 for Winter Quarter, February 1 for Spring Quarter, and May 15 (or July 1 by special petition) for Fall Quarter. Fellowship applications for the academic year are due on January 15 prior to the Fall Quarter for which application is made. Prospective students may write for departmental brochures to the Academic Programs Office, Latin American Center, 10347 Bunche Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

You are expected to develop and integrate three fields in Latin American studies, to be selected from the following: anthropology, art, economics, engineering, education, folklore, geography, history, law, library science, linguistics, management, music, political science, Portuguese, public health, sociology, Spanish, theater arts, and urban planning. At least one of the selected fields must be a social science.

Foreign Language Requirement

Proficiency equivalent to 24 quarter units of university-level Spanish and 12 quarter units of university-level Portuguese or 16 quarter units of university-level Portuguese and 20 units of university-level Spanish is required. Since these courses may not be applied toward the M.A. degree, you are encouraged to pass these proficiency levels by examination. A major Indian language of Latin America may be substituted for either Spanish or Portuguese.

Course Requirements

Two plans are available. For the comprehensive examination plan, a minimum of nine courses is required, to be distributed among three fields or disciplines either on a 3-3-3 or 4-3-2 basis. Of the nine courses, five must be at the graduate level, with at least one in each of the three fields.

For the thesis plan (which requires prior approval), a minimum of ten courses is required, to be distributed on a 4-3-3 basis among three fields. Three graduate-level courses are required in the first field, with one each in the two minor fields.

All courses must be selected from the department-approved list of courses. Other courses must be petitioned in advance.

Courses numbered in the 300 and 400 series are not applicable toward the M.A. degree.

No more than eight units of 500-series courses may be applied toward the total course requirement for the M.A. degree; no more than four units may be applied toward the five graduate courses required for the degree.

Graduate courses may be repeated unless they are of the lecture type.

Comprehensive Examination Plan

In addition to course requirements, you must prepare a research paper on an approved topic that integrates two of the three fields in which coursework has been undertaken. Your research paper committee must approve your topic in advance and must receive a draft of the paper at least five weeks prior to the end of the quarter in which you plan to graduate. Committee members will make recommendations for revision, evaluate the final draft and, if your work meets the University standards of scholarship, will recommend the award of the M.A. degree.

Thesis Plan

Although you are generally expected to follow the M.A. comprehensive examination plan, in special cases you may be allowed to follow the M.A. thesis plan. You must develop a carefully prepared proposal that provides sound justification for the thesis plan, including provisions for funding any planned field research.

Once the thesis plan option has been approved, you select a three-member faculty thesis committee to work with you in the development of the thesis and to read, evaluate, and approve the drafts and final version. Once the final version is approved, the thesis committee
Cooperative Degree Programs

Several options are available to combine the M.A. in Latin American Studies with a professional degree. After acceptance by both the Latin American Studies Program and the respective professional school, you may pursue both degrees simultaneously. Articulated degree programs are currently available with the Schools of Architecture and Urban Planning (M.A. in Architecture/Urban Planning), Education (M.Ed. in Curriculum), Engineering and Applied Science (M.S. in Engineering), Library and Information Science (M.L.S.), and Public Health (M.P.H.); articulated programs do not allow course credit to be applied toward more than one degree. A concurrent degree program is available with the Graduate School of Management (M.B.A.).

Individual Ph.D. Programs

You may design an individual doctoral program in Latin American studies. An explicit proposal must be submitted to your M.A. committee for analysis and endorsement, and then be submitted to the Graduate Council for approval.

Lower Division Course

99. Introduction to Latin American Problems. Limited to 15 students. An interdisciplinary seminar for lower division students. May be repeated for credit with topic change.

Upper Division Courses

M155. Disease Problems of Socioeconomic and Political Impact in Latin America. (Same as Public Health M115.) Lecture, six hours; discussion, six hours. Prerequisite: one upper division course in Latin American studies. Social, economic, and political impact of important disease problems in Latin American countries. Mr. Work

197. Interdisciplinary Topics in Latin American Studies. Advanced interdisciplinary course for upper division students. May be repeated for credit with topic change.

199. Special Studies in Latin American Studies (4 or 8 units). Prerequisite: upper division standing. An intensive directed research program in which students conduct interdisciplinary research or complete an internship with an international agency or program dealing with Latin America. Faculty sponsorship and written reports are required.

Graduate Courses

M200. Latin American Research Resources. (Same as History M265 and Library and Information Science M225.) The course acquaints students with general and specialized materials in fields concerned with Latin American studies. Library research techniques provide the experience and competency required for future bibliographic and research sophistication as the basis for advanced research. Mr. Lauverhass

201. Statistical Resources for Latin American Research. The course acquaints students with contemporary statistical materials important for research in Latin American studies. Discussion focuses on the qualitative and interpretative aspects of the material, especially as it relates to data developed for publication in the Latin American Center's Statistical Abstract of Latin America and its Supplement Series.

M225. Computer Methodologies in Latin American Studies and Anthropology. (Same as Anthropology M289.) Lecture, three hours. Prerequisite: consent of instructor. The seminar introduces some basic principles of computing and information processing, along with their potential application in Latin American research. The impact that computers are having in Latin American society is also examined. Mr. Behrens

M250A. Indians of South America. (Same as Anthropology M272.) Lecture, three hours. Prerequisite: consent of instructor. Survey of the literature and research topics related to Indian cultures of South America. May be repeated for credit. Mr. Wilbert

250B. Interdisciplinary Seminar in Latin American Studies. Lecture, three hours. Prerequisite: consent of instructor. Reading knowledge of Spanish or Portuguese is normally required. A seminar devoted to selected topics of an interdisciplinary nature.

250C. Interdisciplinary Topics in Latin American Studies. Prerequisite: consent of instructor. Reading knowledge of Spanish or Portuguese is normally required. A seminar devoted to selected topics of an interdisciplinary nature. In Progress grading.

Mr. Wilkie

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor, department chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596. Directed Individual Study or Research (2 to 8 units). May be repeated, but only four units may be applied toward the minimum graduate course requirement. S/U grading.

597. Preparation for M.A. Comprehensive Examination (2 to 8 units). Course is ordinarily taken only during the quarter in which the student is being examined. S/U grading.

598. Research for and Preparation of M.A. Thesis. Only four units may be applied toward the minimum graduate course requirement. S/U grading.

Approved Graduate Course List

Refer to the Latin American Studies graduate section for the lists of approved undergraduate courses.

Fine Arts

Art History (Art, Design, and Art History) *201. Historiography of Art History
220. Oceanic, Pre-Columbian, African, and Native North American Art
Dance *260A-260E. Advanced Studies in Dance Ethnography
Music *260. Seminar in Ethnomusicology
Theater Arts *290C. Ethnographic Film
*298A-299B. Special Studies in Theater Arts

Languages

Indigenous Languages of the Americas (Linguistics) *19A-19B-19C. Elementary Quechua
Portuguese (Spanish and Portuguese) *1. Elementary Portuguese
2. Elementary Portuguese
3. Intermediate Portuguese
25. Advanced Portuguese
*101A. Advanced Reading and Conversation
102A-102B. Intensive Portuguese
*105. Advanced Composition and Style
Spanish (Spanish and Portuguese) *1. Elementary Spanish
*1G. Reading Course for Graduate Students
2. Elementary Spanish
2G. Reading Course for Graduate Students
3. Elementary Spanish
4. Intermediate Spanish
5. Intermediate Spanish
25. Advanced Spanish
*105A. Intermediate Composition
*105B. Advanced Composition

Linguistics

Anthropology 240. Seminar in Language and Culture
Linguistics *210A. Field Methods I
*210B. Field Methods II
*220. Linguistic Areas
*225. Linguistic Structures
M246C. Topics in Linguistic Anthropology
Portuguese (Spanish and Portuguese) *M203A-M203B. The Development of the Portuguese and Spanish Languages
*204A-204B. Generative Grammar
*206. Synchronic Morphology and Phonology
Spanish (Spanish and Portuguese) *M203A-M203B. The Development of the Portuguese and Spanish Languages
*204A-204B. Generative Grammar
*206. Phonology and Morphology
*209. Dialectology
*256A-256B. Studies in Spanish Linguistics
*257. Studies in Dialectology

Literature

Portuguese (Spanish and Portuguese) *M200. Research Resources
C231. Colonial Brazilian Literature
C232. Romanticism in Brazilian Literature
C233. Naturalism, Realism, and Symbolism in Brazilian Literature
C234. 20th-Century Brazilian Literature: Poetry and Drama
C235. 20th-Century Brazilian Literature: Novel
M249. Folk Literature of the Spanish and Portuguese Worlds
254. Studies in Early Brazilian Literature
255. Studies in Modern Brazilian Literature
Spanish (Spanish and Portuguese) *M200. Research Resources
C237. The Literature of the Spanish Conquest
C239. Romanticism and Realism in Spanish-American Literature
*240. Major Currents in Modern Spanish-American Literature
243A-243B. Contemporary Spanish-American Poetry
Professional
Architecture and Urban Planning *232A. Introduction to Regional Planning: The Evolution of Regional Planning Doctrines
*232B. Spatial Planning: Regional and International Development
*235A-235B, Urbanization and Rural Development in Third World Countries
*236A. Urban and Regional Economic Development I
*236B. Urban and Regional Economic Development II
239. Special Topics in Urban and Regional Development Policy
246. Housing in Social and Economic Development Policy
253. Social Theory for Planners
Education *203. Educational Anthropology
*204A. Topics and Issues in International and Comparative Education
*204B. Introduction to Comparative Education
*204C. Business Forecasting
*204D. Minority Education in Cross-Cultural Perspective
*204E. International Efforts in Education
204F. Nonformal Education in Comparative Perspective
207. Politics and Education
*238. Cross-National Analysis of Higher Education
*252B. Seminar: Education and Social Change
*253A. Seminar: Current Problems in Comparative Education
253D. Seminar: Latin American Education
*253F. Seminar: Education in Revolutionary Societies
253H. Seminar: The Chicano/Hispanic and Education
*254. Directed Independent Study
*257. Preparation for Master's Comprehensive Examination or Doctoral Qualifying Examinations
*258. Thesis Research
Engineering *259. Directed Individual or Tutorial Studies (selected from any of the engineering departments)
*259A. Preparation for M.S. Comprehensive Examination (selected from any of the engineering departments)
Law *270. International Law
*271. International Business Transactions
Library and Information Science *207. Seminar on International and Comparative Librarianship
*222. Literature of the Social Sciences
*224. Literature of the Humanities and Fine Arts
225. Latin American Research Resources
*256. Directed Individual Study or Research
Management *205A. International Business Economics
*205B. Comparative Market Structure and Competition
*205C. Business Forecasting for Foreign Economies
*208. Selected Topics in Business Economics
*234A. Multinational Business Finance
*234B. Advanced Studies in International Finance
261B. International Marketing Management
*296A. International Business Management
*297A. Comparative and International Management
*297B. International Business Policy
*297C. International Business Law
*297D. International Business Negotiations
*298B. Special Topics in International and Comparative Management
Public Health *214. Infectious and Tropical Disease Epidemiology
*216A. Ecology of Exotic Diseases
*221. Seminar in Epidemiology: Methodology
*222. Seminar in Epidemiology: Infectious and Tropical Disease
*240. Health Care Issues in International Perspective
*260E. Advanced Nutrition: Vitamins
*260F. Advanced Nutrition: Proteins
*260G. Advanced Nutrition: Lipids
260H. Advanced Nutrition: Minerals
*262. Seminar in Nutrition
*270. Maternal and Child Nutrition
*M271. Medical Anthropology
*272. Seminar on Current Issues in Maternal and Child Health
*M274A-M274B. Population Policy and Fertility
*M274C. Seminar in Population Policy and Fertility
*M276. Culture and Human Reproduction
*259. Directed Individual Study or Research
Social Science
Anthropology *212P. Selected Topics in Hunter-Gatherer Archaeology
*214. Selected Topics in Prehistoric Civilizations of the New World
*M216. Dating Techniques in Environmental Sciences and Archaeology
*218. Historical Reconstruction and Archaeology
*230B. Ethnology
*230C. Myth and Ritual
*M232R. South American Folklore and Mythology Studies
233P. Symbolic Anthropology
*239P. Selected Topics in Field Training in Ethnography
*239Q. Analysis of Field Data
*240. Seminar in Language and Culture
*M241. Topics in Linguistic Anthropology
*M247A. Ethnographic Film
251Q. Cultural Ecology of Lowland South America
*M253. Economic Anthropology
*M261. Comparative Minority Relations
*M262. The Cultural Context of Health Care
*M263. Medical Anthropology
*M264. Ethnography of the Mexican/Chicano People in North America
*M267B. Ethnographic Film Direction
*M272. Indians of South America
*M287A-287B. Seminar in Field Training in Ethnography
Archaeology *200. Archaeology Colloquium
*259. Fieldwork in Archaeology
Economics *211. Economic Development
*212. Applied Topics in Economic Development
*213A-213B. Selected Problems of Underdeveloped Areas
*221. Urban and Regional Economic Analysis I
*222. Urban and Regional Economic Analysis II
*291. International Trade Theory
*292. International Finance
*293A-293B-293C. International Economics: Selected Topics
Folklore and Mythology *201A, 201B. Folklore Collecting and Field Research
248. Theory and Method in Latin American Folklore Studies
*M249. Folk Literature of the Spanish and Portuguese Worlds
*M286A-M286B. Studies in Hispanic Folk Literature
Geography *251. Seminar: Urban Geography
*M278. Dating Techniques in Environmental Sciences and Archaeology
281. Middle America
282. South America
*M292. Advanced Regional Geography: Selected Regions
History 200I. Advanced Historiography: Latin America
2011. Topics in History: Latin America
266A-266B. Seminar in Colonial Latin American History
267A-267B. Seminar in Latin American History: 19th and 20th Centuries
*M266A-M266B. Seminar in Recent Latin American History
Latin American Studies M200. Latin American Research Resources
M250A. Indians of South America
250B. Interdisciplinary Seminar in Latin American Studies
250C. Interdisciplinary Topics in Latin American Studies
Political Science 204A. Quantitative Applications
*218A. Public Administration and Democratic Government
*224A. Studies in Politics: Politics and Economy
*252B. Urban Government
*C230. Comparative Development Administration
*C231D. Studies in International Relations: International Relations Theory
*C258. Selected Topics in Comparative Politics
*C259. Seminar in Regional and Area Political Studies: Latin American Studies
*C255. Seminar in International Relations
Sociology *259. Social Structure and Economic Change: Historical and Comparative Perspectives
*263. Social Stratification
*M287A-M287B. Population Policy and Fertility
*292A-292B-292C. Research Development

*Special courses which may be applied toward the M.A. degree requirements by advanced departmental approval. These courses do not have any exclusive focus on Latin America but provide an opportunity for the student to relate a particular perspective or phenomenon to Latin America.
**Law and Society**

4256 Bunche Hall, 825-3862

**Scope and Objectives**

The Special Undergraduate Program in Law and Society can only be taken jointly with a major in political science, and all requirements for the political science major must be met by or in addition to meeting the requirements of this program. Students completing the program will receive a degree with a major in political science and specialization in law and society. The program is designed to allow students to explore the relationships of law with ethics, economics, crime, and social and political institutions and theories.

**Special Undergraduate Program**

**Preparation for the Program**

*Required:* Political Science 10, 40, 70, and 20 or 50; two courses from History 7A, 7B, Philosophy 4, 6, 22.

**Upper Division**

The political science major should be completed as follows: Political Science 117; one course in Field I other than course 117; two courses in Field II; four courses in Field V; two other political science electives; six courses from Anthropology 152, Economics 172, History 151A, 151B, Philosophy 150, 151A, 151B, 157A, 157B, 166, Sociology 145, 146, 147, 162.

For further information, contact Vicki Waldman, Political Science Counselor, in the program office.

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**Linguistics**

2113 Campbell Hall, 825-0634

**Professors**

Stephen R. Anderson, Ph.D.
Raimo A. Anttila, Ph.D. (*Indo-European and General Linguistics*)
William O. Bright, Ph.D.
Victoria A. Fromkin, Ph.D.
Edward L. Keenan, Ph.D.
Sandra A. Thompson, Ph.D.
William E. Welmers, Ph.D., Emeritus

**Associate Professors**

George D. Bedell, Ph.D.
Thomas J. Hinnebusch, Ph.D. (*Linguistics and African Languages*)

**Assistant Professors**

John W. Du Bois, Ph.D.
Bruce P. Hayes, Ph.D.
Patricia A. Keating, Ph.D.
Timothy A. Stowell, Ph.D.
Eric Wehrli, Ph.D.

**Adjunct Associate Professors**

Susan R. Curtiss, Ph.D.
Ian Maddison, 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), syntax, and semantics. A grammar is a system of rules which characterize the phonology, 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 science 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 which reflect the diversity of the field.

In a 1982 survey conducted by the Conference Board of the Associated Research Councils, UCLA’s Linguistics Department was judged second best in the nation in the quality of its faculty. 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 which concentrates entirely on general linguistics; (2) several majors which combine the basic courses of the general program with a language concentration or other related fields; and (3) a major which concentrates entirely on an African language area.

The combined majors in conjunction with teacher 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.

**Bachelor of Arts in Linguistics**

This major is designed for students with an exceptional interest in and aptitude for the study of languages and linguistics. It enables the undergraduate 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:* Completion of the equivalent of the sixth quarter in each of two foreign languages or the sixth quarter in one foreign language and the third quarter in each of two other foreign languages. In addition you must take two of the following: Philosophy 31. Psychology 10, one course in cultural anthropology.

**The Major**

*Required:* A minimum of 11 upper division or graduate courses, including Linguistics 100, 103, 110, 120A, 120B or 127, and either 164, C165A, or C165B (both C165A and C165B are strongly recommended for students planning linguistics graduate work; course 164 is recommended for students *not* planning linguistics graduate work). The remaining courses are electives, three of which must be upper division linguistics courses, to be selected subject to your adviser’s approval. These electives have typically been selected from the following list, though it is not exhaustive: Linguistics C104, 120B, 125, 127, 130. CM135, 140. M146. M150, 160, 164. C165A, C165B, 170, 175, C180, 195, 199 (if four units), African Languages 190, Anthropology 143A, 143B, Philosophy 127A, 127B, 172, Psychology 122, 123, English 121, 122, or advanced courses in a foreign language or literature (beyond the sixth quarter of language instruction). In addition to the 11 upper division courses, at least three courses (which may be either upper or lower division) are required in a language other than those in the Romance, Slavic, or Germanic families. These courses may be applied toward the foreign language requirement described above under “Preparation for the Major.” If you complete an advanced language course, you are considered to have completed the equivalent of whatever courses are prerequisite to that one (e.g., if you complete French 100A, you have automatically satisfied the requirement of the sixth quarter of work in one language).
Linguistics 195 is recommended for students planning to pursue graduate work in linguistics, since it provides a unique opportunity to engage in independent research and to write a paper which can be submitted to graduate admissions committees. To enroll in course 195, you must consult with the department's senior essay counselor.

Honors in Linguistics
Honors in linguistics will be awarded at graduation to those students who have a grade-point average of 3.6 or better in their junior and senior years and who have received a grade of A in Linguistics 195.

Bachelor of Arts in Linguistics and Computer Science
Admission to the major is contingent on passing the following courses, which constitute the linguistics and computer science premajor, with a grade-point average of 3.3 or better and no grade lower than a C: Linguistics 100, Philosophy 31, Program in Computing 10, 20.

Preparation for the Major
Required: Mathematics 31A, 31B, Philosophy 31, Program in Computing 10, 20, 30, completion of the sixth quarter in one foreign language and the third quarter in a second foreign language. Mathematics 31A and 31B must be passed with grades of C or better. Mathematics 61 is strongly recommended.

The Major
Required: Fourteen upper division courses as follows: Linguistics 100, 103, 104, 120A, 120B or 127, either 164, C165A, or C165B, two upper division electives from other linguistics courses: English 121, 122, 140A, and four 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).

Bachelor of Arts in Linguistics and English

Preparation for the Major
Required: English 3, 10A, 10B, 10C, Philosophy 31, completion of the sixth quarter in each of two foreign languages or the sixth quarter in one foreign language and the third quarter in each of two other foreign languages.

The Major
Required: Fifteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, either 164, C165A, or C165B, two upper division electives from other linguistics courses: English 121, 122, 140A, and four 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).

Bachelor of Arts in Linguistics and French

Preparation for the Major
Required: French 1, 2, 3, 4, 5, 6, 12, 15, completion of the sixth quarter in one other foreign language or the third quarter in each of two other foreign languages.

The Major
Required: Sixteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, either 164, C165A, or C165B, two upper division electives in linguistics, French 100A, 100B, 100C, 103, 105, 106, and two elective upper division French literature courses.

Bachelor of Arts in Linguistics and Italian

Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 25, Latin 1, 2, 3, completion of the third quarter in one other foreign language or the sixth quarter in Latin, Philosophy 31, one course in cultural anthropology.

The Major
Required: Thirteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, either 164, C165A, or C165B, two upper division electives in linguistics, Italian 102A, 190, and three additional upper division electives in Italian.

Bachelor of Arts in Linguistics and Philosophy

Preparation for the Major
Required: Philosophy 31, 32, and two courses from 1, 6, 7, 21; completion of the sixth quarter in each of two foreign languages or the sixth quarter in one foreign language and the third quarter in each of two other foreign languages.

The Major
Required: Fourteen upper division courses as follows: Linguistics 100, 103, 120A, 120B or 127, C165B, three upper division electives in linguistics; six upper division courses in philosophy, including at least five from Philosophy 126A through 135, 170, 172, 184, 186, 187, 188, of which at least two must be from 127A, 127B, 172.

Bachelor of Arts in Linguistics and Psychology

Preparation for the Major
Required: Psychology 10, 41, 42, completion of the sixth quarter in one foreign language and the third quarter in a second foreign language. Program in Computing 10 is strongly recommended.

The Major
Required: Fourteen upper division courses as follows: Linguistics 100, 103, 120A, 120B or 127, 130, two upper division electives in linguistics, Psychology 110, 120, 121, 122 or 123, 130, and the remaining elective to be selected from 112A, 112B, 112C, 112E, 115, 116, 124B, 135, 137A. Linguistics 164 and Psychology 115 are strongly recommended.

Bachelor of Arts in Linguistics and Scandinavian Languages

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, 30, completion of the sixth quarter in one other foreign language or the third quarter in each of two other foreign languages.

The Major
Required: Fourteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, either 164, C165A, or C165B, two upper division electives in linguistics, Scandinavian 105 and 106, or 110 twice, 199 (in a topic related to Scandinavian linguistics, under the direction of a Scandinavian or Linguistics faculty member), and three upper division electives in Scandinavian.
Bachelor of Arts in Linguistics and Spanish

Preparation for the Major

Required: Spanish 1, 2, 3, 4, 5, 25, M42, M44, completion of the sixth quarter in one other foreign language or the third quarter in each of two other foreign languages.

The Major

Required: Fifteen upper division courses as follows: Linguistics 100, 103, 110, 120A, 120B or 127, either 164, C165A, or C165B, two additional upper division courses in linguistics (preferably 130 and 170), Spanish 100A, 100B, 115 or 118A, 119A, 119B, and three additional upper division courses in Spanish.

Bachelor of Arts in African Languages

Preparation for the Major

Required: Nine courses from African Languages 1A through 42C and 199 (six in one language and three in another).

The Major

Required: A minimum of 15 upper division courses, including three courses in an African language; African Languages 150A-150B, 190, 192; Linguistics 100, 103; three courses selected from English 114, Geography 189, History 125A, 125B, 125C, 126A, 126B, 127A, 127B, 128A, 128B, Linguistics 110, 120A, 120B or 127, 140, M146, 170, Music 143A, 143B, Political Science 166A, 166B, 166C. Linguistics 164 and completion of the sixth quarter in one of the following non-African languages are strongly recommended: French, Dutch and Afrikaans, German, Portuguese, Arabic.

Graduate Study

The programs leading to the M.A. and Ph.D. degrees in Linguistics are open to qualified graduate students who are interested in descriptive, theoretical, and historical linguistics. Preparation for graduate study in linguistics should be equivalent in as many respects as possible to the undergraduate curriculum in linguistics.

There is also a graduate program leading to a Ph.D. in Applied Linguistics. It is administered by an interdisciplinary committee, not by the Department of Linguistics. The requirements of the program are stated earlier in this chapter.

Master of Arts Degree

Admission

Students are normally admitted to begin residence in the Fall Quarter only (exceptions may be made by the Chair). The deadline for submission of applications for the Fall Quarter is December 31 of the previous year. Late applications for admission without possibility of consideration for support will be received through March 31.

Applicants are asked to submit a statement of purpose, which should include their background for graduate study in linguistics and their immediate and long-range goals in the field. They should also have at least two scholars under whom they have studied submit letters to the department about their qualifications. Scores on the verbal, quantitative, and analytical sections of the Graduate Record Examination (GRE) must be submitted with the application. There is no minimum score requirement. In addition, applicants must submit a copy of some research paper or other piece of writing in linguistics or a closely related field.

While not required for admission, Linguistics 100, 103, 110, 120A, 120B, C165A/C200A, C165B/C200B are to be taken prior to graduate courses in their respective areas. At the time of admission, students will be notified which, if any, of the above courses are required due to deficiencies. However, if there is any question of whether courses taken elsewhere are equivalent to the above courses, students must discuss this with their advisers.

Prospective students may request an information brochure from the Administrative Assistant, Department of Linguistics, 2113 Campbell Hall, UCLA, Los Angeles, CA 90024. This brochure explains, in particular, advising procedures and procedures for the formation of M.A. and Ph.D. guidance committees.

Specialization

At the M.A. level, six core courses in phonetics, phonology, syntax, semantics, and historical linguistics are required. The remaining three (of the nine graduate courses required) may be taken in any area of linguistics, generally aiming toward a doctoral specialization. Except for these electives, no specialization is possible at the M.A. level.

Foreign Language Requirement

You must demonstrate knowledge of one research language before receiving an M.A. and a second research language before advancement to candidacy. Knowledge can be demonstrated by one of four methods: (1) a reading examination administered by the department; (2) a research paper based on extensive sources in the language; (3) a conversation examination showing knowledge in depth; (4) an Educational Testing Service (ETS) graduate language examination. One of the languages must have substantial literature on linguistics; the other may serve as a contact language for field research. The latter option must be approved by the departmental language committee. Native speakers of languages other than English may use English to meet one of the foreign language requirements unless English was the language of instruction in their elementary and secondary education. The departmental brochure provides details about the departmentally administered language examinations.

Course Requirements

The M.A. degree requires the completion, with a B average or better, of nine graduate courses in linguistics. The following eight courses are required: Linguistics C165A/C200A, C165B/C200B, 201A, 202, 203, 206A, 206B, 207. One elective is required and must be a graduate linguistics course. Students who enter without deficiencies will already have taken courses C165A and C165B or the equivalent, so they must take three electives in all. The core courses in the relevant areas are normally considered prerequisite to the seminars (courses 251 through 259B), which may be repeated for credit with topic change. No more than four units of course 596A or 596B and no more than eight units of course 501 may be applied toward the required nine courses. Courses in the 260 series may be applied as electives for the M.A. if taken for four units.

The following undergraduate courses or the equivalent are prerequisite to graduate courses in the corresponding areas: Linguistics 100, 103, 110, 120A, 120B, C165A/C200A, C165B/C200B. Course 103 must have been passed with a grade of B or better as prerequisite to courses 210A and 210B. If course 103 is waived on the basis of training elsewhere, you must pass a department examination in practical phonetics. This requirement must be completed before admission into the doctoral program.

No more than two courses (with grades of B or better) from institutions outside the University of California may be applied toward the M.A.

Thesis Plan

After completing the required courses and the foreign language examination, students selecting this plan will submit a thesis based on original research to a thesis committee for approval. All students intending to proceed to the Ph.D. must adopt this plan.

If you wish to be considered for advancement into the doctoral program, a copy of the thesis, complete and clearly legible, but not necessarily in final typed form, must be in the hands of the committee at least two weeks before the last day of classes in the quarter. Limits on the length of the thesis are stipulated in the departmental brochure.

Requirements for receiving an M.A. include the filing of a Petition for Advancement to Candidacy form early in the quarter during which you expect to take the degree. The thesis must be typed according to regulations set by the University. Information on these regulations and procedures is available from the Graduate Division.
Comprehensive Examination Plan
After completing the required courses and the foreign language examination, you must pass a comprehensive examination administered by a four-member committee of the faculty, appointed by the Chair. This is normally an oral examination, general in scope, and will result in a terminal M.A. degree.

Ph.D. Degree
Admission
General admission requirements are the same as those listed for the M.A. Students who have done their earlier graduate work at UCLA will be considered for admission into the Ph.D. program on the basis of the following: (1) completion of all requirements for the M.A. and (2) the faculty's evaluation of the quality of the M.A. thesis and of the student's overall work and promise.

If you have already received an M.A. in Linguistics from another department or institution, you must fulfill all the requirements expected of an M.A. candidate, including the coursework, unless work elsewhere is equivalent and satisfies the course requirements. Then there are two possible procedures: (1) you may submit a master's thesis written at another institution or department or (2) if you have not written a thesis elsewhere, you must submit to the evaluation committee a paper equal in depth and scope to a thesis. A committee is appointed and, in either case, once the committee has approved the thesis or paper, it is submitted to the entire faculty who evaluate its quality and your accomplishments and promise.

Major Fields or Subdisciplines
You may specialize in syntax, semantics, phonology, phonetics, language change, typology, sociolinguistics, neurolinguistics, and many language areas, notably African languages and American Indian languages. Other specializations may be possible, depending on the availability of faculty expertise.

Foreign Language Requirement
A doctoral committee cannot be officially appointed until the foreign language requirement has been met. Details are given above under the "Foreign Language Requirement" for the M.A. degree.

Course Requirements
Candidates for the Ph.D. are required to take 36 units of graduate coursework beyond the M.A. requirements. These units must include Linguistics 210A and 210B, unless they have been used to fulfill the M.A. requirement, and eight units in an area distinct from that of the student's major area of concentration. The 36 units may not include courses 275, 597, or 599. Of the 36 units, no more than 12 units may be in course 596A. A maximum of four two-unit seminars may be included in the 36 units. At some time, you are expected to present some of the results of your research at a meeting of the Linguistics Department Colloquium. This is a requirement for the degree.

Qualifying Examinations
In order to be advanced to candidacy, you are required to prepare two substantive research papers of publishable quality in different areas or fields of linguistics. These papers are to be submitted to and approved by a doctoral guidance committee. A written prospectus of the dissertation must be submitted to the guidance committee, with a copy for the department file, one month prior to the oral examination. At this time, the language requirement has been met, an official doctoral committee must be established.

The University Oral Qualifying Examination is administered by the doctoral committee, based primarily on the topic of the dissertation research. The examination will deal with the background necessary for you to pursue research on the specific topic. Reexamination is possible on recommendation of the committee. You are expected to take the examination and be advanced to candidacy no later than six quarters after being admitted to the doctoral program.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
A final defense of the dissertation is required, scheduled at a time, and with advance notice, that will enable a substantial number of students and faculty to attend. The defense is not restricted to the doctoral committee.

General Linguistics
Lower Division Courses
1. Introduction to the Study of Language. A summary, for the general undergraduate, of what is known about human language; the unique nature of human language, its structure, its universality, and its diversity; language in its social and cultural setting; language in relation to other aspects of human inquiry and knowledge.
2. Language and Social Issues. Prerequisite: course 1 or consent of instructor. A survey of linguistic problems that have social or political importance. Topics include minority languages and dialects (particularly "Black English" and Chicano-American), bilingualism, literacy, second-language education, and language standardization in developing and developed nations.
5. Language in Africa. A survey of the languages spoken in Africa and their social and cultural context; languages found on the African continent; history of African language study; literature in African languages; African languages in the mass media; language policy and planning in modern Africa.

10. The Structure of English Words. Lecture, three to four hours. An introduction to the structure of English words of classical origin, including the most common base forms and the 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.

Mr. Stockwell

Upper Division Courses
100. Introduction to Linguistics. An introduction to the theory and methods of linguistics; universal properties of human language; phonetic, phonological, morphological, syntactic, and semantic structures and analysis; the nature and form of grammar.
103. Introduction to General Phonetics. Lecture, three hours; laboratory, two hours. Prerequisite or corequisite: course 100 or equivalent. The phonetics of a variety of languages and the phonetic phenomena that occur in languages of the world. Extensive practice in the perception and production of such phenomena.
Ms. Keating, Mr. Ladehoged
C104. Experimental Phonetics. Lecture, four hours; laboratory, two hours. Prerequisite: course 103. Survey of the principal techniques of experimental phonetics and of laboratory equipment for recording and measuring phonetic phenomena. Concurrently scheduled with course C204.
Mr. Anderson, Ms. Fromkin, Ms. Keating, Mr. Ladehoged

110. Introduction to Historical Linguistics. Prerequisites: courses 100, 103, 120A, and 120B or 127. The methods and theories appropriate to the historical study of language, such as the comparative method and method of internal reconstruction. Sound change, grammatical change, semantic change.
Mr. Anttila, Mr. Schuh, Mr. Stockwell

114A. American Indian Linguistics. Strongly recommended prerequisite: course 100. Survey of genetic, areal, and typological classifications of American Indian languages. Emphasis on lexical and grammatical features of phonology, morphology, and syntax; writing systems for American Indian languages; American Indian languages in social and historical context.
Ms. Munro

114B. American Indian Language Structures. Strongly recommended prerequisite: course 100. Course 114A is not prerequisite to 114B. Detailed introduction to the linguistic structure of three different American Indian languages representing at least two separate genetic groupings.
Ms. Munro

120A. Linguistic Analysis: Phonology. Prerequisites: courses 100, 103. Descriptive analysis of phonological structures in natural languages; emphasis on insight into the nature of such structures rather than linguistic formalization.
Mr. Bedell, Mr. Bright, Mr. Hayes

120B. Linguistic Analysis: Grammar. Prerequisite: course 100. Course 120A is not prerequisite to 120B. Descriptive analysis of morphological and syntactic structures in natural languages; emphasis on insight into the nature of such structures rather than linguistic formalization.
Mr. Bedell, Mr. Bright, Mr. Stowell

125. Semantics. Prerequisite: course 120B. A survey of the most important theoretical and descriptive claims about the nature of meaning.
Ms. Thompson

127. Syntactic Typology and Universals. Prerequisite: course 100. A study of the essential similarities and differences among languages in the grammatical devices they use to signal the following kinds of concepts: relations between nouns and verbs (case and word order), negation, comparison, existence/locus/possession, causation, interrogation, reflexivization, relativization, attribution (adjectives), time (tense and aspect), and background (subordinating.
Data from a range of languages is presented and analyzed.
Mr. Keenan, Ms. Thompson
130. Child Language Acquisition: Introduction. Prerequisites: courses 120A, 120B, or 120B, or consent of instructor. A survey of contemporary research and theoretical perspectives in the acquisition of language. Emphasis on linguistic interpretation of existing data, with some attention to related psychological and linguistic development, and other topics. Includes discussion of acquisition of English and other languages and universals of linguistic development.

Ms. Keating

C135. Theoretical Issues in Disorders of Language Development. (Formerly numbered 130.) Prerequisites: courses 1 or 100, and 130, or consent of instructor. Introduction to the field of language disorders of children. The course deals primarily with some clinical syndromes which are associated with disorders of language acquisition: aphasia, autism, mental retardation. Theories regarding etiology and the relationship of these disorders to each other are examined. Such questions as the relationship of cognition to linguistic ability is considered. Concurrently scheduled with course C235.

140. Linguistics in Relation to Language Teaching. Prerequisites: courses 120A, 120B. Aspects of linguistics in relation to the teaching of language, with particular focus on the special problems involved in the teaching of non-European languages.

Mr. Stockwell

M146. Language in Culture. (Same as Anthropology M140.) Prerequisite: upper division standing or consent of instructor. Study of language as an aspect of culture; the relation of habitual thought and behavior to language; and language and the classification of experience. The course offers a holistic approach to the study of language and emphasizes the relationship of linguistic anthropology to the fields of biological, cultural, and social anthropology, as well as archaeology.

Mr. Kroskryt

M150. Introduction to Indo-European Linguistics. (Same as Indo-European Studies M150.) Prerequisite: one year of college-level study in language (course 3 or better, eight units minimum) of either Greek or Latin and either German or Russian. A survey of the Indo-European languages from ancient to modern times; their relationships and chief characteristics.

Mr. Anttila

150. History of Linguistics through the 19th Century. Prerequisites: courses 120A, 120B. Historical survey of the development of linguistics from Panini through the 19th century, including approaches to grammar, phonology, and language universals.

Mr. Anttila, Mr. Bedell

164. Modern Theories of Language. Prerequisites: courses 120A, and 120B or 127. A critical and historical survey of some of the central claims and types of supporting evidence put forward by transformational theory and by at least one other influential school of contemporary linguistics. About one third of the course deals with phonology, the remainder with syntax and semantics. Students who plan to take courses C165A, C165B should not take 164.

Mr. Bedell, Mr. Schachter, Mr. Stowell

C165A. Linguistic Theory: Phonology. Prerequisite: course 120A. Recommended for students who plan to do graduate work in linguistics. The theory of generative phonology: the form of phonological rules; formal and substantive phonological universals. Concurrently scheduled with course C200A.

Mr. Anderson, Mr. Hayes

C165B. Linguistic Theory: Grammar. Prerequisite: course 120B or 127. Recommended for students who plan to do graduate work in linguistics. The form of grammars; word formation and sentence formation; formal and substantive universals in syntax and semantics. Concurrently scheduled with course C165B.

Mr. Schachter, Mr. Stowell

170. Language and Society: Introduction to Sociolinguistics. Prerequisite: course 100 or consent of instructor. Study of the patterned covariation of language and society; social dialects and social styles in language; problems of multilingual societies.

Mr. Du Bois

175. Linguistic Change in English. Prerequisites: courses 110, 120A, 120B. Principles of linguistic change as exemplified through a detailed study of the history of English pronunciation, lexicon, and syntax.

Mr. Stowell

M176. Introduction to the Structure of Japanese. (Same as East Asian Languages and Cultures CM176.) Lecture, three hours. Prerequisite: two years of Japanese. Knowledge of linguistics is not required. Discussion of many supposedly idiosyncratic characteristics of Japanese syntax and semantics in light of word-order typology and universal grammar. Course often takes the form of a contrastive analysis of Japanese and English.

Ms. Akatsuka (W)

C180. Mathematical Backgrounds for Linguistics. Prerequisites: courses 120A, 120B. Prior mathematical knowledge is not assumed. Introduction to selected topics in set theory, logic and formal systems, modern algebra, and automata theory, with elementary applications to linguistics. Topics vary each quarter. Concurrently scheduled with course C208.

Mr. Keenan

185. Introduction to Computational Linguistics. (Formerly numbered 145.) Prerequisites: courses 120B, C180, or consent of instructor. Computer-oriented study of language. Students will implement techniques and theoretical results in assignment and term projects. Topics include history of linguistic theory and application of computational techniques to linguistic research.

Mr. Wehrli

195. Senior Essay. Prerequisite: consent of instructor. Limited to senior linguistics majors. An extended paper of writing is undertaken on a linguistic topic selected by the student to be completed under the supervision of a faculty member. Consult the professor in charge to enroll.

199. Special Studies in Linguistics (2 to 4 units). Prerequisites: courses 120A, 120B, consent of instructor. May be repeated for credit.

Graduate Courses

C200A. Linguistic Theory: Phonology. Prerequisite: course 120A. The theory of generative phonology; the form of phonological rules; formal and substantive phonological universals. Concurrently scheduled with course C165A.

Mr. Anderson, Mr. Hayes

C200B. Linguistic Theory: Grammar. Prerequisite: course 120B or 127. The form of grammars; word formation and sentence formation; formal and substantive universals in syntax and semantics. Concurrently scheduled with course C165B.

Mr. Schachter, Mr. Stowell

201A. Phonological Theory. Current Issues. Prerequisite: course C165A/C200A. Survey of current issues in phonological theory.

Mr. Anderson, Mr. Bedell, Mr. Hayes


Mr. Anderson, Mr. Bedell


Mr. Anttila, Ms. Munro, Mr. Schuh, Mr. Stockwell

203. Theory of Phonetics. Prerequisite: course 120A. The preliminaries to speech analysis. Functional anatomy of the vocal organs; fundamental principles of pho netics; and of the acoustic theory of speech production; issues in the perception of speech; the nature and design of feature systems for phonetic and phonological analysis.

Mr. Anderson, Ms. Keating, Mr. Ladefoged

C204. Experimental Phonetics. Lecture, four hours; laboratory, two hours. Prerequisite: course 103. Survey of the principal techniques of experimental phonetics. Use of laboratory equipment for recording and measuring phonetic phenomena. Concurrently scheduled with course C164A. Graduate students are expected to produce a substantial research paper.

Mr. Anderson, Ms. Fromkin, Ms. Keating, Mr. Ladefoged


Mr. Anderson, Mr. Hayes

206A. Syntactic Theory: Current Issues in Formal Syntax. Prerequisite: course C165B/C200B. Survey of current issues in formal syntactic theory.

Mr. Schachter, Mr. Stowell

206B. Syntactic Theory: Current Issues in Functional and Typological Approaches to Syntax. Prerequisite: course C165A/C200A. Survey of current issues in functional and typological approaches to syntax.

Mr. Du Bois, Ms. Thompson

207. Semantic Theory. Recommended prerequisite when theoretical perspective is that of formal semantics; course C165A/C200A, or equivalent. Approaches to the study of meaning. Different offerings of the course approach semantics from different theoretical perspectives (e.g., formal semantics, functional semantics, interpretive semantics). May be repeated for credit if the theoretical approach is different.

Mr. Du Bois, Mr. Keenan

C208. Mathematical Backgrounds for Linguistics. Prerequisites: courses 120A, 120B. Corequisite: course C200B. Prior mathematics knowledge assumed. Introduction to selected topics in set theory, logic and formal systems, modern algebra, and automata theory, with elementary applications to linguistics. Topics vary each quarter. Concurrently scheduled with course C208. Graduate students are expected to complete additional problem sets.

Mr. Keenan

299. Natural Language Processing. Recommended prerequisites: courses C165B, C180, 185, or equivalent. Computational models of language processing, with emphasis on syntactic processing. Overview of field. Artificial vs. natural language processing techniques. Discussion and evaluation of several paradigms (e.g., one-stage and two-stage processing, deterministic vs. stochastic models, etc.) from computational and psychological points of view.

Mr. Wehrli

210A. Field Methods I (6 units). Prerequisites: courses C165A/C200A, C165B/C200B. A language data elicited from a native speaker of the language. Term papers are relatively full descriptive sketches of the language. May be repeated for credit with topic change.
210B. Field Methods II (6 units). Prerequisite: course 210A in preceding quarter. Because different languages are investigated in different years, course 210B can only be taken as a direct continuation of 210A in the same year. When there are multiple sections, continuation must be in the same section. May be repeated for credit with topic change.

Mr. Bright, Ms. Munro, Mr. Schachter

220. Linguistic Areas. Prerequisites: courses 120A, and 120B or 127. Recommended: courses C165A/C200A, C165B/C200B. Analysis and classification of languages spoken in a particular area (e.g., Africa, the Balkans, South Asia, Southeast Asia, Australia, Aboriginal North America, Aboriginal Latin America, Far East, etc.). May be repeated for credit with topic change.

225. Linguistic Structures. Prerequisites: courses 120A, and 120B or 127. Recommended: courses C165A/C200A, C165B/C200B. Phonological and grammatical structure of a selected language and its genetic relationships to others of its family. May be repeated for credit with topic change.

235. Theoretical Issues in Disorders of Language Development. (Formerly numbered C235.) Prerequisites: courses 1 or 100, and 130, or consent of instructor. Introduction to the field of language disorders of children. The course deals primarily with some clinical syndromes which are associated with delayed or deviant language acquisition: aphasia, autism, mental retardation. Theories regarding etiology and the relationship of these disorders to each other are examined. Such questions as the relationship of cognition to linguistic ability are considered. Concurrently scheduled with course C135. Graduate students are expected to apply more sophisticated knowledge and produce a research paper of greater depth.

246C. Topics in Linguistic Anthropology. (Same as Anthropology M241.) Prerequisite: consent of instructor. Problems in relations of language, culture, and society. May be repeated for credit.

Proseminars numbered 251 through 254 may be taken for either two or four units. If a pro- seminar is taken for four units, a paper is required. Proseminars and seminars numbered 251 and above may be repeated for credit, having been approved by the Graduate Council as nonrepetitive in content.

251. Topics in Phonetics and Phonology I: Proseminar (2 or 4 units). Prerequisite: course C165A/C200A. Discussion, three hours. Prerequisite: consent of instructor. Course 201A, 201B, 202, 203, 206A, 206B, or 207 may be required. Individual prosessminiars deal with such topics as child language, sociolinguistics, history of linguistic theory, neurolinguistics, languages of the world, psycholinguistics, etc. May not be applied toward the M.A. or Ph.D. degree requirements when taken for two units. Meets with course 259A. May be repeated for credit. S/U (two-unit course) or letter (four-unit course) grading.

256A. Topics in Phonetics and Phonology II: Proseminar. Prerequisite: course C165A/C200A. Courses 201A and/or 203 may be required. Specialized topics in phonetics and phonology. May be repeated for credit. Meets with course 251. In Progress grading (credit to be given only on completion of course 256B).

256B. Topics in Phonetics and Phonology II: Proseminar (2 or 4 units). Prerequisite: course 256A. Specialized topics in phonetics and phonology. May be repeated for credit.

257A. Topics in Syntax and Semantics I: Proseminar. Prerequisite: course C165B/C200B. Courses 206A, 206B, and/or 207 may be required. Specialized topics in syntax and semantics. May be repeated for credit. Meets with course 252. In Progress grading (credit to be given only on completion of course 257B).

257B. Topics in Syntax and Semantics II: Proseminar (2 or 4 units). Prerequisite: course 257A. Specialized topics in syntax and semantics. May be repeated for credit.

258A. Topics in Language Variation I: Proseminar. Prerequisite: course 110. Course 202 may be required. Specialized topics in language variation. Meets with course 253. In Progress grading (credit to be given only on completion of course 258B).

258B. Topics in Language Variation II: Proseminar (2 or 4 units). Prerequisite: course 258A. Specialized topics in language variation. May be repeated for credit.

259A. Topics in Linguistics II: Proseminar. Prerequisites: courses C165A/C200A, C165B/C200B, consent of instructor. Course 201A, 201B, 202, 206A, 206B, or 207 may be required. Individual prosessminiars deal with such topics as child language, sociolinguistics, history of linguistic theory, neurolinguistics, languages of the world, psycholinguistics, etc. May be repeated for credit. Meets with course 254. In Progress grading (credit to be given only on completion of course 259B).

259B. Topics in Linguistics II: Proseminar (2 or 4 units). Prerequisite: course 259A. Individual prosessminiars deal with such topics as child language, sociolinguistics, history of linguistic theory, neurolinguistics, languages of the world, psycholinguistics, etc. May be repeated for credit.

Seminars numbered 260A through 264C may be taken for either two or four units. If a seminar is taken for four units, an oral presentation is required. Seminars may be taken for two units credit only by students who have been formally admitted to the doctoral program. All others must enroll for four units.

260A-260B-260C. Seminar in Phonetics (2 or 4 units). Discussion, three hours. Prerequisite: consent of instructor. Each course may be taken independently for credit. May not be applied toward the M.A. or Ph.D. degree requirements when taken for two units. May be repeated for credit. S/U grading.

261A-261B-261C. Seminar in Phonology (2 or 4 units). Discussion, three hours. Prerequisite: consent of instructor. Each course may be taken independently for credit. May not be applied toward the M.A. or Ph.D. degree requirements when taken for two units. May be repeated for credit. S/U grading.

262A-262B-262C. Seminar in Syntax and Semantics (2 or 4 units). Discussion, three hours. Prerequisites: consent of instructor. Each course may be taken independently for credit. May not be applied toward the M.A. or Ph.D. degree requirements when taken for two units. May be repeated for credit. S/U grading.

263A-263B-263C. Seminar in Language Variation (2 or 4 units). Discussion, three hours. Prerequisite: consent of instructor. Each course may be taken independently for credit. May not be applied toward the M.A. or Ph.D. degree requirements when taken for two units. May be repeated for credit. S/U grading.

264A-264B-264C. Seminar in Special Topics in Linguistic Theory (2 or 4 units). Discussion, three hours. Prerequisite: consent of instructor. Each course may be taken independently for credit. Special topics may include child language, neurolinguistics, psycholinguistics, sociolinguistics, etc. May not be applied toward the M.A. or Ph.D. degree requirements when taken for two units. May be repeated for credit. S/U grading.

275. Linguistics Colloquium. Prerequisite: completion of the M.A. requirements. Various linguistic topics, generally presentations of new research by students, faculty, and visiting scholars. S/U grading.

276. Linguistics Colloquium (No credit). Prerequisite: graduate standing. Same as course 275, but taken without credit by students not presenting a colloquium. S/U grading.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

411A-411B-411C. Research Orientation (1 unit each). Formerly numbered 411A-411B. Prerequisites: Independent decision of faculty. May be repeated for credit. S/U grading.

422. Practicum in Phonetic Data Analysis (2 units). Prerequisite: graduate standing. Workshop in the examination of phonetic data, such as sound spectrograms, oscillographic records, and computer output. May not be applied toward the M.A. or Ph.D. degree requirements. S/U grading.

Ms. Keating, Mr. Ladefoged

433. The Use of Computers in Linguistics (2 units). Guided use of the departmental computer facilities. May not be applied toward the M.A. or Ph.D. degree requirements. S/U grading.

Mr. Hayes, Mr. Ladefoged

495. College Teaching of Linguistics (2 units). Prerequisite: graduate standing. Required of all new teaching assistants. Seminars, workshops, and apprentice teaching. Selected topics, including curriculum development, various teaching strategies and their evaluation, and other topics on college teaching. Students receive unit credit toward full-time equivalence but not toward any degree requirements. S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor, department Chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596A. Directed Studies (1 to 8 units). Prerequisite: completion of all undergraduate deficiency courses. Directed individual study or research. May be applied toward the M.A. course requirements. May be repeated for credit. S/U grading.
African Languages

Lower Division Courses

**1A-1B-1C. Elementary Swahili.** Lecture, five hours.
The major language of East Africa, particularly Tanzania.
Mr. Kunene

2A-2B-2C. Intermediate Swahili. Prerequisites: courses 1A-1B-1C or consent of instructor.
Mr. Kunene

7A-7B-7C. Elementary Zulu. Lecture, five hours.
The most widely spoken of the Nguni languages of South Africa, mutually intelligible with other members of this group.
Mr. Kunene

8A-8B-8C. Intermediate Zulu. Prerequisites: courses 7A-7B-7C or consent of instructor.
Mr. Kunene

9A-9B-9C. Elementary Xhosa. Lecture, five hours.
A major Nguni language of South Africa, mutually intelligible with other members of this group.
Mr. Kunene

10A-10B-10C. Intermediate Xhosa. Prerequisites: courses 9A-9B-9C or consent of instructor.
Mr. Kunene

11A-11B-11C. Elementary Yoruba. Lecture, five hours.
Prerequisite: consent of instructor. The major language of Western Nigeria.
Mr. Kunene

12A-12B-12C. Intermediate Yoruba. Prerequisites: courses 11A-11B-11C or consent of instructor.
Mr. Kunene

13A-13B-13C. Elementary Igbo. Lecture, five hours.
The major language of Eastern Nigeria.
Mr. Kunene

14A-14B-14C. Intermediate Igbo. Prerequisites: courses 13A-13B-13C or consent of instructor.
Mr. Kunene

The major language of Ghana.
Mr. Kunene

21A-21B-21C. Elementary Fula. Lecture, five hours.
The language of the Fulani, spoken in widely scattered areas of West Africa, including major concentrations in Guinea and the Nigeria-Cameroon area.
31A-31B-31C. Elementary Bambara. Lecture, five hours.
Prerequisite: consent of instructor. The major language of Mali, also widely spoken in adjacent parts of West Africa; includes Maninka (Malinké), Dyula, and other mutually intelligible dialects.

Upper Division Courses

**103A-103B-103C. Advanced Swahili.** Prerequisites: courses 2A-2B-2C or consent of instructor. Readings in Swahili literature and the contemporary press. Discussions mainly in Swahili.
Mr. Kunene

123A-123B-123C. Advanced Yoruba. Prerequisites: courses 12A-12B-12C or consent of instructor. Readings in Yoruba literature and the contemporary press. Discussions mainly in Yoruba.
Mr. Kunene

133A-133B-133C. Advanced Bambara. Prerequisites: courses 32A-32B-32C or consent of instructor.
Mr. Kunene

143A-143B-143C. Advanced Hausa. Prerequisites: courses 42A-42B-42C or consent of instructor.
Readings in Hausa literature and the contemporary press. Discussions mainly in Hausa.
Mr. Kunene

590A-590B. African Literature in English Translation. (Formerly numbered 150A-150B-150C.) Course 150A is prerequisite to 150B. Narrative and didactic oral prose and poetry of sub-Saharan Africa and written prose and poetry of South Africa.
Mr. Kunene

Graduate Courses

**201A-201B. Comparative Niger-Congo.** Prerequisites: Linguistics C165A, C165B, 220. Recommended.
An introductory course in one Niger-Congo language selected from courses 1A through 32C. 199. Investigation of relationships within the Niger-Congo family as a whole or within selected branches of the family.
Mr. Kunene

Three quarter courses in one Bantu language selected from courses 1A through 10C. 199. Investigation of relationships among the Bantu languages; the extent and external relationships of Bantu.
Mr. Kunene

270. Seminar in African Literature. Prerequisite: 590A-590B. Directed Studies (1 to 6 units). Directed individual study or research. Four units may be applied toward the M.A. course requirements. May be repeated for credit. S/U grading.
Mr. Kunene

Indigenous Languages of the Americas

**18A-18B-18C. Elementary Quechua.** Lecture, five hours.
The language of the Incas and its present-day dialects, as spoken in Andean South America.
Mr. Kunene

Upper Division Courses

**119A-119B-119C. Advanced Quechua.** Prerequisites: courses 18A-18B-18C or consent of instructor. Readings in Quechua. Dialectical and stylistic variation. Discussions mainly in Quechua.
Mr. Bedell

Graduate Course

**596. Directed Studies in Quechua (1 to 8 units).** Prerequisites: courses 119A-119B-119C or consent of instructor. Directed individual study or research in Quechua. Four units may be applied toward the M.A. course requirements. May be repeated for credit. S/U grading.
Mr. Bedell

Related Courses in Other Departments (Other than Language Courses)

Anthropology 143A. Field Methods in Linguistic Anthropology: Practical Phonetics

143B. Field Methods in Linguistic Anthropology: Syntax, Semantics, Textual Cohesion

Armenian (Near Eastern Languages) 210. History of the Armenian Language

Dutch and Afrikaans (Germanic Languages) 234. The Structure of Modern Standard Dutch

East Asian Languages and Cultures CM176. Introduction to the Structure of Japanese

223. Seminar: Linguistic Analysis of Japanese Narratives

English 121. The History of the English Language

212. Introduction to the Structure of Present-Day English

310. History of the English Language

218. Celtic Linguistics

240. Studies in the History of the English Language

241. Studies in the Structure of the English Language

English (ESL) 241. Contrastive and Error Analysis in the ESL Context

Psycholinguistics and Language Teaching

280K. Language Policy in Developing Countries

Folklore and Mythology 217. Folk Speech

French 204A. Phonology and Morphology from Vulgar Latin to French Classicism

204B. Syntax and Semantics from Vulgar Latin to French Classicism

206. French Linguistics

German (Germanic Languages) 137. Language and Linguistics

217. History of the German Language

230. Survey of Germanic Philology

251. Seminar in Syntax and Phonology of German

252. Seminar in Historical and Comparative German Linguistics

Hebrew (Near Eastern Languages) 190A-190B. Survey of Hebrew Grammar

210. History of the Hebrew Language

Indo-European Studies 210. Indo-European Linguistics: Advanced Course

280A-280B. Seminar in Indo-European Linguistics

Italian 259A. History of the Italian Language

259B. The Structure of Modern Italian

259C. Italian Dialectology

Latin (Classics) 240. History of the Latin Language

Philosophy 127A, 127B. Philosophy of Language

172. Philosophy of Language and Communication

287. Seminar: Philosophy of Language
Mathematics

6356 Math Sciences, 825-4701

Professors
Richard F. Arons, Ph.D.
Donald G. Babitt, Ph.D., Vice Chair, Undergraduate
Kirby A. Baker, Ph.D.
Robert J. Blattner, Ph.D.
Robert F. Brown, Ph.D.
David G. Cantor, Ph.D.
C. C. Chang, Ph.D.
S. Y. Alice Chang, Ph.D.
S. Y. Cheng, Ph.D.
Earl A. Coddington, Ph.D.
Philip C. Curtis, Jr., Ph.D.
Henry A. Dye, Ph.D.
Robert Edwards, Ph.D.
Edward Effros, Ph.D., Vice Chair, Graduate
Richard S. Elman, Ph.D.
Bjorn Engquist, Ph.D.
Gregory I. Eskin, Ph.D.
Hector O. Fattorini, Ph.D.
Thomas S. Ferguson, Ph.D.
Theodore Gamelin, Ph.D.
John Garnett, Ph.D.
David Gieseker, Ph.D.
I. G. Gordon, Ph.D.
Mark Green, Ph.D.
Robert E. Greene, Ph.D.
Nathanial Grossman, Ph.D.
Alfred Horn, Ph.D.
Robert I. Jennrich, Ph.D.
Paul J. Kooosis, Ph.D.
Charles G. Lange, Ph.D.
Thomas M. Liggett, Ph.D.
D. Anthony Martin
Ronald Meich, Ph.D., Director, Program in Computing
John J. Millson, Ph.D.
Yiannis N. Moschovakis, Ph.D., Chair
Barrett O’Neill, Ph.D.
Stanley J. Osher, Ph.D.
Sidney Port, Ph.D.
James W. Ralston, Jr., Ph.D.
Raymond M. Redheffer, Ph.D.
Bruce L. Rothschild, Ph.D.
Murray Schacher, Ph.D.
Lloyd S. Shapley, Ph.D.
Robert Steinberg, Ph.D.
Masamichi Takesaki, Ph.D.
V. S. Varadarajan, Ph.D.
James White, Ph.D.
N. Donald Yvissaker, Ph.D.

Emeritus Professors
John W. Green, Ph.D.
M. R. Hestenes, Ph.D.
Paul G. Hefel, Ph.D.
S. T. Hu, Ph.D., D.Sc.
Paul G. Johnson, Ph.D.
Lowell J. Paige, Ph.D.
William T. Puckett, Ph.D.
Leo Sario, Ph.D.
Robert H. Sorgenfrey, Ph.D.
Angus E. Taylor, Ph.D.
Frederick A. Valentine, Ph.D.

Associate Professors
Rodolfo De Sajjo, Ph.D.
David Gillman, Ph.D.
Robert K. Lazarfeld, Ph.D.
Ker-Chau Li, Ph.D.
John R. Steel, Ph.D.

Assistants
Mladen Bestvina, Ph.D.
Kenneth P. Bube, Ph.D.
Daniel Michelson, Ph.D.

Scope and Objectives
Gauss has called mathematics the "Queen of the Sciences." It has provided powerful intellectual tools that have made possible tremendous advances in modern science and technology. The Department of Mathematics aims to provide courses of study that will introduce students to the fundamentals of mathematics and allow them to master the most important parts of the subject, both pure and applied. It leads doctoral students to the frontiers of mathematical research, where they can begin to push back those frontiers.

Undergraduate Study
Preliminary Examination in Mathematics
If you wish to enroll in Chemistry 11A and/or Mathematics 1, 3A, or 31A, you are required to pass the mathematics section of the Chemistry/Mathematics Preliminary Examination. Students with three years or less of high school mathematics must take Level I of this examination; students with three and one-half years or more must take Level II. This examination may be taken at any one of several times. Students participating in the summer Orientation Program may take the examination on the first morning of their three-day orientation at UCLA. It will also be given on Tuesday, September 24, 1985, for Fall Quarter 1985; Tuesday, November 12, 1985, for Winter Quarter 1986; and Tuesday, February 25, 1986, for Spring Quarter 1986. For information, contact the Undergraduate Mathematics Office, 6375 Math Sciences (206-6857).

Advanced Placement in Calculus
Students who have taken the Advanced Placement (AP) Calculus AB test and obtained a score of 3 or higher receive five units of credit and Mathematics 31A equivalency. Those who take the BC test and obtain a score of 3 or higher receive ten units of credit and Mathematics 31A, 31B equivalency.
If you have had calculus in high school but do not have Advanced Placement Test credit, you may take beginning calculus (Mathematics 3A or 31A), or you may seek advanced placement by passing examinations in the subject. Consult the Undergraduate Mathematics Office for further details.

Transfer Students
Transfer students, and UCLA students with 60 or more quarter units of credit, who wish to change their major to one of those offered by the department must have completed 12 quarter units of calculus and have a minimum grade of C in all college-level courses completed. Students who wish to enter the mathematics/computer science major must satisfy further requirements (see "Mathematics/Computer Science" following this departmental section).

Undergraduate Majors
The Mathematics Department offers three majors: mathematics, applied mathematics, and mathematics/applied science. In addition two programs are offered in cooperation with the School of Engineering and Applied Science: the mathematics/computer science and mathematics/system science majors, described following this departmental listing.

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, engineering, and the physical sciences; and the mathematics/applied science major for individuals who wish to combine the study of mathematics with another particular field of interest. The department also offers an actuarial program, as well as training for those interested in teaching mathematics.

Courses taken to fulfill any of the requirements for any of the mathematics majors must be taken for a letter grade.

Bachelor of Arts in Mathematics

Preparation for the Major
Students officially admitted to the mathematics major for Fall Quarter 1985 or thereafter must fulfill the following preparation requirements. Those admitted prior to Fall Quarter 1985 may fulfill the preparation requirements listed in the 1984-85 UCLA General Catalog.

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10, Physics 8A, 8C, and one additional course from Physics 8B, 8D, 8E, Chemistry 11A, 11B. All courses must be passed with a minimum grade of C –, and you must have a minimum overall GPA of 2.0 for these courses.

The Major
Students officially admitted to the mathematics major for Fall Quarter 1985 or thereafter and those admitted prior to Fall Quarter 1985 with less than 90 quarter units completed prior to Fall Quarter 1984 must fulfill the following major requirements. Those admitted prior to Fall Quarter 1985 with 90 or more quarter units completed prior to Fall Quarter 1984 may fulfill the major requirements listed in the 1984-85 UCLA General Catalog.

Required: Mathematics 110A, 110B, 115A, 120A, 131A-131B, 131C, and at least five additional courses from 106 through 199. These 12 courses must be passed with a minimum overall GPA of 2.0.

Bachelor of Science in Applied Mathematics

Preparation for the Major
Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10, Physics 8A, 8C, and one additional course from Physics 8B, 8D, 8E, Chemistry 11A, 11B. All courses must be passed with a minimum grade of C –, and you must have a minimum overall GPA of 2.0 for these courses.

The Major
Required: Mathematics 115A, 131A, either 131B or 132, 142; two two-quarter sequences from two of the following categories: numerical analysis — courses 140A-140B or 141A-141B, probability and statistics — courses 150A-150B or 152A-152B, differential equations — courses 153A-153B; four additional courses from 110A through 199 (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 GPA of 2.0.

Bachelor of Arts in Mathematics/Applied Science

The 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 member, design their own program. In the past, mathematics/applied science majors have combined the study of mathematics with fields such as physics, chemistry, biochemistry, economics, and geography. Two popular variants, the actuarial plan and the mathematics/economics plan, are described later.

Preparation for the Major
Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10. Each of these courses must be passed with a minimum grade of C. Additional preparation, varying with the individual program, may be required.

The Major
Required: Fourteen courses, seven in mathematics selected from Mathematics 110A through 199 and seven upper division courses in a related field selected from one or two departments. The seven mathematics courses must be passed with an overall GPA of 2.0, as must the seven courses outside mathematics.

If you are interested in this major, you should apply during your sophomore year. A proposed program is drawn up in consultation with a faculty member and is then forwarded for approval by the mathematics/applied science curriculum committee.

At least five of the courses from the related discipline must be taken after the program has been approved. If you will have 135 or more units by the end of the quarter in which you plan to enter the program, you will not be admitted to the major.

Actuarial Plan
The actuarial plan, designed especially for students interested in actuarial science, is a variant of the mathematics/applied science major.

Preparation for the Major: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10, Economics 1 and 2, or 100. Economics 100 may not be applied as one of the upper division courses for the major. You must have a minimum overall 2.5 GPA in the six calculus courses.

The Major: Seven mathematics courses, including Mathematics 115A, either 140A or 141A, 144, 152A, 152B, and two courses from 113, either 140B or 141B, 151, 153; seven outside courses, including Economics 101A, 101B, 102, 147A, 160, and two courses from Management 130, 190, English 131, Economics 145 through 199.

Mathematics/Economics Plan

Preparation for the Major: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Economics 1, 2, Program in Computing 10, and one other social science course.

The Major: Seven mathematics courses, including Mathematics 115A, either 110A or 117, 131A, 144, either 150A or 152A, and two courses from 110A through 199; seven economics courses, including Economics 101A, 101B, 102, 144, 145, 147A, and one course from 147A through 199.

Operations Research Plan
Enrollment in this plan, designed for students interested in careers and graduate study in operations research and management science, is limited. You must have completed Mathematics 33A before the application deadline of April 15, 1986. The admissions committee will base its decisions on your grades in "Preparation for the Major" courses, motivation, and intellectual promise. Application forms and further information are available in the department.

The Major: Seven courses in mathematics and seven in economics and management. Consult the department for recommended courses. Programs will be designed so that students in this plan qualify for a specialization in computing.

Specialization in Computing

Majors in mathematics, applied mathematics, or mathematics/applied 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 10, 20, 30, 60, and Mathematics 61 with a minimum grade of C in each course, (3) completing at least two courses from Mathematics 141A, 141B, 169, 169HS. You will graduate with a bachelor's degree in your major and a specialization in computing.

The Teaching of Mathematics

The department offers a major in the teaching of mathematics. However, because of insufficient demands, several of the courses required for the major have not been offered during the past two years.

If you are interested in teaching mathematics in the public schools, you must show competence in the field of mathematics. You must also complete a group of professional courses in education. For more information, contact the Office of Student Services, Graduate School of Education, 201 Moore Hall.

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. Call the department (206-1286) for further details.

Honors Program

Majors who wish to graduate with honors should apply for admission to the honors program. You may enter the program any time after completing four courses from the calculus sequence or from upper division mathematics courses with an overall GPA of 3.6 or better. The program entails taking Mathematics 110B-110C or 110BH-110CH, and 190 and earning an overall 3.6 GPA in approved upper division and graduate mathematics courses.

If you complete the program, you will be awarded honors at graduation; if you demonstrate exceptional achievement, you will be awarded highest honors.

Credit Limitations

Credit will be given for at most one course in each of the following groups: (1) 3A, 4A, 31A, 31AH; (2) 3B, 4B, 31B, 31BH; (3) 3C, 3E; (4) 131C, 131CH, 132; (5) 140A, 141A; (6) 150A, 152A.

Mathematics 2, 38A-38B, and 50 are not open for credit to students with credit for any course from Mathematics 110A through 199.

Mathematics 140A-140B-140C and 141A-141B are not open for credit to students with credit for Electrical Engineering 124A or former System Science 124A.

Mathematics 150A-150B and 152A-152B are not open for credit to students with credit for Electrical Engineering 120A or former System Science 120A.

You may not take a mathematics course for credit if you have credit for a more advanced course which has the first course as a prerequisite. This applies in particular to the repetition of courses (e.g., if you wish to repeat Mathematics 31B, you must do so before completing course 32A).

Graduate Study

Admission

Prospective graduate students in mathematics need not have an undergraduate mathematics major, but they must have completed at least 12 quarter courses (or eight semester courses) in substantial upper division mathematics — particularly advanced calculus, algebra, differential equations, and differential or projective geometry. For admission to a master's degree program, you must have earned in these upper division mathematics courses a cumulative grade-point average of at least 3.2; for direct admission to the doctoral program, at least 3.5.

If you have already obtained a master's degree, you must have maintained an average of better than 3.6 in graduate study.

You must take the Graduate Record Examination (GRE) Aptitude and Advanced Tests and must submit at least two letters of recommendation from mathematicians who know your recent work.

Applications and a booklet, Graduate Studies in Mathematics at UCLA, are available from the Graduate Adviser, Department of Mathematics, 6356 Math Sciences, UCLA, Los Angeles, CA 90024.

Master of Arts Degree

You may earn the M.A. degree under the comprehensive examination plan, either in the basic (pure mathematics) program or an interdisciplinary program in applied mathematics.

Foreign Language Requirement

There is no foreign language requirement for master's students.

Course Requirements

Eleven courses are required for the M.A. degree, of which at least eight must be graduate courses, while the remaining three may be approved upper division courses. With consent of the Graduate Vice Chair, students in the applied mathematics program may take up to five of the required 11 courses in other departments, provided that these courses are in professional or scientific fields closely related to research in applied mathematics.

You may enroll in Mathematics 596 any number of times and may apply up to two 596 courses toward the 11-course requirement for the M.A., provided you receive a B or better in these courses (not the grade S).

Comprehensive Examination Plan

For the basic (pure mathematics) M.A., the comprehensive examination consists of two written four-hour tests, one in algebra and one in analysis. For students in the applied mathematics program, the comprehensive examination consists of a four-hour written test in analysis and a similar test selected from numerical analysis, methods of applied mathematics, or probability/statistics. These tests, prepared by a comprehensive examination committee, are offered early in Fall Quarter or toward the end of Spring Quarter. You may take one or both of the examinations at one sitting and may retake them any number of times until you pass them.

Master of Arts in Teaching

The M.A.T. program serves the needs of present and prospective mathematics teachers in high school and junior college.

Foreign Language Requirement

There is no foreign language requirement for M.A.T. students.

Course Requirements

Eleven courses are required, as follows.

Core Courses: You must take Mathematics 201A-201B-201C and 202A-202B. Normally, you will also take one quarter of course 596 while fulfilling the essay requirement described below.

CREDENTIAL REQUIREMENTS: If you plan to teach in secondary schools and do not already have valid credentials for such teaching, you should enroll in the single subject credential program in the Graduate School of Education. Of the courses required by this program, you may receive M.A.T. credit only for the following:

Education 100A, 100B, 112, 312, 330A, and 330B. Actual receipt of the credential is not a degree requirement. You should check
with the Graduate School of Education for a full and up-to-date description of credential requirements and should submit a Graduate School of Education application for admission to the credential program.

At present, no education courses or practice teaching are required for the community college credential. To qualify for this credential, it is sufficient to have the M.A.T. degree.

In exceptional cases, an M.A.T. program may be individually designed for candidates for a credential other than the two already mentioned.

Additional Courses: Besides the six core courses described above, you must take a seventh upper division or graduate course in mathematics. Particularly recommended are Mathematics 106, 110B, 110C, 111A, 111B, 131B, 135A, and 152B. Candidates on the junior college track normally take five 100- or 200-level courses in mathematics in addition to the six core courses. However, with prior approval of the Graduate Vice Chair, such students may present for degree credit one course of a predominantly mathematical nature taken in another department.

You may not receive degree credit for Mathematics 370 or for any mathematics course numbered 101A through 109, except course 106. In addition, you may not receive degree credit for more than two quarters of course 596 or for more than two quarters of any 300-series courses.

Essay Requirement: You must prepare a master's essay on some subject in mathematics related to your prospective teaching. You will write this under the direction of a faculty member while enrolled in Mathematics 596.

Teaching Experience
Teaching experience is not a formal requirement for the M.A.T. degree, although students working for a secondary credential must take the supervised teaching course. M.A.T. students are eligible for teaching assistantships.

Comprehensive Examination Plan
In the M.A.T. program, you take one examination in mathematical subject matter and one in content and philosophy of secondary school mathematics. Ordinarily, these are administered in conjunction with Mathematics 201A-201B and 202A-202B. Reexamination after failure is allowed.

Ph.D. Degree
Students may earn the Ph.D. degree in Mathematics at UCLA either in the classical, pure mathematics program or under an interdisciplinary program in applied mathematics. There are many possible choices of fields within both of these programs, and you are urged to read the booklet, *Graduate Studies in Mathematics at UCLA*, where the specialties of the faculty and the active research areas in the department are described in some detail.

Foreign Language Requirement
You are required to pass two written departmental language examinations in French, German, or Russian (with the consent of the Graduate Vice Chair, students in the applied program may substitute a computer language project for one of the languages). Foreign students whose principal language of instruction in elementary and secondary education was not English may substitute English for one of the foreign languages, but their other language must be one of French, German, or Russian (even if they are in the applied program).

These examinations, offered in the Fall and Spring Quarters, require the translation of material in some basic field of mathematics without the use of a dictionary. They may be taken any number of times until passed. One of the language examinations must be passed within seven quarters of registration for full-time study, the second within 13 quarters. In any event, one examination must be passed before taking the first oral qualifying examination.

Course Requirements
In the pure mathematics program, you must pass (with a grade of A or B) at least 12 courses from Mathematics 205A through 285L, but excluding the basic courses 210A-210B, 245A-245B, and 246A-246B. At most, three of these courses may be in the 285 series. You must also satisfy a seminar participation requirement by participating actively in at least two advanced seminars (normally you will lecture twice for a total of 90 minutes). Credit for one seminar must be obtained within three registered quarters after passing the written qualifying examinations, the other within five quarters.

In the applied mathematics program, you must pass (with a grade of A or B) at least 12 approved graduate courses, including at least 12 courses from Mathematics 205A through 285L. At most, three of these may be in the 285 series.

Qualifying Examinations
In the pure mathematics program, you are required to take four written qualifying examinations in the following fields: algebra, analysis, complex analysis, and one field selected from geometry-topology, statistics-probability, logic, or numerical analysis. The examinations are given in the Fall or Spring Quarter. You must pass two examinations within a period of six registered quarters and all four examinations within a period of nine registered quarters after being admitted to graduate study.

In the applied mathematics program, you must pass four qualifying examinations. The first three consist of one written examination in applied real and complex analysis and two written examinations selected from three areas (applied differential equations, numerical analysis, and probability-statistics). Two of these three examinations are to be completed by the end of six quarters after being admitted to graduate study; the third by the end of nine quarters. The fourth qualifying examination, either written or oral, is in your specialized "outside" field, testing your competence at a research level.

After passing the four qualifying examinations, you may set up the doctoral committee which administers the University Oral Qualifying Examination for advancement to candidacy.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
The final oral examination may be waived by the doctoral committee, with the approval of the Graduate Vice Chair.

Lower Division Courses

A. Intermediate Algebra (No credit). (Formerly numbered 1A.) Lecture, five hours. Prerequisite: Level I Chemistry/Mathematics Preliminary Examination. Mathematics A displaces four units on the student's Study List but yields no credit toward a degree. May not be applied toward Letters and Science breadth requirements. Not open to students with credit for other mathematics courses. Designed for students requiring a review of elementary and intermediate algebra. Arithmetical operations on the real numbers, algebraic notation, polynomials, rational exponents, linear and quadratic equations and inequalities, coordinate geometry.

1. Precalculus. (Formerly numbered 1B.) Lecture, three hours; discussion, two hours. Prerequisites: course 3A with a grade of C- or better, or two and one-half years of high school mathematics and successful completion of the Level I Chemistry/Mathematics Preliminary Examination. The function concept. Linear and polynomial functions and their graphs, zeros of polynomials. Inverse, exponential, and logarithmic functions. Trigonometric functions.

2. Finite Mathematics and Social Science Students. Lecture, three hours; discussion, one hour. Prerequisite: course 1 or three years of high school mathematics. Not open for credit to students with credit for any course from Mathematics 110A through 199. Finite mathematics consisting of elementary logic, sets, combinatorics, probability, vectors, and matrices.

3A. Calculus for Life Science Students. Lecture, three hours; discussion, one hour. Prerequisites: three and one-half years of high school mathematics (including trigonometry) and successful completion of the Level II Chemistry/Mathematics Preliminary Examination, or completion of 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 the differential calculus.

3B. Calculus for Life Science Students. Prerequisite: course 3A with a grade of C- or better. Techniques and applications of the integral calculus.

3C. Calculus for Life Science Students. Prerequisite: course 3B with a grade of C- or better. Functions of several variables, vectors, partial differentiation, and multiple integration.
COLLEGE OF LETTERS AND SCIENCE / Mathematics / 229

3E. Calculus for Economics Students. Lecture, three hours; discussion, two hours. Prerequisite: course 3A or 31A with a grade of C– or better. Not open for credit to students with credit for course 3C. Functions of several variables; techniques of graphing, partial derivatives, maxima and minima, Lagrange multipliers. Exponential functions.

5. Introduction to Calculus. Lecture, three hours; discussion, one hour. Not open for credit to students with credit for courses 3A, 3E, or 31A. The course satisfies the Letters and Science quantitative reasoning requirement. A brief look at the source of many of the quantitative methods in the physical, biological, and social sciences. The concepts, techniques, and applications of the elementary and integral calculus of polynomial, rational, and exponential functions. Applications emphasize the use of calculus in business and economics.

31A. Calculus and Analytic Geometry. Lecture, three hours; discussion, one hour. Prerequisite: at least three and one-half years of high school mathematics (including some coordinate geometry and trigonometry) and successful completion of the Level II Chemistry/Mathematics Preliminary Examination or completion of course 1A with a grade of C– or better. Differential calculus and applications; introduction to integration.

31AH-31BH. Calculus and Analytic Geometry (Honors Sequence). Lecture, three hours; discussion, one hour. Prerequisite: at least three and one-half years of high school mathematics (including some coordinate geometry and trigonometry) and successful completion of the Level II Chemistry/Mathematics Preliminary Examination or an additional honors placement examination, consent of instructor. An honors sequence parallel to courses 31A, 31B.

31B. Calculus and Analytic Geometry. Lecture, three hours; discussion, one hour. Prerequisite: course 31A with a grade of C– or better. Transcendental functions; methods and applications of integration.

32A. Calculus of Several Variables. Lecture, three hours; discussion, one hour. Prerequisite: course 31B with a grade of C– or better. Introduction to differential calculus of several variables.

32AH-32BH. Calculus of Several Variables (Honors Sequence). Prerequisites: course 31BH, or 31B with a grade of A and consent of instructor. An honors sequence parallel to courses 32A, 32B.

32B. Calculus of Several Variables. Lecture, three hours; discussion, one hour. Prerequisite: course 32A with a grade of C– or better. Introduction to the integral calculus of several variables.

32C. Introduction to Differential Equations. Prerequisite: course 32A or 32AH. Introduction to matrix theory; introduction to differential equations.

33AH-33BH. Matrices, Differential Equations, and Infinite Series (Honors Sequence). Prerequisites: course 32BH, or 32B with a grade of A and consent of instructor. An honors sequence parallel to courses 33A, 33B.

33B. Infinite Series. Prerequisite: course 33A or 33AH or consent of instructor. Infinite series and sequences; complex numbers.

38A-38B. Fundamentals of Arithmetic. Lecture, three hours; laboratory, two hours. Designed for prospective elementary teachers (also see Mathematics 104). The real number system, its origins, development, structure, and use. Emphasis on understanding mathematical procedures through hands-on experience with aids and models. 38A. Prerequisites: sophomore standing, two years of high school mathematics. May not be applied toward Letters and Science breadth requirements. Counting numbers and other subsystems of the rational numbers; sets; operations; relations; algorithms; measurement and approximation; applications. 38B. Prerequisite: course 38A. May not be applied toward Letters and Science breadth requirements. Numbers; functions; relations; elementary ideas of number theory; probability and statistics; the microcomputer and simple instructional programs. Other topics appropriate for the elementary classroom.

50. Elementary Statistics. (Formerly numbered 50A-50B.) Lecture, three hours; discussion, one hour. Prerequisite: three years of high school mathematics or course 1 or consent of instructor. Not open for credit to students with credit for any course from Mathematics 110A through 119 or Economics 40. Descriptive statistics, elementary probability, random variables, binomial and normal distributions. Large and small sample inference concerning means.

61. Introduction to Discrete Structures. Lecture, three hours; discussion, one hour. Prerequisites: courses 31A, 31B, and Program in Computing 10 or 110C. Galois theory, applications to geometric constructions, and solvability by radicals.

101AH-101BH. Calculus (Honors Sequence). Prerequisite: consent of instructor. An honors sequence parallel to courses 110A, 110B, and Program in Computing 10 or 110C.

111A-111B-111C. Theory of Numbers, Lecture, three hours; discussion, one hour. Prerequisites: courses 110A or 117, and 115A, or consent of instructor. Divisibility, congruences, Diophantine analysis, selected topics in the theory of primes, algebraic number theory, Diophantine equations.

112A-112B-112C. Set Theory and Logic. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B, 33B. 112A deals with informal axiomatic set theory presented as a foundation for modern mathematics. 112B and 112C cover predicate logic and formalized theories; Gödel’s completeness and incompleteness theorems.

113. Combinatorics. Lecture, three hours; discussion, one hour. Prerequisites: 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’s theorem and related topics.

114A-114B. Computability and Logic. (Formerly numbered 114.) Lecture, three hours; discussion, one hour. Prerequisite: any course from Mathematics 110A through 119. Turing machines and recursive functions; Church’s thesis; Gödel numbering; unsolvable problems; relative recursiveness and the arithmetical hierarchy. Predicate logic and formal number theory; Gödel’s incompleteness theorem; undecidability results. Selected topics from the theory of automata and computational complexity.

115A. Linear Algebra. (Formerly numbered 115.) Lecture, three hours; discussion, one hour. Prerequisite: course 33A. Abstract vector spaces; linear transformations and matrices; determinants; inner product spaces; low dimension eigenvector theory.

115B. Linear Algebra. Lecture, three hours; discussion, one hour. Prerequisite: course 115A. Linear transformations, conjugate spaces, duality; the 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.

117. Algebra for Applications. Lecture, three hours; discussion, one hour. Prerequisite: course 115A. Not open for credit to students with credit for course 101A or 110A. Integers, congruences; fields, applications of finite fields; polynomials; permutations, introduction to groups.

118. Combinatorial Algorithms. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B, 33B. Applied aspects of combinatorial mathematics, including counting and enumeration; searching and sorting techniques; recurrence relations; graph algorithms; computational complexity.

Geometry and Topology

120A-120B. Differential Geometry. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B, 33B, 131A. Curves in 3-space, 3-space; surfaces in 3-space, normal curvature. Gaussian curvature. Congruence of curves and surfaces. Intrinsic geometry of surfaces, isometries, geodesics, Gauss-Bonnet theorem.
121. Introduction to Topology. Prerequisite: course 131A. Metric and topological spaces, topological properties, completeness, mappings and homeomorphisms, the metrization problem.

122. Projective Geometry. Lecture, three hours; discussion, one hour. Prerequisites: courses 110A-110B, 115A. Projective spaces, especially lines and planes; homogeneous coordinates; the principles of duality, projectivities, the fundamental theorem, and the theorems of Desargues, Pappus, Steiner, and Pascal.

Analysis

131A-131B. Analysis. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B, 33B. Real numbers, point set topology in IR^p and in metric spaces, limits, continuity, derivatives, infinite series and sequences. 131B. Prerequisites: courses 115A, 131A. Functions of bounded variation, Riemann-Stieltjes integral, sequences and series of functions, multivariable differential calculus, implicit and inverse function theorems, extremum problems.

131AH-131BH. Analysis (Honors Sequence). Lecture, three hours; discussion, one hour. Prerequisite: consent of instructor. An honors course parallel to courses 131A-131B. Courses 131AH-131BH and 131CH form a full honors sequence in analysis.

131C. Complex Analysis. Lecture, three hours; discussion, one hour. Prerequisite: course 131A. Not open for credit to students with credit for course 132. Rigorous treatment of fundamental results of theory of functions of one complex variable. Topics include analytic functions, power series, Cauchy integral theorem and formula, residue theorem, winding numbers and local behavior of holomorphic functions, maximum principle, harmonic functions.

131CH. Complex Analysis (Honors). (Formerly numbered 132H.) Lecture, three hours; discussion, one hour. Prerequisite: course 131BH, consent of instructor. An honors course parallel to course 131C. Courses 131AH-131BH and 131CH form a full honors sequence in analysis.

132. Complex Analysis for Applications. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B, 33B. Not open for credit to students with credit for course 131C. Introduction to the basic formulas and calculation procedures of complex analysis for one variable. Applications to physics include Cauchy-Riemann equations, Cauchy integral formula, power series expansion, contour integrals, residue calculus.

133. Integration on Manifolds. Prerequisite: course 131D. Integration theory for functions of several variables, multilinear algebras, differential forms, Stokes' theorem on manifolds.

134. Measure and Integration. Prerequisite: course 131B or consent of instructor. An introduction to Lebesgue measure and integration.

135A-135B. Ordinary Differential Equations. Lecture, three hours; discussion, one hour. Prerequisites: courses 33A, 33B, 115A. Systems of differential equations; linear systems with constant coefficients, analytic coefficients, periodic coefficients, and linear systems with regular singular points; existence and uniqueness results; linear boundary and eigenvalue problems; two-dimensional autonomous systems, phase-plane analysis; stability and asymptotic behavior of solutions.

136. Partial Differential Equations. (Formerly numbered 135C.) Lecture, three hours; discussion, one hour. Prerequisites: courses 33A, 33B. Linear partial differential equations, particularly of the second order: the wave equation, the heat equation, and Laplace's equation; appropriate boundary, initial value problems, and eigenvalue problems.

Applied Mathematics

The 140 and 141 sequences are parallel courses and transferring between them is not permitted.

140A-140B-140C. Numerical Analysis. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B, 33B, 115A, and Program in Computing 3 or 10 or equivalent. Not normally open for credit to students with credit for courses 141A, 141B, Electric Engineering 124A. An introduction to numerical analysis and applications. Analysis of numerical methods for the following areas: 140A. Nonlinear equations, systems of linear equations, and eigenvalue problems. 140B. Interpolation and approximation, fast Fourier transforms, differentiation, and integration. 140C. Differential equations, systems of nonlinear equations, and optimization.

141A-141B. Applied Numerical Methods. Lecture, three hours; discussion, one hour. Prerequisites: courses 32A, 32B, 33A, 33B, 115A, and Program in Computing 3 or 10 or equivalent. Not open for credit to students with credit for courses 140A, 140B, Electrical Engineering 124A. An introduction to the fundamental principles and the spirit of applied mathematics. Emphasis on the manner in which mathematical models are constructed for physical problems. The course covers applications from many fields of endeavor (e.g., physical science, biology, economics, traffic dynamics, etc.).

142. Mathematical Modeling. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B and 33B, or consent of instructor. An introduction to the fundamental principles and the spirit of applied mathematics. Emphasis on the manner in which mathematical models are constructed for physical problems. The course covers applications from many fields of endeavor (e.g., physical science, biology, economics, traffic dynamics, etc.).

143. Analytic Mechanics. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B, 33B. Foundations of classical mechanics, Newton's laws, Lagrange equations, analytic functions, proof of Cauchy integral theorem and formula, power series expansion, contour integrals, residue calculus.

144. Linear Programming. Lecture, three hours; discussion, one hour. Prerequisite: course 115A or consent of instructor. An introduction to linear programming. Not open for credit to students with credit for Electrical Engineering 129A. Principles of linear programming, the duality theorem, the simplex method; applications to industry and business problems. Additional topics: convex analysis, integer programming, distribution and transportation algorithms, and applications to game theory.

145. Fourier Methods for Differential Equations. (Formerly numbered 145B.) Lecture, three hours; discussion, one hour. Prerequisite: course 115A or equivalent. Fourier series and integral transforms, separation of variables, eigenfunction expansions. Applications from such areas as mechanical vibrations, fluid dynamics, heat conduction, and electromagnetics.

146. Methods of Applied Mathematics. (Formerly numbered 145B.) Lecture, three hours; discussion, one hour. Prerequisite: course 115A or consent of instructor. Principles and techniques of applied mathematics. Games in extensive form. Matrix games. The minimax theorem and calculation of optimal strategies. Stochastic games, cooperative and non-cooperative solutions of matrix games. Coalition games and applications. Additional topics such as combinatorial games, repeated games, the Lemke-Howson algorithm, assignment games and the marriage problem, economic markets, cost allocation, measurement of voting power.

Probability and Statistics

The 150 and 152 sequences are parallel courses and transferring between them is not permitted.

150A-150B-150C. Probability and Statistics. Lecture, three hours; discussion, one hour. Prerequisites: courses 32B, 33B, 115A. A basic course in probability and statistics emphasizing theory and applications. The course is aimed at a general audience and prepares students to use probability and statistical models in their own field as well as to pursue more advanced topics in either subject. Course 150A and the first half of 150B are devoted to probability, the remaining half covers statistics.

151. Stochastic Processes. Lecture, three hours; discussion, one hour. Prerequisites: courses 150A-150B or consent of instructor. An introduction to the theory and application of stochastic models, emphasizing Markov chains and pure jump processes; illustrations from queueing systems, point processes, birth and death processes, renewal theory; Poisson processes, Brownian motion.

152A-152B. Statistics. Lecture, three hours; discussion, one hour. Prerequisite: for course 152A: course 32B (recommended: course 33B); for course 152B: courses 115A and 152A, or consent of instructor. Not open for credit to students with credit for former System Science 120A. An introductory course in the theory and applications of probability. The sequence condenses courses 150A-150B-150C into two quarters mainly by omitting topics, especially in probability theory.

M153. Introduction to Computational Statistics. (Same as Biomathematics M153-) Prerequisites: courses 150C or 152B or equivalent. Statistical analysis of data by means of computer packages. Regression, analysis of variance, discriminant analysis, and analysis of categorical data. Emphasis on understanding the connections between statistical theory, numerical results, and analysis of real data. Not open for credit to students with credit for former System Science 120A.

169. Mathematics of Computer Graphics. Lecture, three hours; discussion, one hour. Prerequisites: courses 115A, and Program in Computing 10 or equivalent knowledge of programming in either the Pascal or C language. Study of homogeneous coordinates, projective transformations, interpolating and approximating curves, representation of surfaces, and other mathematical concepts useful in graphics. 169HS. Honors Seminar in Mathematics of Computer Graphics. Lecture, three hours. Prerequisites: course 169, consent of instructor. Limited enrollment (admission to be based on performance in course 169 and permission of honors program). A participating seminar on topics not covered in course 169. Each student prepares a substantial course project and presents it to the class.

Special Studies

190. Honors Mathematics Seminar. Prerequisites: honors program standing, consent of instructor. A parallel seminar on advanced topics in mathematics.

191. Upper Division Seminars (2 to 4 units). Prerequisites: courses 32A, 32B, 33A, 33B, consent of instructor. Limited to 15 students. Each quarter the department offers seminars on special topics and various branches of mathematics. The method of teaching involves substantial student participation. May be repeated for credit.

199. Special Studies in Mathematics (1 to 4 units). Prerequisite: consent of department Chair and instructor. At the discretion of the Chair and subject to the availability of staff, individuals or groups may study topics suitable for undergraduate course credit but not specifically offered as separate courses. May be repeated for credit, but no more than two credits toward a minor or major in mathematics courses may be applied toward the ten upper division courses required for the degree.
Graduate Courses

Teacher Preparation

201A-201B-201C. Topics in Algebra and Analysis. Prerequisite: B.A. degree in Mathematics or equivalent. Designed for students in the mathematics-education program. Important ideas of algebra, geometry, and calculus leading effectively from elementary to modern mathematics. Approaches to the number system, point sets, geometric interpretations of algebra and analysis, integration, differentiation, series and analytic functions. May not be applied toward the M.A. degree requirements.

202A-202B. Mathematical Models and Applications. Prerequisite: B.A. degree in Mathematics or equivalent. Designed for students in the mathematics-education program. A development of mathematical theories describing various empirical situations. Basic characterizing postulates are discussed, and a logical structure of theories is developed. Modern topics such as operations research, linear programming, game theory, learning models, models in social and life sciences. May not be applied toward the M.A. degree requirements.

Number Theory

205A-205B-205C. Number Theory. Prerequisites: courses 106A and 204A, or consent of instructor. Topics from analytic algebraic and geometric number theory, including distribution of primes and factorization in algebraic number fields. Selected topics from additive number theory, Diophantine approximation, partitions, class-field theory, lattice point problems, valuation theory, etc.


Algebra

210A-210B-210C. Algebra. Prerequisites: courses 110A-110B, or consent of instructor. Topics include rings, fields, modules, and Galois theory. Important concepts include the first isomorphism theorems, unique factorization domains, field extensions, Galois theory, and quadratic reciprocity.

212A. Algebraic Geometry. Prerequisite: course 210A or consent of instructor. Topics in algebraic geometry, including affine and projective varieties, schemes, sheaves, and cohomology.

215A-215B. Commutative Algebra. Prerequisite: course 210A or consent of instructor. Topics from commutative ring theory, including techniques of localization, prime ideal structure in commutative Noetherian rings, the principal ideal theorem, Dedekind rings, modules, projective modules, the Serre conjecture, regular local rings.

Logic and Foundations

220A-220B-220C. Mathematical Logic and Set Theory. Prerequisites: courses 112A-112B-112C or equivalent. Model theory: compactness theorem; Lowenheim-Skolem theorems; definability; ultraproducts; preservation theorems; interpolation theorems, Recursion function theory: Church's thesis; recursively enumerable sets; hierarchies; degrees. Formal proofs: completeness and incompleteness theorems; decidable and undecidable theories; quantifier elimination. Set theory: Zermelo-Fraenkel and von Neumann-Godel axioms; cardinal and ordinal numbers; continuum hypothesis; constructible sets; independence results and forcing.

222A-222B. Lattice Theory and Algebraic Systems. Lecture, three hours. Prerequisite: course 210A or consent of instructor. Partially ordered sets, lattices, distributivity, modularity, completeness, interaction with combinatorics, topology, and logic, algebraic systems, construction of subdirectly irreducible lattices, congruence decompositions, congruence laws, equational bases, applications to lattices.

223A. Model Theory. Prerequisites: courses 220A-220B-220C. Topics include ultraproducts, preservation theorems, interpolation theorems, saturated models, omitting types, categoricity, two cardinal theories, enriched languages, soft model theory, and applied model theory.

223B. Set Theory. Prerequisites: courses 220A-220B-220C. Topics include constructibility theory, Cohen extensions, large cardinals, and combinatorial set theory.

223C. Recursion Theory. Prerequisites: courses 220A-220B-220C. Topics include degrees of unsolvability, recursively enumerable sets, undecidable theories, inductive definitions, admissible sets and ordinals, and recursion in higher types.


Geometry

225A-225B-225C. Differential Geometry. Prerequisite: course 231A or consent of instructor. Manifold theory: connections, curvature, torsion, and parallelism. Riemannian manifolds; completeness, submanifolds, constant curvature. Geodesics; conjugate points, variational methods, Myers theorem, nonpositive curvature. Further topics such as pinched manifolds, integral geometry, Kahler manifolds, symmetric spaces.


Topology

230. General Topology. Prerequisites: courses 131A-131B or consent of instructor. Students with credit for this course will not receive M.A. degree credit for this course. Topological spaces and maps, products, quotient spaces, connectedness and compactness, separation properties, local properties, completeness. Homotopy and the fundamental group.

231A. Manifold Theory. Prerequisites: courses 121 and 131A-131B, or consent of instructor. Manifolds, tangent and cotangent spaces, vector fields and integral curves, Lie brackets, differential forms and exterior derivative, Stokes' theorem on manifolds.

231B. Introduction to Homology Theory. Prerequisite: course 231A or consent of instructor. Elementary concepts of homology theory. Singular chains and the boundary operator, definition of homology, Mayer-Vietoris sequence, calculation of homology of standard spaces.

231C. Further Topics in Geometry and Algebraic Topology. Prerequisites: courses 231A and 231B, or consent of instructor. Topologies include cohomology and duality theories, de Rham's theorem, cup product, and the intersection theory of submanifolds. Additional topics as time permits.

232A-232B-232C. Algebraic Topology. Prerequisite: courses 121 or 230 or consent of instructor. Fundamental group; homology theory, singular theory, cellular theory, computation of homology groups; cohomology theory, cup and cap products, duality; homotopy theory, fibers, spaces, Hurewicz theorem, obstruction theory.

236. Advanced Topics in Geometric Topology. Prerequisites: courses 231A and 231B, or consent of instructor. Handlebody theory, transversality; PL topology; surgery. Topics vary from year to year.

237. Advanced Topics in Algebraic Topology. Prerequisites: courses 232A-232B-232C or consent of instructor. K-theory; fixed-point theory; extraordinary cohomology theories. Topics vary from year to year.

Analysis and Differential Equations

240. Methods of Set Theory. Lecture, three hours. Prerequisites: courses 110A-110B, 121 or equivalent, 131A-131B. Naive, axiomatic set theory, the axiom of choice and its equivalents, well-orderings, transfinite induction, ordinal and cardinal arithmetic. Applications to algebra: Hamel bases, the Stone representation theorem. Applications to analysis and topology: the Cantor-Bendixson theorem, countable-examples in measure theory, Borel and analytic sets, Choquet's theorem.


247A-247B. Classical Fourier Analysis. Lecture, three hours. Prerequisites: courses 245A-245B, 246A. Distribution on $\mathbf{R}^n$ and $T^n$: Principal values; other transforms; convolutions with singular kernels. Support; Kernel theorem. Convolution; examples of singular integrals. Tempered distributions and Fourier transform theory on $\mathbf{R}^n$. Distributions with compact or one-sided supports and their complex Fourier transforms.


250C. Advanced Topics in Ordinary Differential Equations. Prerequisites: courses 250A, 250B. Selected topics, such as spectral theory or ordinary differential operators, nonlinear boundary value problems, celestial mechanics, approximation of solutions, and bifurcation theory.

251A. Introductory Partial Differential Equations. Prerequisite: consent of instructor. Classical theory of heat, wave, and potential equations; fundamental solutions; characteristics and Huygens principle, properties of harmonic functions, classification of second-order differential operators, Maximum principles, energy methods, uniqueness theorems. Additional topics as time permits.

251B-251C. Topics in Partial Differential Equations. Prerequisite: consent of instructor. An in-depth exploration of topics of current interest in partial differential equations or their applications.

252A-252B-252C. Advanced Topics in Complex Analysis. Prerequisites: courses 245A-245B-245C and 246A-246B-246C, or consent of instructor. Potential theory, subharmonic functions, harmonic measure, Hardy spaces, extremal length, variational methods, quasiconformal mappings. Topics vary from year to year.

253A. Several Complex Variables. Prerequisites: courses 245A-245B-245C and 246A-246B-246C, or consent of instructor. Introduction to analytic functions of several complex variables. The problem of domains, Cousin problems, domains of holomorphy, complex manifolds.

254A-254B. Trigonometric Series. Prerequisite or corequisite: course 245A or 246A or consent of instructor. Selected topics in Fourier series, power series, orthogonal polynomials, almost periodic functions, and completeness of sets of functions.

Functional Analysis


255B-255C. Topics in Functional Analysis. Prerequisite: course 255A. Topics include Banach algebras, operators on Banach spaces and Hilbert space, semigroups of operators, linear topological vector spaces, and other related areas.

256A-256B-256C. Topological Groups and Their Representations. Lecture, three hours. Prerequisite: course 255A or consent of instructor. Topological groups and their basic properties. Haar measure. Compact groups and their representations. Duality and Fourier analysis on locally compact abelian groups. Induced representations. Profinite reciprocity. Representations of special groups (Lorentz, Galilean, etc.). Projective representations. Representations of totally disconnected groups.


Applied Mathematics

260. Introduction to Applied Mathematics. Prerequisite: course 142 or consent of instructor. The construction, analysis, and interpretation of mathematical models of problems which arise outside of mathematics.

261. Multiplayer Game Theory. Lecture, three hours. Prerequisite: graduate standing in mathematics or consent of instructor. Noncooperative set functions; games in characteristic function form; imputations and domination; von Neumann-Morgenstern solutions; the core; totally balanced games; kernel and nucleolus; multilinear extension and the Shapley value; fixed-point theorems; Nash equilibrium; nontransferrable utility; lambda-transfer method. Applications to market models, cost allocation, assignment and marriage problems, voting power.

M263. Hydrodynamic Instabilities and Turbulence. (Same as Earth and Space Sciences M211.) An introduction to the theories of hydrodynamic instability and the nonstatistical description of turbulence; stability bounds by the energy method; linear theory of instability; finite amplitude theories of post-instability flows; bounds on properties of turbulent flows by variational techniques.

Mr. Busse (alternate years)

264. Applied Complex Analysis. Prerequisite: course 246A or consent of instructor. Topics include contour integration conformal mapping, differential equations in the complex plane, special functions, asymptotic series, Fourier and Laplace transforms, singular integral equations.

265A. Linear Algebra, Eigenvalues, and Quadratic Forms. Prerequisites: courses 131A-131B or consent of instructor. Noncooperative utility; lambda-transfer method. Applications to topics such as continuum and particle mechanics.

271A. Tensor Analysis. Prerequisite: course 131A or consent of instructor. Algebra and calculus of tensors on n-dimensional manifolds. Curvilinear coordinate systems and coordinate-free methods. Covariant differentiation. Green-Stokes theorem for differential forms. Applications to topics such as continuum mechanics.


272. Advanced Topics in Continuum Mechanics. Prerequisites: courses 142, 251A, or equivalent. Mathematical aspects of solid and/or fluid mechanics. Instability, wave propagation, nonlinear and stochastic phenomena.


M274A. Asymptotic and Perturbation Methods I. (Same as Civil Engineering M292A.) Prerequisites: course 132, Chemical Engineering M192A, or equivalent. Topics include fundamentals of asymptotic analysis, asymptotic expansions of Fourier integrals, method of stationary phase. Watson’s lemma, method of steepest descent, uniform asymptotic expansions, elementary perturbation methods.

M274B. Asymptotic and Perturbation Methods II. (Same as Chemical Engineering M292B.) Prerequisites: course 132, Chemical Engineering M192A, or equivalent. The fundamental mathematics of asymptotic analysis, limit process expansions, regular and singular perturbation problems, matching of asymptotic expansions, multiple-scale methods, application to partial differential equations, near and far fields.

Probability and Statistics

275A-275B. Probability Theory. Prerequisite: course 245A or 246A. Connection between probability and measure theory. Weak and strong laws of large numbers, central limit theorem, conditioning, ergodic theory, martingale theory.

275C. Stochastic Processes. Prerequisites: courses 275A-275B. Selected topics such as Brownian motion and stochastic processes. Markov processes, infinite particle systems, Gaussian processes. Content varies from year to year. May be repeated for credit.
276A-276B. Mathematical Statistics. Prerequisites: courses 150A-150B-150C or 152A-152B and 131A-131B. 276A. Bayes, admissible, and minimax decision rules; sufficiency and completeness; uniformly most powerful tests. 276B. Fisher information; asymptotic properties of tests and estimators; maximum likelihood estimators; likelihood ratio and chi-square tests of hypotheses.

276C. Statistical Decision Theory. Prerequisite: course 276A. Invariant estimates and tests; best unbiased and locally best tests; multiple decision problems; application to the general linear model; other topics.

277. Sequential Analysis. Prerequisite: course 276A. Bayes sequential decision rules, stopping rules; sufficiency and completeness; uni-tio test, Wald's fundamental identity.

278. Nonparametric and Robust Statistics. Prerequisite: course 276B. Nonparametric and robust procedures are developed for hypothesis testing, estimation in one- and two-sample problems, linear and nonlinear regression, multiple classification, density estimation.

M279A-M279B-M279C. Linear Statistical Models. (Same as Public Health M205A-M205B-M205C.) Lecture, three hours. Prerequisites: course 150C or 152B. Public Health 100C, or equivalent. Topics include linear algebra applied to linear statistical models; distribution of quadratic forms, the Gauss-Markov theorem, fixed and random component models, balanced and unbalanced designs.

M280. Computational Statistics. (Same as Biomathematics M280 and Public Health M207J.) Lecture, three hours. Prerequisites: courses 15A, 150C, or equivalent. Introduction to theory and design of statistical programs: pivoting and other technologies used in stepwise regression, nonlinear regression algorithms, algorithms for balanced and unbalanced analysis of variance, including the mixed model, iterative rescaling, and other methods for log-linear models.

Special Studies

285A-285L. Seminars. Prerequisite: consent of instructor. No more than two 285 courses may be applied toward the M.A. degree requirements except by prior consent of the Graduate Vice Chair. Topics include various branches of mathematics and their applications by means of lectures and informal conferences with members of the staff.

285A. Seminar in the History and Development of Mathematics.
285B. Seminar in Number Theory.
285C. Seminar in Algebra.
285D. Seminar in Logic.
285E. Seminar in Geometry.
285G. Seminar in Analysis.
285H. Seminar in Differential Equations.
285I. Seminar in Functional Analysis.
285J. Seminar in Applied Mathematics.
286A-286M. Participating Seminars (No credit). Prerequisite: consent of instructor. Seminars and discussion by staff and students. No course credit is given, but the courses may be used to satisfy the participating seminar requirement for the Ph.D. S/U grading:

286A. Participating Seminar in the History and Development of Mathematics.
286B. Participating Seminar in Number Theory.
286C. Participating Seminar in Algebra.
286D. Participating Seminar in Logic.
286E. Participating Seminar in Geometry.
286F. Participating Seminar in Topology.
286G. Participating Seminar in Analysis.
286H. Participating Seminar in Differential Equations.
286L. Participating Seminar in Functional Analysis.
286J. Participating Seminar in Applied Mathematics.
286K. Participating Seminar in Probability.
286L. Participating Seminar in Statistics.
286M. Participating Seminar in Mathematics.

Bachelor of Science Degree

Admission

Admission to the major (not guaranteed by one's acceptance to UCLA) may be limited in total numbers to accommodate students within the limits of the facilities (staff, laboratories, computing resources) available. Admission is based on (1) academic criteria, including the minimum standards described below, and (2) the number of open positions in the program.

Pre-Mathematics/Computer Science Major

The mathematics/computer science program may soon be replaced by several new programs giving prospective students a greater diversity of choice in computational mathematics, computer sciences, and the application to other disciplines. Therefore applicants may not be admitted to this premajor but will have an opportunity to pursue one of the new alternatives. Consult the Mathematics Department for information.

You may apply for the major immediately after your freshman year (first three quarters of college or university work) if you have completed the following courses with a minimum total grade-point average of 3.3 and a grade of C or better in each: Mathematics 31A, 31B, 32A, 33A, 33B, 61, Program in Computing 10, 20, Physics 8A. You can have no more than one repeated preparation course to be eligible to apply.

If you apply after your fourth quarter of college or university work, you are normally required to complete additional "Preparation for the Major" and major courses with a minimum total GPA of 3.3 and at least a C in each. You can have no more than one repeated preparation or major course to be eligible to apply.

If you are a transfer student, you must, in addition, earn a 3.3 GPA in at least three "Preparation for the Major" or major courses at UCLA. You can have no more than one repeated preparation or major course to be eligible to apply.

Preparation for the Major


The Major

Required: Fourteen courses, seven in mathematics and seven in computer science, distributed as follows: (1) Mathematics 115A, either 110A or 117, either 150B or 152A, and four courses from 110A through 199 (suggested: 113, 114A, 11B, 140A, 140B, 140C, 141A, 141B, 142, 144, 150A or 152B, M153); (2) Computer Science 131, 141, 151A, 151B, 152A, 152B, 181, and one additional course from Electrical Engineering 121C, 124A, 127B, Mechanical, Aerospace, and Nuclear Engineering 194A, 194B, or Computer Science 111 through 199 (courses 152A and 152B are laboratory courses; each is to be taken concurrent-
by with its mate). Credit may not be applied
toward the degree for more than one of Math-
ematics 140A, 141A, Electrical Engineering
124A.

Minimum Standards
A minimum grade of C is required in each
"Preparation for the Major" course; a minimum
grade of C – is required in all major courses. In
addition, you must maintain a GPA of 2.0 or
better in upper division mathematics courses
and a GPA of 2.0 or better in upper division
computer science and electrical engineering
courses in the major.

If you do not earn the specified minimum grade
in a particular course, you must repeat that
course. If you fail to earn the minimum grade
for the repeated course, you may not remain in
the premaj or major.

Credit Limitations
The credit limitation rules that apply to math-
ematics majors also apply to mathematics/comp
puter science majors.

Honors Program
Majors who wish to graduate with honors should
apply for admission to the honors program.
You may enter the program after completing
two upper division mathematics courses and
eight upper division units in computer science
or electrical engineering courses in the major
with an overall GPA of 3.6. The program con-
sists of completing a suitable special project or
participating seminar, earning a 3.6 GPA in up-
per division mathematics courses, and a 3.6
GPA in upper division computer science and
electrical engineering courses in the major.

If you complete the program, you will be award-
ed honors at graduation; if you demonstrate
exceptional achievement, you will be awarded
highest honors.

Microbiology
5304 Life Sciences, 825-8482
Professors
Frederick A. Eisenstod. Ph.D., Chair
C. Fred Fox, Ph.D.
June Lascelles, Ph.D.
Rafael J. Martinez, Ph.D.
Donald P. Nielhch, Ph.D.
M. J. Pickett, Ph.D.
Sydney C. Rittenberg, Ph.D.
William R. Romig, Ph.D.
Elis E. Sercarz, Ph.D.
Anthony J. Salle, Ph.D., Emeritus

Associate Professors
Arnold J. Berk, M.D.
Aldons J. Lusis, Ph.D. (Medicine)
Mary C. Tettito, M.D. (Medicine)
Bernadine J. Wieneke, Ph.D.
Owen N. Witte, M.D.

Assistant Professors
Robert P. Gunsalus, Ph.D.
Joan E. McEwen, Ph.D.
Robert W. Simons, Ph.D.

Adjunct Professor
John H. Silliker, Ph.D.

Adjunct Lecturer
Laurel G. Heffernan, Ph.D.

Scope and Objectives
Microbiology at UCLA is a diverse science that
includes bacteriology, virology, and the study of
single mammalian 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 micro-
biology prepare for careers in medicine or den-
tistry, medical technology, industrial microbi-
ology (including biotechnology and genetic en-
ingineering), and agricultural or environmental
sciences, among others. The courses present-
ed by the department lead to a Bachelor of
Science degree and depend heavily on prepar-
ation in chemistry, biology, physics, and mathe-
taxics. They provide preparation for ca-
reers in microbiology or for further advanced
study leading to the doctorate.

The graduate program emphasizes the areas
of cell biology, immunology, cell and virus
structure and morphogenesis, animal virology,
general bacteriology and physiology, host-parasite
relationships, medical microbiology, microbial genetics, and recombinant DNA re-
search. Students are prepared for creative re-
search careers in all of these fields. The objec-
tive of the department is to provide breadth in
microbiology at the undergraduate level and
depth and training in independent study and
research for the graduate microbiologist.

Note: Several upper division and graduate
courses in this department are multiple-listed
with those in the Microbiology and Immunology
Department in the UCLA School of Medicine. If
you are interested in a fundamentally disease-
oriented approach to microbiology, see the Mi-
crobiology and Immunology Department de-
scription in Chapter 15.

Bachelor of Science Degree
Pre-Microbiology Major
Students (new, transfer, or change of major)
who wish to major in microbiology will first reg-
ister as pre-microbiology students. After com-
pleting the "Preparation for the Major" courses
with an overall C – grade-point average and
Microbiology 101 with a grade of C or better,
you should petition to enter the major in the
Undergraduate Office, 5205 Life Sciences. All
preparation courses must be taken for a letter
grade. Whenever possible, Microbiology 7
should be taken in place of Biology 7. If you
enter with 80 or more units of credit, in order to
specify pre-microbiology as your major, you
must have completed one year of general chem-
istry; Biology 5, 7, or equivalent; one of the fol-
lowing: organic chemistry with laboratory (two
courses), calculus-based physics, calculus (one
year).

Preparation for the Major
Required: Microbiology 7 (or Biology 7); Biol-
ology 5, 8; Chemistry 11A, 11B/11BL, 11C/
11CL, 21, 23, 25; Mathematics 3A, 3B, 3C (or
31A, 31B, 32A); Physics 6A, 6B, 6C (or 8A/
8AL, 8B/8BL, 8C/8CL, 8D/8DL).

The Major
Required: A total of 40 upper division units,
including Microbiology 101, 102, C103A or
C103B or 110, 119, M185; Chemistry 152; four
additional upper division courses from the de-
partmental list or from related departments se-
lected with approval of the faculty adviser. All
major courses must be taken for a letter grade,
with a minimum overall 2.0 GPA. A maximum
of four units of Microbiology 199 may be ap-
plied toward the major. Credit for 199 courses
from other departments may not be applied. In
addition, you must earn a C or better in
courses 101 and 102 before continuing with
further departmental upper division work. If
you repeat one of these courses, you must
earn a grade of B or better to remain in the
major.

Honors Program
An overall grade-point average of 3.2 and a 3.5
in the premaj or major are required for
graduation with honors in microbiology. Junior
standing and the sponsorship of a faculty ad-
viser are also required. For further information,
contact the Undergraduate Office.

Mathematics/Computer Science
(Interdepartmental)

6375 Math Sciences, 206-1286

Bachelor of Science Degree
The mathematics/system science major is a
cooperative program offered jointly by the
School of Engineering and Applied Science and
the Department of Mathematics. The pro-
gram, administered by the Mathematics De-
partment, leads to the Bachelor of Science de-
gree. For further information, contact the
Mathematics Department.
Master of Arts Degree

Admission
Requirements for admission are the same as for the Ph.D. degree, with the addition of a research proposal. Students who select this program must obtain sponsorship for a laboratory research problem prior to submitting an application. Information is available from the Graduate Adviser, Department of Microbiology, 5304 Life Sciences, UCLA, Los Angeles, CA 90024.

The department accepts relatively few students whose objective is a master's degree; applicants should contact a potential faculty sponsor at the time of application.

Ph.D. Degree

Admission
For admission, you must have completed an undergraduate major in science with superior scholastic achievement. You should have preparation in calculus, physics, biology, genetics, organic and biological chemistry, and microbiology. Physical chemistry is strongly recommended. You may be admitted with background deficiencies to be remedied prior to or concurrent with graduate studies. Submit scores of the Graduate Record Examination (GRE) Aptitude Test directly to the department. Evidence (via letters of recommendation, interviews, or direct knowledge) of your research potential and motivation is also required. Completion of a master's degree is not normally required.

Course Requirements

Formal Lecture/Laboratory Courses
Biochemistry: Chemistry M253 (six units; offered only in the Fall Quarter; to be completed during the first year) and Microbiology 225 or M239 (lecture and laboratory, eight units each; offered in the Winter and Spring Quarters respectively; to be completed during the first year) are required.

Genetics and Regulation: One 200-level, four-unit course to be selected from the current course listings maintained in the departmental graduate office is required.

A total of eight additional units of 200-level coursework to be selected from at least two of the following three subject areas is required: (1) general microbiology and cell biology, (2) host-parasite interactions and virology, (3) immunology. Acceptable courses are listed in the departmental graduate office.

You are expected to complete a course in physical chemistry (Chemistry 156). This requirement can be waived on the basis of work done before entering UCLA.

Student-Participation Seminar Courses
Each quarter, seminar courses in which students read and report on current scientific research literature are organized. You must enroll in five such courses (ten units), including two offerings in the C204 series, during your first two years in residence.

Laboratories
During the first 15 months of residence, you will rotate for one quarter each through three laboratories within the department (outside laboratories are permissible with the consent of the advisory committee). You will normally enroll in Microbiology 596 for four units of credit for each laboratory.

First-Year Proposal
By June 30 of your first year of study you must submit an original research proposal of approximately five pages. The topic may be based on a subject presented in a departmental professional seminar or on material from one of the seminar courses. Suggestions and evaluations will be returned to you and used by faculty to evaluate continuation into the second year.

Teaching Experience
The department considers teaching experience to be an integral part of the graduate program. All Ph.D. candidates are required to serve as teaching assistants or in some other formal teaching capacity for three quarters. Prior experience at another institution is acceptable when approved by the departmental graduate adviser.

Qualifying Examinations
The written examination must be taken within 21 months of entry into graduate school and must be passed, if reexamination is required, no later than 24 months from the date of entry. (These periods may be extended to 26 and 29 months respectively with the written consent of the departmental graduate adviser and your mentor.)

The examination is administered by the doctoral committee which will normally serve as the thesis committee as well. As a major part of the examination, you will prepare and defend a written research proposal. Before presentation to the doctoral committee, you are encouraged to present the proposal before a student seminar group.

The University Oral Qualifying Examination will cover both your proposal and general scientific background. It is not restricted to the topics of the proposal. The committee may arrange alternate ways to assess your preparation and qualifications.

Final Oral Examination
A dissertation on a subject of your choice selected in consultation with the major professor is required. The final oral examination, administered by the doctoral committee, is a defense of the completed dissertation, presented as a professional seminar and open in part to the public.

Lower Division Courses

6. Introduction to Microbiology. Lecture, three hours. Not open for credit to students with credit for courses 7, 10, 101, Biology 5, 6, 7, 8, or equivalent courses taken elsewhere. Designed for the nontechnical student; an introduction to the biology of microorganisms (bacteria, viruses, protozoa, algae, fungi) and their significance as model systems for understanding fundamental cellular processes, and their role in human affairs. (F, W, Sp)

7. The New Cell Biology. Lecture, three hours; laboratory, four hours. Prerequisites: Biology 5, Chemistry 11A. Designed for undergraduate students intending to major in microbiology and others as interested. Lecture and laboratory sessions to give students basic elements of scientific observation using prokaryotic and eukaryotic cell structure and cellular interactions. Intensive training in use of light microscope techniques. Actual on-hand training in microscopic techniques using video microscope, slides, and demonstrations. Extensive exposure to landmark observations and experiments in development of modern cell biology and structure. Mr. Fox, Mr. Witte (W).

10. General Microbiology. Lecture, three hours; laboratory, six hours. Prerequisites: course 7 (or Biology 7B), Biology 5, Chemistry 11A, 15. Designed for health sciences students. Not open for credit to students with credit for Microbiology 101; does not substitute for course 101 in the major. An introduction to the biology of bacteria and their role in diseases of man. Mr. Gunsalus (Sp), Ms. Wisnieski (Sp).

51. The Development of Bacteriology (2 units). Prerequisites: Biology 5, Chemistry 11A, 11B, 11C. Discussion of the early investigations important in the development of bacteriology and the now independent sciences of virology and immunology. P/NP grading. Mr. Rittenberg (W).

Upper Division Courses

101. Fundamentals of Bacteriology. Lecture, three hours; laboratory, six hours. Prerequisites: course 7 (or Biology 7B), Biology 5, Chemistry 21, 23, 25. The historical foundations of the science; introduction to bacterial structure, physiology, biochemistry, genetics and ecology. Mr. Gunsalus (Sp), Mr. Rittenberg (Sp), Ms. Lascelles (F), Ms. McEwen (Sp), Mr. Romig (F).

102. Introductory Virology. Lecture, three hours; laboratory, four hours. Prerequisite: course 101. Biological properties of bacterial and animal viruses; replication, methods of detection, interactions with host cells and multicellular hosts. Mr. Berk, Mr. Romig (W).

C103A. Biochemistry and Biology of Bacterial Infection. (Formerly numbered 103.) Lecture, three hours. Prerequisites: course 101, Chemistry 152. Discussions focus on the biochemical properties of bacteria which afford the potential for pathogenicity. Discussions on the epidemiology and transmission of disease, as well as chemotherapy and drug resistance, are offered. Concurrently scheduled with course C203A.

C103B. Biochemistry of Host Defense Mechanisms. Lecture, three hours. Prerequisites: courses 101, M185, Chemistry 152. The biochemical basis of host defense mechanisms is analyzed in detail. Discussions focus on the role of immunoglobulins in combating microbial invasion; the biology and biochemistry of phagocytic cells and constitutive mechanisms of host defense. Concurrently scheduled with course C203B.

C104A. Molecular Biology of Bacterial Growth (2 units). Lecture, three hours. Prerequisites: course 101, Biology 8, and Chemistry 25, or equivalent, or consent of instructor. Introduction to bacterial physiology with lectures stressing its experimental foundation. Topics include chromosome replication, gene expression, control of growth rate and cell division, role of cyclic AMP and other regulatory factors, cloning and genetic engineering. May be concurrently scheduled with course C204A.

M. Nerlich (Sp, five weeks)
M185. Immunology. (Same as Biology M185 and Microbiology and Immunology M185.) Lecture, three hours; discussion, one hour. Prerequisites: Biology 8, Chemistry 23, 25. Recommended corequisites: Chemistry 152 or 156. Introduction to experimental immunology and immunobiology. Topics include development of selected papers from the immunology literature. Designed to serve as a forum for the critical analysis of research papers.

M187. Immunology Seminar (2 units). (Same as Biology M187 and Microbiology and Immunology M187.) Prerequisites: course M185, consent of instructor. Corequisite: course M187. The course focuses on a limited number of situations designed to train the student in organizing and evaluating immunological laboratory experiments. Ms. Clark, Mr. Sercarz (W).

M204A. Molecular Biology of Bacterial Growth (2 units). Lecture, three hours; discussion, one hour. Prerequisites: course 101, Biology 8, and Chemistry 25, or equivalent, or consent of instructor. Introduction to bacterial physiology, with lectures stressing its experimental foundation. Topics include chromosome replication, gene expression, control of growth rate and cell division, role of cyclic AMP and other regulatory factors, cloning and genetic engineering. May be concurrently scheduled with course C104A. Includes an additional discussion section for graduate students on the research literature and methodology. S/U or letter grading. Mr. Nierlich (Sp, five weeks)

C204B. Biochemical Genetics of Eukaryotic Cells (2 units). Lecture, three hours; discussion, one hour. Prerequisites: prior background in microbiology, biochemistry, and genetics, consent of instructor. Important concepts and experimental approaches in biochemical genetics are illustrated with selected research papers and reviews. Topics include systematic genetic analysis of mammalian cells, somatic cell genetics, developmental genetics, genetic analysis of cancer and human genetic disorders, genetic analysis of human populations. Concurrently scheduled with course C204C. Includes an additional discussion section for graduate students on the research literature and methodology. S/U or letter grading. Mr. Lusis (F, second five weeks)

C204C. The Mammalian Cell as a Microorganism (2 units). Lecture, three hours; discussion, one hour. Prerequisites: consent of instructor. The cultured mammalian cell as an experimental system for the study of normal regulatory processes and disease mechanisms. Contents include regulation of cell growth in chemically defined medium; establishment, cloning, and characterization of cell lines, cultured cells as model systems in the study of normal growth and development, disease mechanisms and cancer. May be concurrently scheduled with course C204B. Includes an additional discussion section for graduate students on the research literature and methodology. S/U or letter grading. Mr. Lusis (F, second five weeks)

108. Hematology (2 units). Prerequisites: senior standing, consent of department. Diagnostic procedures used for the study of normal and pathological blood cells. Ms. Territo (Sp)

110. The Microbiology of Infection. Lecture, three hours; laboratory, six hours. Prerequisites: courses 101, 102, and Chemistry 152, or consent of instructor. The salient characteristics of bacteria, rickettsiae, and viruses, both pathogenic and commensal, associated with diseases of man. Mr. Pickett (F)

110C. The Laboratory Diagnosis of Infection. Lecture, two hours; laboratory, nine hours. Prerequisite: course 110. Techniques in the laboratory examination of clinical material. Mr. Pickett (W)

C111. Biology of the Prokaryotic Cell. (Formerly numbered 111.) Lecture, three hours; discussion, one hour. Prerequisites: course 101 and Chemistry 152, or consent of instructor. A review of current knowledge of the structural organization of prokaryotic cells. Emphasis on isolation methods, chemical composition, structure, components, role of cyclic AMP and other regulatory factors, cloning and genetic engineering. May be concurrently scheduled with course C104B. Includes an additional discussion section for graduate students on the research literature and methodology. S/U or letter grading. Ms. Wisniewski (W)

113. Bacterial Metabolism. Lecture, three hours. Prerequisites: course 101 and Chemistry 152, or consent of instructor. Topics of energy generation and biosynthesis in relation to bacterial growth in pure culture and natural environment. Selected topics center on readings from the current literature. Ms. Lascelles (W)

119. Microbial Genetics and Genetic Engineering. Lecture, three hours; discussion, one hour. Prerequisites: courses 102 and Biology 8, or consent of instructor. Genetics of bacteria and bacteriophages, with emphasis on recombinant DNA technology and use of microbial systems in genetic engineering. Mr. Simons (Sp)

151. Principles of Food Microbiology. Lecture, three hours. Prerequisite: course 101 (or equivalent) and consent of instructor. Fundamental concepts of food microbiology. Emphasis on basic microbiological principles as applied to food products and processing. The approach is science oriented rather than technology oriented. Readings in past and current research literature in food microbiology. Mr. Siliker (Sp)

213. Clinical Aspects of Membrane Research (2 units). Prerequisite: consent of instructor. The course discusses recent advances in clinical aspects of biological membrane behavior. Research progress in areas of medical relevance is stressed. S/U or letter grading. Ms. Wisniewski (W,Sp)
241. Methods in Membrane Biology. Lecture/discussion, three hours; laboratory, nine hours. Prerequisite: consent of instructor. Emphasis on the basic techniques for isolating and characterizing biological membranes and component molecules. Basic and advanced frontier level. M. Lusis (W, alternate years).

221U-221Z. Seminars and Symposium on Molecular Biology (2 to 4 units each). Lecture, two hours; discussion, three hours. Prerequisite: consent of instructor. Seminar courses which integrate topics with symposia organized and sponsored by the Molecular Biology Institute. These international symposia feature leading researchers in selected areas of molecular biology. Students receive an abstract booklet for the symposium and a copy of the accepted abstracts. Mr. Fox and the Staff (W).

222. Membrane Behavior. (Same as Microbiology and Immunology 222.) Lecture, two hours; discussion, two hours. Prerequisite: consent of instructor. Membrane structure and behavior are discussed and related to the function of membranes as both barriers to and mediators of normal and pathological biological responses. General principles of membrane behavior are derived from studies of simple and complex model systems. Mr. Bramhall (W).

223. Membrane Research Seminar (2 units). (Same as Microbiology and Immunology 223.) Prerequisite: consent of instructor. Critical discussions of the current literature in membrane research, with emphasis on the relationship between structure and function in lipid bilayers. May be repeated for credit. Mr. Bramhall (W).

225. Biochemical Methods in Microbial and Cell Biology (2 units). Prerequisite: consent of instructor. Emphasis on techniques for purification and characterization of proteins, including cell disruption, column chromatography, gel electrophoresis, ultracentrifugation, various optical methods, and use of radioisotopes. Mr. Lusis (W, alternate years).

225L. Laboratory in Biochemical Methods in Microbial and Cell Biology (6 units). (Formerly numbered 225L.) Laboratory, twelve hours. Prerequisite: consent of instructor. Corequisite: course 225. Laboratory in techniques for purification and characterization of proteins, including cell disruption, column chromatography, gel electrophoresis, ultracentrifugation, various optical methods, and use of radioisotopes. Mr. Lusis (W, alternate years).

230A. Structural Molecular Biology (2 units). (Same as Biology M236A and Chemistry M237A.) Lecture, two hours; discussion, one hour. Prerequisite: consent of instructor based on a written research proposal. Fundamentals of electron microscopy of macromolecules and supramolecular structures, emphasizing quantitative microscopy, high-resolution techniques, nucleic acid analysis, and studies on viruses and protein crystals. Mr. Eisenberg, Ms. Kasamatsu, Mr. Lake (W, alternate years).

230C. Structural Molecular Biology Laboratory. (Same as Biology M236C and Chemistry M237C.) Laboratory, ten hours. Prerequisite: consent of instructor based on a written research proposal. Practical experience with electron microscopy of macromolecules and supramolecular structures, emphasizing quantitative microscopy, high-resolution techniques, nucleic acid analysis, and studies on viruses and protein crystals. Mr. Eisenberg, Ms. Kasamatsu, Mr. Rees (W, alternate years).

235. Synthesis and Application of Oligonucleotides (2 units). Prerequisite: consent of instructor. Chemical methods for the synthesis of oligonucleotides and use of them for studies of molecular biology. Mr. Itakura (W).

235L. Laboratory Synthesis and Application of Oligonucleotides (6 units). Laboratory, twelve hours. Corequisites: course 235, consent of instructor. Laboratory in advanced methods in oligonucleotide synthesis and application. Oligonucleotides are synthesized chemically by either the phosphorodiamidite or phosphite method and used for site-specific mutation experiments. The resultant mutant is screened by the oligonucleotides. Mr. Lusis (W, alternate years).

239. Techniques in Nucleic Acid Research (2 units). (Same as Microbiology and Immunology 239.) Prerequisite: consent of instructor. Critical discussions of the current literature in T and B cell immunology, with emphasis on molecular mechanisms. Mr. Sercarz (F, W, Sp).

270. Seminar in Molecular Virology (2 units). Prerequisite: graduate standing, consent of instructor. Discussion and student presentations of recent work in molecular virology, including viral gene expression and function. S/U grading. Mr. Lake (W, alternate years).

280. Seminar in Molecular and Cellular Endocrinology (2 units). Prerequisites: graduate standing, consent of instructor. Discussion and student presentations of recent work in molecular and cellular endocrinology. S/U grading. Mr. Fox (Sp).

294. Seminar on Current Topics in Molecular Biology (2 units). (Same as Biological Chemistry M296, Biology M296, Chemistry M296, Microbiology and Immunology M298, and Molecular Biology M298.) Discussion, one hour. Prerequisite: consent of instructor and graduate adviser of Interdepartmental Molecular Biology Ph.D. committee. Each student conducts or participates in discussions on assigned topics. May be repeated for credit.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit.

596. Directed Individual Research (2 to 12 units). Research for M.A. Thesis (2 to 12 units).

599. Research for Ph.D. Dissertation (2 to 12 units).

Molecular Biology (Interdepartmental)

168 Molecular Biology Institute, 825-1018

Professors
Daniel E. Atkinson, Ph.D. (Biochemistry)
Marcel A. Baluda, Ph.D. (Pathology)
Paul D. Boyer, Ph.D. (Biochemistry)
William R. Clark, Ph.D. (Immunology)
Richard E. Dickerson, Ph.D. (Biochemistry and Geophysics), Director
David S. Eisenberg, Ph.D. (Chemistry and Molecular Biology)
Frederick A. Eiserling, Ph.D. (Microbiology)
John H. Fessler, Ph.D. (Biology and Molecular Biology)
C. Fred Fox, Ph.D. (Microbiology and Molecular Biology)
David G. Geltz, Ph.D. (Biological Chemistry)
Robert Goldberg, Ph.D. (Biology)
Michael Grunstein, Ph.D. (Biochemistry and Molecular Biology)
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 drawn from participating departments and from the Molecular Biology Institute. Areas for study include structure and function of macromolecules, molecular genetics, and virology; bioenergetics, catalysis, and control; molecular basis of chromosome replication and gene expression and of cancer and its control.

Ph.D. Degree

Admission

Recommended undergraduate training for the Ph.D. program includes a major in a biological or physical science. Coursework should include mathematics through calculus, one year of general and organic chemistry, one year of physics, two quarters of physical chemistry based on the use of calculus, and one year of biology. Undergraduate requirements may be modified for qualified candidates with interests in certain areas. Candidates who enter the program with course deficiencies will be expected to fulfill these early in the graduate program. In addition to University requirements, six quarters of Molecular Biology M298 are required.

Only superior students are admitted, and in addition to the application, transcripts, and statement of purpose, three letters of recommendation are required along with Graduate Record Exam (GRE) scores. Copies of materials sent to the Graduate Admissions Office should also be sent directly to the Graduate Office, Molecular Biology Program, 168 MBI, UCLA, Los Angeles, CA 90024.

Course Requirements

The usual program is two regular courses per quarter in addition to laboratory research, or the equivalent of 12 quarter units of upper division or graduate work. Six quarters of Molecular Biology M298 are required.

Teaching Experience

Teaching experience is encouraged, although it is not a requirement for the degree.

Qualifying Examinations

Examinations will be given in Molecular Biology M298, and four must be passed. The University Oral Qualifying Examination on original research proposed by the candidate independently of the Ph.D. adviser and on a topic distinct and separate from thesis research is held usually during the second year in the program. A "midstream seminar" must be presented at least six months prior to the final oral examination (usually during the third year).

Final Oral Examination

The final oral examination is required of all students for the degree.

Graduate Course

M298. Seminar on Current Topics in Molecular Biology (2 units). (Same as Biological Chemistry M255, Biology M296, Chemistry M298, Microbiology M298, and Microbiology and Immunology M298.) Discussion, one hour. Prerequisite: consent of instructor and graduate adviser of interdepartmental Molecular Biology Ph.D. committee. Each student conducts or participates in discussions on assigned topics. May be repeated for credit.

Near Eastern Languages and Cultures

376 Kinsey Hall, 825-4165

Professors

Amin Banari, Ph.D. (Persian and History)
Arnold J. Band, Ph.D. (Hebrew)
Andras Bodrogligeti, Ph.D. (Turkic and Iranian)
Seeger A. Bonebakker, Ph.D. (Arabic)
Giorgio Buccellati, Ph.D. (Ancient Near East and History)
John Calender, Ph.D. (Egyptology)
Herbert A. Davidson, Ph.D. (Hebrew)
Ismael Poonawala, Ph.D. (Arabic)
Yona Sabar, Ph.D. (Hebrew)
Avedis K. Sanjian, Ph.D. (Narekatsi Professor of Armenian Studies)
Hans-Peter Schmidt, Ph.D. (Indo-Iranian)
Stanislaw Segert, Ph.D. (Biblical Studies and Northwest Semitics)
Wolf Leslau, Docteur es Lettres, Emeritus
Moshe Perlmann, Ph.D., Emeritus

Associate Professors

Elizabeth Carter, Ph.D. (Near Eastern Archaeology)
Lev Hakak, Ph.D. (Hebrew)
Thomas Penchoen, Ph.D. (Berber and Arabic)
The department offers instruction in the major modern and ancient languages of the Near East: Arabic, Turkic, Persian, Hebrew, Akkadian, and Egyptian. It also provides instruction in Coptic, Armenian, Berber, and various Turkic languages of Central Asia. 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, and Jewish studies. Masters and Ph.D. programs are available 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, archaeology, the Peace Corps, journalism abroad, the Foreign Service, and further academic work involving the area.

Undergraduate Study

The department offers the Bachelor of Arts degree in four fields: (1) Ancient Near Eastern Civilizations, (2) Arabic, (3) Hebrew, and (4) Jewish Studies. In each of these fields you must meet the prerequisites and take the courses prescribed. Your adviser will assist in selecting a plan of study developed around your interests.

Bachelor of Arts in Ancient Near Eastern Civilizations

There are four options for a major in ancient Near Eastern civilizations: (1) Mesopotamia, (2) Egypt, (3) Syria-Palestine, and (4) biblical studies.

Preparation for the Major

Prerequisites for options 1 and 2 are German 1 and 2; prerequisites for options 3 and 4 are Greek 1, 2, Hebrew 1A-1B-1C, 102A-102B-102C. Majors in all four fields will be expected to continue their study of German or Greek beyond the prerequisite levels.

The Major

Majors in all four options are required to take 14 courses selected in consultation with the program adviser.

Majors selecting options 1, 2, and 3 are required to take four language courses as follows: option 1: Semitics 140A-140B, 141, 142; option 2: Ancient Near East 120A-120B-120C, 121A; option 3: Semitics 130 and three quarters of Hebrew 120. The remaining ten courses for all three options are to be selected from the following: three literature courses from Ancient Near East 150A, 150B, 150C, Jewish Studies M150A; three courses in history and religion from Ancient Near East 130, 170, History M104A, M104B, 105, M191A, 193D, 203, Iranian 169, 170, three courses in archaeology and art from Ancient Near East 160A, 160B, 161A, 161B, 161C, 162, Art History 102; one course in research methodology (such as Anthropology 115Q, 115R, 116P, or M116Q, or Linguistics 120A, 120B, or English 100A, 140A) taken preferably in another department with the consent of the adviser.

Majors selecting option 4 are required to take 14 courses as follows: three quarters of Hebrew 120; Ancient Near East 150C, 162, 170; English 108B or History 194A; Greek 130; Jewish Studies M150A; History M191A; Semitics 130. The remaining three courses may be selected from Ancient Near East 104A, M104B, 130, 150A, 150B, 160A, 160B, Art History 102, 105A, Classics 168, Greek 131, History 105, 193D, 194B, Iranian 169, 170, Latin 120.

Bachelor of Arts in Arabic

Students majoring in Arabic may combine the major with the interdepartmental Program in Business and Administration to enhance their career opportunities. Due to the number of additional courses required, you are advised to consider this option early in your academic career.

Preparation for the Major

Required: Arabic 1A-1B-1C, 150A-150B.

The Major


Bachelor of Arts in Hebrew

Preparation for the Major

Required: Hebrew 1A-1B-1C, 102A-102B-102C, Jewish Studies M150A-150B, or equivalent.

The Major

Required: Sixteen courses, including Hebrew 103A-103B-103C; three quarters of Hebrew 120; two courses from Hebrew 130, 135; two courses from Hebrew 140, 160; Hebrew 190A-190B; two additional courses in Hebrew or Arabic to be approved by the adviser; two courses from History M191A, M191B, 192A, 192B.

Bachelor of Arts in Jewish Studies

Preparation for the Major

Required: Hebrew 1A-1B-1C, History M191A-M191B, or equivalent.

The Major

Required: Sixteen courses, including Hebrew 102A-102B-102C, 103A-103B-103C, Jewish Studies M150A-150B, 151A-151B, 199, and five other upper division courses. At least two of the five must be courses in the areas of Hebrew, Jewish history, or Yiddish. The remaining three may be selected either from those areas or from courses with Jewish content given in other departments and approved by the adviser.

Master of Arts Degree

Admission

In addition to the regular University requirements, a bachelor's degree or its equivalent in the language area selected for the degree, the Graduate Record Examination (GRE) Aptitude Test, and three letters of recommendation are required. As a rule, you will not be admitted if your grade-point average is below 3.25 or if your GRE score is below 1600. Prospective students may write to the Department of Near Eastern Languages and Cultures, 376 Kinsey Hall, UCLA, Los Angeles, CA 90024. You will be assigned an adviser after being admitted. Subsequently, an examining committee will be established to administer the comprehensive examination.

Major Fields or Subdisciplines

Ancient Near Eastern civilizations, Arabic, Armenian, Hebrew, Iranian, Semitics, Turkic.

You may concentrate on either language or literature in your chosen field but will be required to do work in both. In the case of the ancient Near Eastern field, you may concentrate on a combination of both language and literature with Near Eastern archaeology.

Foreign Language Requirement

You will be required to pass an examination in one major modern European language other than English by the end of the third quarter of residence. The choice of the language will be determined in consultation with your adviser.
You may satisfy this requirement by one of the following methods: (1) Educational Testing Service (ETS) examination with a minimum score of 550, (2) departmentally administered examination, (3) two years of language instruction at a UC campus, with grades of B or better. It is strongly recommended that if you intend to continue toward a Ph.D. degree, you acquire knowledge of a second major European language other than English while still a candidate for the M.A. degree.

**Course Requirements**

A minimum of nine upper division and graduate courses is required, at least six of which must be on the graduate level. All candidates are required to take one quarter of Near Eastern Languages 200.

Students in ancient Near Eastern civilizations are required to study two ancient languages of the Ancient Near East (Ancient Egyptian, Akkadian, Aramaic, or Hebrew) and the history and archaeology of the related area. The area of concentration may be either the linguistic, literary, or archaeological aspect of the discipline.

Students in Hebrew are required to study Hebrew and another Semitic language; in Semitics, three Semitic languages; in Turkish, two Turkic languages; in Arabic, Armenian, and Iranian, the major language and one culturally related Near Eastern language.

Twelve units of course 596 may be applied toward the total course requirement; eight units may be applied toward the minimum graduate course requirement.

**Comprehensive Examination Plan**

After completion of course requirements and the foreign language examination, you will be required to take a written comprehensive final examination in your major and related fields.

**Ph.D. Degree**

**Admission**

In addition to the regular University requirements, an M.A. or equivalent in your field, the Graduate Record Examination (GRE) Aptitude Test, and three letters of recommendation are required. As a rule, you will not be admitted if your grade-point average is below 3.25 or if your GRE score is below 1600. Prospective students may write to the Department of Near Eastern Languages and Cultures, 376 Kinsey Hall, UCLA, Los Angeles, CA 90024.

The M.A. program need not have been completed at UCLA. You will be assigned an adviser after being admitted. Subsequently, an examining committee will be established to administer the qualifying examinations.

**Major Fields or Subdisciplines**

Ancient Near Eastern civilizations, Arabic, Armenian, Hebrew, Iranian, Semitics, Turkic.

You may concentrate on either language or literature in your chosen field but will be required to do work in both. In all areas of specialization, your program of study will be selected in consultation with your adviser.

**Foreign Language Requirement**

Two modern major European languages other than English are required. The choice of languages must be approved by the adviser, who may also require additional language skills in modern and/or ancient languages if such skills are needed for scholarly work in the area of your interests.

The requirement is fulfilled by one of the following options: (1) passing the Educational Testing Service (ETS) examination with a minimum score of 550, (2) departmentally administered examination, (3) two years of language instruction at a UC campus, with grades of B or better.

You are expected to pass one of the two required European languages at the beginning of your first quarter in residence and the second language no later than the beginning of the fourth quarter.

**Course Requirements**

If you are specializing in the languages of the Near East, you are expected to take the equivalent of one year of general linguistics and one year of grammar in your field of concentration (e.g., Semitics or Turkic). You must also achieve competence in three culturally related languages within your field of concentration, with particular emphasis on two. You are also advised to acquaint yourself with the historical, literary, religious, and social background of the various language areas selected.

If you are specializing in the literatures of the Near East, you are required to achieve competence in two languages; your second language must be a literary language from the cultural area related to the first (e.g., a Hebrewist can choose Akkadian, Arabic, Aramaic, or Yiddish; an Arabist can choose Persian or Turkish, and so on). You must also be familiar with the history of literary criticism and methods of literary research. This requirement may be fulfilled by taking courses offered by various departments at UCLA, particularly the course in literary criticism offered by the English Department or the course in the methodology of comparative literature.

If you are specializing in ancient Near Eastern civilizations, you will be required to achieve competence in two ancient languages. You may concentrate in either the linguistic, literary, or archaeological aspect of the discipline.

**Qualifying Examinations**

You must pass the written qualifying examinations before your doctoral committee is formed.

Candidates in languages will be examined in three Near Eastern languages and the literary and historical background of at least two of them. Candidates in literature will be examined in the literatures written in two languages within the cultural area of concentration and the historical and cultural background of these languages, with emphasis on one of them. Candidates in ancient Near Eastern civilizations will be examined in two ancient languages and the history and archaeology of the ancient Near East.

When you have passed the written examinations, your doctoral committee will administer the University Oral Qualifying Examination. Passing this examination allows you to advance to candidacy and begin work on the dissertation.

**Candidate in Philosophy Degree**

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

**Final Oral Examination**

The department does not require an oral defense of the dissertation except when deemed necessary by the doctoral committee.

**Ancient Near East**

(Akkadian, Aramaic, Phoenician, and Ugaritic are listed under Semitics.)

**Upper Division Courses**

M104A-M104B, Ancient Egyptian Civilization. (Same as History M104A-M104B.) Course M104A is not prerequisite to M104B. The course studies the political and cultural institutions of ancient Egypt and the ideas on which they were based. Discussion proceeds chronologically and covers Prehistory, the Old and Middle Kingdoms in M104A. M104B covers the New Kingdom and the Late period until 332 B.C.

Mr. Callender (alternate years)

120A-120B-120C, Elementary Ancient Egyptian. Lecture, three hours; laboratory, two hours. Prerequisites: consent of instructor. Grammar and texts.

Mr. Callender

121A-121B-121C, Intermediate Ancient Egyptian. Lecture, three hours. Prerequisites: courses 120A-120B. Readings in ancient Egyptian literature.

Mr. Callender

123A-123B, Coptic. Lecture, three hours. Prerequisites: consent of instructor. An introduction to Coptic grammar and reading of Coptic texts.

Mr. Callender

124, Middle Egyptian Technical Literature. Prerequisites: course 121C. Reading of Middle Egyptian technical literature in hieroglyphic transcription. Included are medical, veterinary, mathematical, and astronomical texts.

Mr. Callender

130, Ancient Egyptian Religion. Lecture, three hours. An introductory survey of various ancient Egyptian religious beliefs and practices, their origin, and development. Included are discussions of religious-political institutions such as divine kingship and pious foundations.

Mr. Callender

140A-140B, Elementary Sumerian. Lecture, three hours. Prerequisites: Semitics 140A-140B. Elementary grammar and reading of royal inscriptions, letters, and administrative texts from the Ur III period.

145, Sumerian Literary Texts. Lecture, three hours. Prerequisites: courses 140A-140B or consent of instructor. Reading and interpretation of selected Sumerian literary texts.
150A-150B-150C. Survey of Ancient Near Eastern Literatures in English. Lecture, three hours. Each course may be taken independently for credit. 150A. Mesopotamia: 150B. Egypt; 150C. Syria and Palestine. Mr. Buccellati, Mr. Callender, Mr. Segert

160A-160B. Introduction to Near Eastern Archaeology. Lecture, three hours. Terminology, geography, principles, strategy of research, bibliography, and a general survey of Near Eastern archaeology. Ms. Carter (alternate years)

161A-161B-161C. Archaeology of Mesopotamia. Prerequisite: consent of instructor. Survey of the main archaeological periods in Mesopotamia, with special emphasis on late prehistoric and early historical periods and with reference to neighboring cultural areas. Each course may be taken independently for credit. Ms. Carter

162. Archaeology of Palestine. Lecture, three hours. A survey of the archaeology of Palestine and the Sinai Peninsula from the Bronze Age to the destruction of Jerusalem in A.D. 70, with emphasis on the geographic setting and relationships to the other cultures of the Near East. Mr. Segert (alternate years)

163A-163B. Archaeology of Iran. Lecture, three hours. Designed to introduce students to Iranian archaeology from prehistoric through Achaemenid times. 163A focuses on the prehistoric and protohistoric cultures of Iranian archaeology. 163B covers the archaeology of Elam, the Iron Age, and the Achaemenid Empire. Ms. Carter

164A-164B-164C. The Archaeology of the Historic Periods in Mesopotamia. Prerequisites: courses 161A-161B-161C or consent of instructor. Survey of the main archaeological periods in Mesopotamia, with special emphasis on the historic periods and with reference to neighboring cultural areas. Each course may be taken independently for credit. Ms. Carter

170. Introduction to Biblical Studies. Lecture, two hours. Knowledge of original languages is not required. The Bible (Old and New Testaments) as a book. Canon, text, and versions. Lingusitic, literary, historical, and religious approaches to Bible study. Survey of history of interpretation from antiquity to the present. Mr. Segert

199. Special Studies in the Ancient Near East (2 to 8 units). Prerequisite: consent of instructor.

Graduate Courses

210. Late Egyptian. Lecture, three hours. Prerequisites: courses 121A-121B-121C, consent of instructor. Late Egyptian grammar and reading of both hieroglyphic and hieratic texts. May be repeated for credit. Mr. Callender

211A-211B. Texts of the Greco-Roman Period. Prerequisite: course 121C. Introduction to the grammar and orthography of hieroglyphic texts from Greco-Roman temples. Text readings and translation of various textual types. Mr. Callender

220. Seminar in Ancient Egypt. Seminar, three hours. Prerequisite: consent of instructor. May be repeated for credit. Mr. Callender

221A-221B. Demotic. Prerequisite: course 121C. Introduction to Demotic grammar and orthography. Reading of texts from various genres. Mr. Callender

240A-240B-240C. Seminar in Sumerian Language and Literature. Lecture, two hours. Prerequisite: consent of instructor. Readings of texts from various Sumerian periods and literary genres; selected problems in linguistic or stylistic analysis and literary history. Mr. Buccellati

250. Seminar in Ancient Mesopotamia. (Same as History M250.) Selected topics on the political, social, and intellectual history of ancient Mesopotamia. May be repeated for credit. Mr. Buccellati

250X. Seminar in Ancient Mesopotamia (1 unit). Prerequisite: consent of instructor. Selected topics on the political, social, and intellectual history of ancient Mesopotamia. A course for students who participate regularly in class meetings but without the homework required in course M250. May be repeated for credit. Mr. Buccellati

260. Seminar in Near Eastern Archaeology. Lecture, two hours. Prerequisite: consent of instructor. May be repeated for credit.

261. Practical Field Archaeology (2 to 8 units). Fieldwork, two hours. Prerequisite: consent of instructor. Participation in archaeological excavations or other archaeological research in the Near East under supervision of the staff. May be repeated. Mr. Buccellati, Ms. Carter

262. Seminar in Object Archaeology. Discussion, two hours; laboratory, one hour. Prerequisite: consent of instructor. Selected topics in the analysis and interpretation of Near Eastern archaeological finds in museum collections. Students work with objects in the Heeremaneke Collectoin of the Los Angeles County Museum of Archaeology. Mr. Segert


596. Directed Individual Study (2 to 8 units). May be repeated for credit.

597. Examination Preparation (2 to 8 units). May be repeated for a maximum of twenty-four units.

599. Ph.D. Dissertation Research and Preparation (2 to 8 units).

Related Courses in Other Departments

Art History (Art, Design, and Art History) 101A. Egyptian Art and Archaeology

History M104A-M104B. Ancient Egyptian Civilization


Arabic

Lower Division Courses

1A-1B-1C. Elementary Literary Arabic. Lecture, six hours. Basic grammar and syntax.

Upper Division Courses

102A-102B-102C. Intermediate Literary Arabic. Lecture, four hours; discussion, one hour. Prerequisites: courses 1A-1B-1C or consent of instructor. Grammar and syntax; readings from excerpts from literary texts; composition.

111A-111B-111C. Elementary Spoken Egyptian Arabic. Lecture, three hours. Prerequisites: courses 1A-1B-1C or consent of instructor. Basic grammar and syntax of Egyptian colloquial Arabic.

112A-112B-112C. Advanced Spoken Egyptian Arabic (Formerly numbered 112.). Lecture, three hours. Prerequisites: courses 111A-111B-111C or consent of instructor. Grammar and syntax; excerpts from literary texts using colloquial Arabic.

114A-114B-114C. Spoken Moroccan Arabic. Lecture, three hours; laboratory, one hour. Introduction to the spoken Arabic dialect of Morocco. Phonology, morphology, and syntax are presented. Emphasis on developing oral skills. Mr. Penchoen

120. Islamic Texts. Prerequisite: course 102C or equivalent. Readings from Koran, Tafsir, Hadith, Figh. May be repeated for credit.

130. Classical Arabic Texts. (Formerly numbered 130A-130B-130C.) Lecture, three hours. Prerequisite: course 102C or equivalent. Readings from medieval literary texts, with grammatical and syntactical analysis. May be repeated for credit. Mr. Bonebakker

132. Philosophical and Kalam Texts. (Formerly numbered 132A-132B-132C.) Lecture, three hours. Prerequisite: course 120 or consent of instructor. Readings in medieval and Kalam texts. May be repeated for credit. Mr. Davidson

140. Modern Arabic Texts. (Formerly numbered 140A-140B-140C.) Lecture, three hours. Prerequisite: course 102C or equivalent. Readings in contemporary Arabic texts, including newspapers and journals. May be repeated for credit. Mr. Poonawala

141. Modern Arabic Literature. Lecture, three hours. Prerequisites: two quarters of course 140 or consent of instructor. Readings in selected texts representing the most important trends in contemporary Arabic literature, with an outline of literary history; from the beginning of the 19th century to the present. Conducted in Arabic. May be repeated for credit.

150A-150B. Survey of Arabic Literature in English. Lecture, three hours. Knowledge of Arabic is not required. Survey of Arabic literature from its beginning to the present, with selected readings in translation. Each course may be taken independently for credit. Mr. Bonebakker (F,W)

199. Special Studies in Arabic (2 to 8 units). Prerequisite: consent of instructor.

Graduate Courses

220. Seminar in Islamic Texts. (Formerly numbered 220A-220B-220C.) Lecture, three hours. Prerequisite: consent of instructor. Doctrines and hermeneutics of various schools of thought in Islam, with selected readings from major works. May be repeated for a maximum of twenty-four units. Mr. Poonawala (F,W,Sp, alternate years)

230. Medieval Literary Texts. (Formerly numbered 230A-230B-230C.) Lecture, two hours. Prerequisite: consent of instructor. Readings in Arabic prose and poetry, survey of prosody. May be repeated for a maximum of twenty-four units. Mr. Bonebakker (F,W,Sp)

240. Seminar in Arab Historians and Geographers. (Formerly numbered 240A-240B-240C.) Lecture, three hours. Prerequisite: consent of instructor. Selected readings from the works of major historians, geographers, and travelers. May be repeated for a maximum of twenty-four units. Mr. Poonawala (F,W,Sp, alternate years)

250. Seminar in Arabic Literature. (Formerly numbered 250A-250B-250C.) Lecture, two hours. Prerequisite: consent of instructor. Readings from Arabic literature. Readings of texts from manuscript. May be repeated for a maximum of twenty-four units. Mr. Bonebakker (F,W,Sp)

596. Directed Individual Study (2 to 8 units). May be repeated for credit.

597. Examination Preparation (2 to 8 units). May be repeated for a maximum of twenty-four units.

599. Ph.D. Dissertation Research and Preparation (2 to 8 units).

Related Courses in Another Department

History 106A-106B-106C. Survey of the Middle East from 500 to the Present

204A-204B. Seminar in Near and Middle Eastern History
Armenian

Upper Division Courses

102A-102B-102C. Intermediate Modern Armenian. Prerequisites: courses 101A-101B-101C or equivalent. Reading of selected texts, composition, and conversation in intermediate level. Mr. Sanjian
103. Advanced Modern Armenian. (Formerly numbered 103A-103B-103C.) Lecture, three hours. Prerequisites: courses 102A-102B-102C or equivalent. Readings in advanced modern Armenian texts. May be repeated twice for credit. Mr. Sanjian
130A-130B. Elementary Classical Armenian. Lecture, three hours. Grammar of the classical Armenian language and readings of selected texts. Mr. Sanjian
131A-131B. Intermediate Classical Armenian. Lecture, three hours. Prerequisites: courses 130A-130B or equivalent. Reading of selected texts. Mr. Sanjian
132A-132B. Advanced Classical Armenian. Lecture, three hours. Prerequisites: courses 131A-131B or equivalent. Readings in advanced classical Armenian texts. Mr. Sanjian
150A-150B. Survey of Armenian Literature in English. Lecture, three hours. Knowledge of Armenian is not required. Each course may be taken independently for credit. Mr. Sanjian
160A-160B. Armenian Literature of the 19th and 20th Centuries. Lecture, three hours. Prerequisites: courses 102A-102B-102C or equivalent. Reading of texts and discussion of various genres of modern Armenian literature within the context of the Armenian cultural renaissance. Mr. Sanjian
199. Special Studies in Armenian Language and Literature (2 to 8 units). Prerequisite: consent of instructor. Mr. Sanjian

Graduate Courses

207. Armenian Intellectual History. Lecture, three hours. Intellectual and cultural trends reflected in Armenian literature, historiography, religious and philosophical thought. Mr. Sanjian
210. History of the Armenian Language. Lecture, three hours. Prerequisite: consent of instructor. The development of the Armenian language in its various stages: classical, middle, and modern. Mr. Sanjian
220. Armenian Literature of the Golden Age (A.D. 5th Century). Lecture, three hours. Prerequisites: courses 131A-131B or equivalent. Readings of texts and discussion of literary genres; course concentrates on the original works and those translated from Greek and Syriac. Mr. Sanjian
250A-250B. Seminar in Armenian Literature. Seminar, three hours. Prerequisite: consent of instructor. Selected topics from various periods of Armenian literature. May be repeated for credit. Mr. Sanjian
250C. Seminar in Armenian Paleography. Seminar, three hours. Prerequisite: consent of instructor. Discussion of a variety of Armenian scripts and training in the use of manuscripts. Mr. Sanjian
596. Directed Individual Study (2 to 8 units). May be repeated for credit. Mr. Sanjian
597. Examination Preparation (2 to 8 units). Mr. Sanjian
599. Ph.D. Dissertation Research and Preparation (2 to 8 units). Mr. Sanjian

Related Courses in Other Departments


Berber

Upper Division Courses

101A-101B-101C. Elementary Berber. Lecture, three hours; laboratory, two hours. Development of oral proficiency and analysis of basic grammatical structure. Mr. Penchoen (F,Sp)
102A-102B-102C. Advanced Berber. Prerequisites: courses 101A-101B-101C or consent of instructor. Advanced study of Berber. Regional and stylistic variants in folk literature. Mr. Penchoen (F,Sp)
130. The Berbers. Examination of the main features of Berber societies and cultures, with particular attention to social structures and institutions on the one hand, and to customs, values, and beliefs on the other. The course presents a broad framework within which the study of particular aspects of Berber cultures may be pursued. Mr. Penchoen
199. Special Studies in Berber Languages (2 to 8 units). Prerequisite: consent of instructor. Study based on the requirements of the individual student. Mr. Penchoen

Hebrew

Lower Division Courses

1A-1B-1C. Elementary Hebrew. Lecture, three hours; laboratory, two hours. Structural principles of grammar. Students who have prior knowledge of reading and some vocabulary are advised to take courses 10A-10B-10C. Students with credit for course 10A will not receive credit for 1A; those with credit for course 10B will not receive credit for 1B and/or 1C. Mr. Sabar (F,Sp)
10A-10B-10C. Accelerated Elementary Hebrew. Lecture, five hours. Open to students who wish to cover the equivalent of two years of college Hebrew in one academic year. Designed for students who have previously studied the rudiments of Hebrew. Students with credit for course 1A will not receive credit for 10A; those with credit for course 1B and/or 1C will not receive credit for 10B. Mr. Davidson (F,Sp)

Upper Division Courses

102A-102B-102C. Intermediate Hebrew. Lecture, five hours. Prerequisites: courses 1A-1B-1C or equivalent. Amplification of grammar; reading of vocalized texts from modern, biblical, and medieval/rabbinic literature. Section 1 is for students with strong grammatical background; section 2, for students with strong conversational background. The two sections should be equal in both language skills by the end of Winter Quarter. Mr. Sabar (F,Sp)
103A-103B-103C. Advanced Hebrew. Lecture, three hours; conversation, two hours. Prerequisites: courses 102A-102B-102C or equivalent. Introduction to modern Hebrew literary texts. Mr. Hakak (F,Sp)
120. Biblical Texts. Lecture, three hours. Prerequisites: courses 103A-103B-103C or consent of instructor. Reading of biblical Hebrew prose and poetry. May be repeated for a maximum of sixteen units. Mr. Davidson
130. Rabbinic Texts. Lecture, three hours. Prerequisites: courses 103A-103B-103C or consent of instructor. Readings in medieval Hebrew prose and poetry. May be repeated for a maximum of sixteen units. Mr. Davidson
140. Modern Hebrew Poetry and Prose. Lecture, three hours. Prerequisites: courses 103A-103B-103C or consent of instructor. Analysis of the major Hebrew writers of the past one hundred years: prose — Mendele, Ahad Ha’am, Agnon, Yizhar; poetry — Bialik, Tchernichovsky, Greenberg, Shlonsky, Alterman, Amhali. May be repeated for credit. Mr. Hakak
160. The Hebrew Essay. Lecture, three hours. Prerequisites: courses 103A-103B-103C or consent of instructor. The Hebrew essay from its rise in Europe in the late 18th century to the contemporary Israeli essay. The literary, political, philosophical, and scholarly essay is studied. May be repeated for credit. Mr. Hakak
190A-190B. Survey of Hebrew Grammar. Lecture, three hours. Prerequisites: courses 102A-102B-102C or consent of instructor. Descriptive and comparative study of Hebrew as a language and as a written form. Mr. Sabar (W,Sp)
199. Special Studies in Hebrew (2 to 8 units). Prerequisite: consent of instructor.

Graduate Courses

210. History of the Hebrew Language. Prerequisites: courses 103A-103B-103C or consent of instructor. The development of the Hebrew language in its various stages: biblical, Mishnaic, medieval, modern, and Israeli; differences in vocabulary, morphology, syntax, and the influence of other languages; problems of language expansion in Israeli Hebrew. Mr. Sabar (Sp, alternate years)
220. Studies in Hebrew Biblical Literature. Lecture, three hours. A critical study of the Hebrew text in relation to the major versions; philological, comparative, linguistic study of various biblical books. May be repeated for credit. Mr. Segert
230. Seminar in Medieval Hebrew Literature. Seminar, three hours. May be repeated for credit. Mr. Davidson (F,W)
231. Texts in Judeo-Arabic. Prerequisite: reading knowledge of Hebrew and Arabic. Reading the philological texts in Judeo-Arabic. Mr. Davidson
241. Studies in Modern Hebrew Prose Fiction. Studies in specific problems and trends in Hebrew prose fiction of the last two centuries. May be repeated for credit. Mr. Band (W,Sp)
596. Directed Individual Study (2 to 8 units). May be repeated for credit.
221A-231B. Middle Iranian. Prerequisite: consent of instructor. Studies in the grammars and texts of such Middle Iranian languages as best serve the students' needs (e.g., Pahlavi, Sogdian, Sakian). Only course 221B may be repeated for credit. Mr. Schmidt
250. Seminar in Classical Persian Literature. Seminar, three hours. Prerequisites: courses 103A-103B-103C and 189, or consent of instructor. May be repeated twice for credit.
Mr. Banani
251. Seminar in Contemporary Persian Literature. Seminar, three hours. Prerequisites: course 140 or equivalent, consent of instructor. Studies in specific problems and trends in Persian poetry and prose in the 20th century. May be repeated twice for credit.
Mr. Banani
596. Directed Individual Study (2 to 8 units). May be repeated for credit.
597. Examination Preparation (2 to 8 units).
599. Ph.D. Dissertation Research and Preparation (2 to 8 units).

Related Courses in Other Departments

Art History (Art, Design, and Art History) 104A. Western Islamic Art
104B. Eastern Islamic Art
C104C. Problems in Islamic Art
213. Problems in Islamic Art

Middle East and Cultural Studies

100. Introduction to Islam. Lecture, three hours. The course treats the 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. Mr. Poona\n
Graduate Courses

220A-220B. Classical Persian Texts. Lecture, three hours. Prerequisites: courses 103A-103B-103C or consent of instructor. Study of selected classical Persian texts. Each course may be taken independently for credit.
Mr. Banani
221. Rumi, the Mystic Poet of Islam. Seminar, three hours. Prerequisites: course 220A or 220B or equivalent, consent of instructor. A study of the life and works of Rumi in the context of interaction of Sufism and poetic creativity. May be repeated twice for credit.
Mr. Banani
M222A-M222B. Vedic. (Same as East Asian Languages and Cultures M222A-M222B.) Prerequisites: knowledge of Sanskrit equivalent to East Asian Languages and Cultures 162, consent of instructor. Characteristics of the Vedic dialect and readings in the Rig-Vedic hymns. Only course M222B may be repeated for credit.
Mr. Schmidt
230A-230B. Old Iranian. Prerequisite: consent of instructor. Studies in the grammars and texts of Old Persian and Avestan. Comparative considerations. Only course 230B may be repeated for credit.
Mr. Schmidt

596. Directed Individual Study (2 to 8 units). May be repeated for credit.
597. Examination Preparation (2 to 8 units).
598. M.A. Thesis Research and Preparation (2 to 8 units).
599. Ph.D. Dissertation Research and Preparation (2 to 8 units).

Related Courses in Another Department

History 107A-107B. Islamic Civilization

300. The History and Institutions of the State of Israel. Lecture, three hours. A survey of the social and cultural development of the State of Israel from its pre-state institutional structures to the present, with emphasis on major trends, personalities, and ideologies, and the state's position in the wider framework of modern Jewish history. Ms. Lipstadt

140A-140B. American Jewish History. Lecture, three hours. An examination of the social and cultural history of the American Jewish community from its inception to the present. Emphasis on the integration of successive immigrants and the development of institutions. 140A covers the period from 1654 to 1914. 140B covers the period from 1914 to the present. Ms. Lipstadt (W140B)
141. Modern Anti-Semitism. Lecture, three hours. An examination of modern anti-Semitism from the 18th century to the present; a comparison of modern racist ideologies with premodern theories; case studies (e.g., the Dreyfus affair, the Bellies Tract, the Holocaust), Jewish reactions to these phenomena.
Ms. Lipstadt
142. The History and Institutions of the State of Israel. Lecture, three hours. A survey of the social and cultural development of the State of Israel from its pre-state institutional structures to the present, with emphasis on major trends, personalities, and ideologies, and the state's position in the wider framework of modern Jewish history. Ms. Lipstadt

151A. Diaspora Literature; The Literary Traditions of Ancient Israel: Biblical and Apocalyptic. (Formerly numbered 150A.) The course examines Judaism's basic beliefs, institutions, and practices. Topics include the development of biblical and rabbinic Judaism; the concepts of God, sin, repentance, prayer, and the messiah; the history of the Talmud and the synagogue; the evolution of folk beliefs and yearcycle and lifecycle practices. Ms. Lipstadt (F, Sp)
M111E. Ethnic Groups and Their Bibliographies: Jewish History and Culture. (Same as Library and Information Science M111E.) Students become familiar with basic reference sources on specific topics on Judaica, ranging from biblical studies to the Holocaust to Jewish life in the United States.
Mr. Stern

130. Modern Jewish Religious and National Movements. Lecture, three hours. Study of the evolution of modern Jewish national movements, with particular emphasis on the history of Zionism and Diaspora nationalism. Covers the period up to 1948. Ms. Lipstadt (W)

140A-140B. American Jewish History. Lecture, three hours. An examination of the social and cultural history of the American Jewish community from its inception to the present. Emphasis on the integration of successive immigrants and the development of institutions. 140A covers the period from 1654 to 1914. 140B covers the period from 1914 to the present. Ms. Lipstadt (W140B)
141. Modern Anti-Semitism. Lecture, three hours. An examination of modern anti-Semitism from the 18th century to the present; a comparison of modern racist ideologies with premodern theories; case studies (e.g., the Dreyfus affair, the Bellies Tract, the Holocaust), Jewish reactions to these phenomena.
Ms. Lipstadt
142. The History and Institutions of the State of Israel. Lecture, three hours. A survey of the social and cultural development of the State of Israel from its pre-state institutional structures to the present, with emphasis on major trends, personalities, and ideologies, and the state's position in the wider framework of modern Jewish history. Ms. Lipstadt

151A. Diaspora Literature; The Literary Traditions of Ancient Israel: Biblical and Apocalyptic. (Formerly numbered 150A.) The course examines Judaism's basic beliefs, institutions, and practices. Topics include the development of biblical and rabbinic Judaism; the concepts of God, sin, repentance, prayer, and the messiah; the history of the Talmud and the synagogue; the evolution of folk beliefs and yearcycle and lifecycle practices. Ms. Lipstadt (F, Sp)
M111E. Ethnic Groups and Their Bibliographies: Jewish History and Culture. (Same as Library and Information Science M111E.) Students become familiar with basic reference sources on specific topics on Judaica, ranging from biblical studies to the Holocaust to Jewish life in the United States.
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Ms. Lipstadt
142. The History and Institutions of the State of Israel. Lecture, three hours. A survey of the social and cultural development of the State of Israel from its pre-state institutional structures to the present, with emphasis on major trends, personalities, and ideologies, and the state's position in the wider framework of modern Jewish history. Ms. Lipstadt

151A. Diaspora Literature; The Literary Traditions of Ancient Israel: Biblical and Apocalyptic. (Formerly numbered 150A.) The course examines Judaism's basic beliefs, institutions, and practices. Topics include the development of biblical and rabbinic Judaism; the concepts of God, sin, repentance, prayer, and the messiah; the history of the Talmud and the synagogue; the evolution of folk beliefs and yearcycle and lifecycle practices. Ms. Lipstadt (F, Sp)
M111E. Ethnic Groups and Their Bibliographies: Jewish History and Culture. (Same as Library and Information Science M111E.) Students become familiar with basic reference sources on specific topics on Judaica, ranging from biblical studies to the Holocaust to Jewish life in the United States.
Mr. Stern
M191C-M191D. Focal Themes in Jewish History. (Same as History M191C-M191D) Lecture, three hours. The course treats in depth one major theme in Jewish history (such as the history of Messianic Movements, the structure of the Jewish communities) through the ages. Mr. Funkenstein

199. Special Studies in Jewish Studies (2 to 8 units). Limited to Jewish studies majors.

Related Courses in Another Department

History 192A-192B. Jewish Intellectual History

Near Eastern Languages

Graduate Courses

200. Bibliography and Method of Near Eastern Languages and Literatures. Lecture, two hours. Prerequisite: consent of instructor. Required for the M.A. degree. Introduction to bibliographical resources and training in methods of research in various branches of Near Eastern studies. Taught by the department. May be repeated for credit.

210. Survey of Afro-Asiatic Languages. Lecture, three hours. Prerequisite: consent of instructor. A survey of the grammatical structure of major branches of the Afro-Asiatic family. Taught by the department. May be repeated for credit.

215A-215B. Syriac. Lecture, two hours. Prerequisites: courses 215A-215B or consent of instructor. A survey of the history and linguistic development of the Syriac language. Taught by the department. May be repeated for credit.

220A-220B. Ugaritic. Lecture, two hours. Prerequisites: courses 220A-220B or consent of instructor. A survey of the linguistic history and development of the Ugaritic writing systems. Taught by the department. May be repeated for credit.

225. Phoenician. Lecture, two hours. Prerequisites: courses 225 or consent of instructor. A survey of the linguistic history and development of the Phoenician language and inscriptions. Taught by the department. May be repeated for credit.

230. Seminar in Northwest Semitic Languages and Literatures. Seminar, two hours. Prerequisite: consent of instructor. Required of students in the Semitic program. A survey of the textual and linguistic history of the Semitic languages. Taught by the department. May be repeated for credit.

240. Seminar in Akkadian Language. Seminar, two hours. Prerequisite: consent of instructor. Readings of texts from various Akkadian literary genres; selected problems in literary history and stylistic analysis. Taught by the department. May be repeated for credit.

241. Seminar in Akkadian Literature. Seminar, two hours. Prerequisite: consent of instructor. Readings of texts from various Akkadian literary genres; selected problems in the linguistic analysis of Akkadian dialects. Taught by the department. May be repeated for credit.

241X. Seminar in Akkadian Literature (1 unit). Prerequisite: consent of instructor. Readings of texts from various Akkadian literary genres; selected problems in the linguistic analysis of Akkadian dialects. Taught by the department. May be repeated for credit.

245. Phoenician Grammar and Reading. Seminar, two hours. Prerequisite: courses 245 or consent of instructor. Readings of texts in Phoenician from their early history to the present. Taught by the department. May be repeated for credit.

260A-260B-260C. Seminar in Comparative Semitics. Seminar, two hours. Prerequisites: courses 260A-260B or consent of instructor. Readings of texts in Semitic from their early history to the present. Taught by the department. May be repeated for credit.

265. Directed Individual Study (2 to 8 units). May be repeated for credit.

275. Examination Preparation (2 to 8 units).

299. Ph.D. Dissertation Research and Preparation (2 to 8 units).

Semiotics

Upper Division Courses

110. Neo-Aramaic. Lecture, three hours. Grammar and reading of selected texts (folktales, homilies, songs) in the modern Aramaic dialects of the Jews and Christians of Kurdistan. Mr. Sabar

130. Biblical Aramaic. Lecture, three hours. Prerequisites: courses 102A-102B or consent of instructor. Grammar of biblical Aramaic and reading of texts. Mr. Segert (alternate years)

140A-140B. Elementary Akkadian. Lecture, three hours. Elementary grammar and reading of texts in standard Babylonian. Mr. Buccellati

141. Advanced Akkadian. Lecture, three hours. Prerequisite: consent of instructor. Old Babylonian syntax; reading of basic Old Babylonian texts. Mr. Buccellati

142. Akkadian Literary Texts. Lecture, three hours. Prerequisite: consent of instructor. Selected readings from Akkadian myths and epics, with an introduction to the historical tradition of the works and their literary structure. Taught by the department. May be repeated for credit.

199. Special Studies in Semitics (2 to 8 units). Prerequisite: consent of instructor. (F,W,Sp)

Graduate Courses

210. Ancient Aramaic. Lecture, two hours. Prerequisites: courses 102A or consent of instructor. Reading of the surviving inscriptions and papyri. May be repeated for credit.

215A-215B. Syriac. Lecture, two hours. Morphology and syntax of the Syriac language; readings in the Syriac translation of the Bible and Syriac literature. Taught by the department. May be repeated for credit.

220A-220B. Ugaritic. Lecture, two hours. Prerequisites: courses 220A-220B or consent of instructor. Readings of the Ugaritic language and literature. Taught by the department. May be repeated for credit.

225. Phoenician. Lecture, two hours. Prerequisites: courses 225 or consent of instructor. Readings of Phoenician language and inscriptions. Taught by the department. May be repeated for credit.

230. Seminar in Northwest Semitic Languages and Literatures. Seminar, two hours. Prerequisite: consent of instructor. Required of students in the Semitic program. A survey of the textual and linguistic history of the Semitic languages, from their early history to the present. Taught by the department. May be repeated for credit.

240. Seminar in Akkadian Language. Seminar, two hours. Prerequisite: consent of instructor. Readings of texts from various dialects of Akkadian; selected problems in the linguistic analysis of Akkadian dialects. Taught by the department. May be repeated for credit.

241. Seminar in Akkadian Literature. Seminar, two hours. Prerequisite: consent of instructor. Readings of texts from various dialects of Akkadian; selected problems in literary history and stylistic analysis. Taught by the department. May be repeated for credit.

245. Phoenician Grammar and Reading. Seminar, two hours. Prerequisite: courses 245 or consent of instructor. Readings of texts from various dialects of Akkadian; selected problems in the linguistic analysis of Akkadian dialects. Taught by the department. May be repeated for credit.

260A-260B-260C. Seminar in Comparative Semitics. Seminar, two hours. Prerequisites: courses 260A-260B or consent of instructor. Readings of texts in Semitic from their early history to the present. Taught by the department. May be repeated for credit.

Graduate Courses

210A-210B-210C. Introduction to Ottoman. Lecture, three hours. Prerequisite: consent of instructor. Introduction to the literary language of the Ottoman Empire from its foundation in the 14th century to its overthrow in the 20th century. Taught by the department. May be repeated for credit.

211. Ottoman Diplomats. Lecture, three hours. Prerequisite: courses 211 or consent of instructor. Topics include Ottoman diplomatic texts as a source for historical research. Taught by the department. May be repeated for credit.

220A-220B-220C. Chadatay. Lecture, three hours. Prerequisites: courses 220A-220B or consent of instructor. Topics include Ottoman diplomatic texts as a source for historical research. Taught by the department. May be repeated for credit.

225A-225B-225C. Old Turk and Uygur. Lecture, three hours. Prerequisites: courses 225A-225B or consent of instructor. Topics include the Arabic script as applied to Ottoman; Arabic and Persian elements in grammar and vocabulary. Taught by the department. May be repeated for credit.

230A-230B-230C. A Historical and Comparative Survey of the Turkic Languages. Lecture, three hours. Prerequisites: courses 230A-230B or consent of instructor. Topics include the Arabic script as applied to Ottoman; Arabic and Persian elements in grammar and vocabulary. Taught by the department. May be repeated for credit.

240. Seminar in Akkadian Language. Seminar, two hours. Prerequisite: consent of instructor. Readings of texts from various dialects of Akkadian; selected problems in the linguistic analysis of Akkadian dialects. Taught by the department. May be repeated for credit.

245. Phoenician Grammar and Reading. Seminar, two hours. Prerequisite: courses 245 or consent of instructor. Readings of texts from various dialects of Akkadian; selected problems in the linguistic analysis of Akkadian dialects. Taught by the department. May be repeated for credit.

260A-260B-260C. Seminar in Comparative Semitics. Seminar, two hours. Prerequisites: courses 260A-260B or consent of instructor. Readings of texts in Semitic from their early history to the present. Taught by the department. May be repeated for credit.

TURKIC LANGUAGES

Upper Division Courses


102A-102B-102C. Advanced Turkish. (Formerly numbered 102B, 103A-103B.) Lecture, five hours. Prerequisites: courses 101A-101B-101C or equivalent. Continuing study of grammar, conversation, and composition. Readings in modern literature and social science texts. Mr. Jaeckel

111A-111B-111C. Elementary Uzbek. Lecture, three hours; laboratory, two hours. Prerequisite: consent of instructor. Elementary grammar, reading, and composition exercises; elementary conversation. Taught by the department. May be repeated for credit.

112A-112B-112C. Advanced Uzbek. Lecture, three hours; laboratory, two hours. Prerequisite: consent of instructor. Descriptive Uzbek grammar, reading, and analysis of Uzbek literary and folkloric texts. Taught by the department. May be repeated for credit.

160. Cultural History of the Turks. (Formerly numbered 160A-160B.) Lecture, three hours. Prerequisite: consent of instructor. A survey of the cultural history of the Turks, as seen primarily through their literature, from their early history to the present. Taught by the department. May be repeated for credit.

170. Turco-Mongolian Nomadic Empires. Lecture, three hours. Prerequisite: consent of instructor. Required of students in the Turkic program. A survey of the history of Turkic and Mongolian dominions from the 8th to the 20th century. Topics include the Arabic script as applied to Ottoman; Arabic and Persian elements in grammar and vocabulary. Taught by the department. May be repeated for credit.

180. Modern Turkish Languages and Peoples. (Formerly numbered 180A-180B-180C.) Lecture, three hours. Prerequisite: consent of instructor. Required of students in the Turkic program and recommended for students in Soviet studies. An ethnic and linguistic survey of the Turkic peoples. Taught by the department. May be repeated for credit.

199. Special Studies in Turkic Languages (2 to 8 units). Prerequisite: consent of instructor.
Bachelor of Arts Degree

Preparation for the Major

Required: The first-year course in Arabic, Armenian, Hebrew, Persian, or Turkish. You must also obtain a reading proficiency in French, German, Italian, Russian, or Spanish as demonstrated by completing six quarter courses or their equivalent in the language of your choice. You may substitute for the European language requirement Computer Science 10S and one course from Economics 40, Mathematics 50, Political Science 6, Psychology 41, or Sociology 18, plus one course from Economics 141, Geography 171, Political Science 102, Psychology M142, or Sociology 116. Also required are History 9D and four courses from History 1A, 1B, 1C, Anthropology 5, 6, Economics 1, 2, Geography 3, Political Science 20, 50, Sociology 1.

The Major

Required: Sixteen courses as follows: (1) completion of the advanced level or equivalent in the same language taken in lower division; (2) History 106A-106B-106C and three additional courses in the history of the Near East, two of which are related to the major language; (3) four courses (two of which must be in the same discipline) from Anthropology 110, 176, Art History 102, 104A, 104B, C104C, Economics 110, 111, 112, 190, Geography 187, 188, Political Science 132A, 132B, 164, 165, Sociology 132, 133. This program may be modified in exceptional cases by consent of the adviser.

If you are interested in doing graduate work in this field, see the M.A. and Ph.D. programs offered under "Islamic Studies" earlier in this chapter.

For further information, contact Professor Stanford J. Shaw at the program address.

Near Eastern Studies (Interdepartmental)

5353 Bunche Hall, 825-1374

Professors

Ismail Poonawala, Ph.D. (Near Eastern Languages and Cultures)
Georges Sabaugh, Ph.D. (Sociology)
Stanford J. Shaw, Ph.D. (History), Chair

Scope and Objectives

The graduate major in this discipline is called "Islamic Studies." For details, see the program by that name earlier in this chapter.

The undergraduate major is designed primarily for (1) students seeking a general education and desiring a special emphasis in this particular area, (2) those who plan to live and work in the Near East whose careers will be aided by a knowledge of its peoples, languages, and institutions, and (3) students preparing for academic study in the various disciplines pertaining to the Near East.

Oriental Languages

See East Asian Languages and Cultures

Philosophy

321 Dodd Hall, 825-4641

Professors

Marilyn Adams, Ph.D.
Robert Matthew Adams, Ph.D.
Rogers Albritton, Ph.D.
Tyler Burge, Ph.D.
Alonzo Church, Ph.D., in Residence (Flint Professor of Philosophy)

Associate Professor

Warren S. Quinn, Ph.D.
Assistant Professors

Joseph Almog, Ph.D.
Jean Hampton, Ph.D.
Richard Healey, Ph.D.
Alan Nelson, Ph.D.

Scope and Objectives

In a 1982 survey conducted by the Conference Board of the Associated Research Councils, UCLA’s Philosophy Department was judged fifth best in the nation in terms of the quality of its faculty. It offers programs leading to the Bachelor of Arts, Master of Arts, and Ph.D. degrees.

Philosopher, translated from the Greek, literally means "lover of wisdom." The term has come to mean someone who seeks knowledge, enlightenment, truth. The undergraduate program in philosophy is not directed at career objectives (although it is traditionally a good preparation for law, theology, and graduate work in philosophy). Philosophy is taught to undergraduates primarily as a contribution to their liberal education. All of the lower and most of the upper division offerings should be of interest and useful to students who are reflective about their beliefs or who wish to become so. It also provides the occasion to ponder the foundations of almost any other subject to which they are exposed — whether history, religion, government, or science.

The principal goal of the graduate program is to produce philosophers of high quality, thinkers informed by the great historical traditions of Western philosophers who can apply the methods of philosophical analysis to a broad range of current philosophical problems. Since all its graduate students hope to teach at the college or university level, the department is also committed to training clear, able, and stimulating teachers.
courses are divided, in the following manner: two courses (eight units) in each of three of the groups and one course (four units) in the remaining group.

Courses listed under “Special Studies” may be applied toward the major but not toward a group requirement. A maximum of eight units of Philosophy 199 may be applied toward the major but not toward a 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 at Graduation

On the recommendation of the department faculty, honors in philosophy will be awarded at graduation to a major whose grade-point average in upper division philosophy courses is 3.3 and who has completed two graduate courses (eight units) in philosophy with an average GPA of 3.5.

Master of Arts Degree

Admission

It is the policy of the department to admit only those who plan to earn the Ph.D. degree. For admission requirements, see the description under “Ph.D. Degree.”

Foreign Language Requirement

You must demonstrate a reading knowledge of French, German, Latin, or Greek. (Another language may be substituted with the consent of the department.) This requirement can be satisfied by passing, with a score of at least 500, the Educational Testing Service (ETS) Graduate School Foreign Language Test in an approved language. Alternatively, it can be satisfied in either of the ways in which the Ph.D. language requirement can be satisfied.

Course Requirements

You must complete at least nine upper division or graduate courses (36 units), excluding Philosophy 199, of which five courses (20 units) must be in the 200 series.

Courses in the 500 series may not be applied toward the course requirements for the M.A. in Philosophy.

Comprehensive Examination Plan

Students seeking the M.A. must pass the master’s comprehensive examination (see the “Ph.D. Degree”). In case of failure, the examination may be repeated.

Ph.D. Degree

Admission

Admission to UCLA as a graduate student in philosophy requires approval both by the Graduate Division and by the Department of Philosophy. The University application and one official transcript from each institution attended should be sent directly to Graduate Admissions; the departmental application, three letters of recommendation (on the official forms), a statement of purpose, a sample of your written work, official scores from the Graduate Record Examination (GRE) Aptitude Test (the Advanced Test in Philosophy is not required), official Test of English as a Foreign Language (TOEFL) scores for applicants whose native tongue is not English, and one official transcript from each institution attended should be sent to the department graduate counselor. Departmental information and applications can be obtained by writing to the Graduate Counselor, Department of Philosophy, 321 Dodd Hall, UCLA, Los Angeles, CA 90024.

Admission to graduate study in philosophy is not probationary. At the end of your first year of study, the department conducts a review of your work; results are discussed in a meeting between you and your graduate adviser.

Foreign Language Requirement

You must demonstrate a reading knowledge of French, German, Latin, or Greek. (Another language may be substituted with the consent of the department, if it is used in the doctoral work.) You may satisfy this requirement by completing, with a grade of C or better, the final course in a two-year sequence of college courses in an approved language. Alternatively, you may satisfy the requirement by passing the department language examination. Completion of the foreign language requirement is not required for admission to the doctoral program but is required by the University for advancement to candidacy.

Course Requirements

A Ph.D. candidate must complete, with a grade of B or better, the three first-year seminars, plus nine additional upper division and graduate courses in philosophy (not including individual studies courses), distributed as follows:

Logic: Two upper division or graduate courses in logic in either the Philosophy or Mathematics Department (approved by your adviser).

History of Philosophy: Two graduate-level courses.

Ethics and Value Theory: One graduate-level course.

Metaphysics and Epistemology: One graduate-level course.

Electives: Three upper division or graduate-level courses of your choice.

Group classification of a course is generally given by its catalog listing, but final classification of a course is determined by the instructor on the basis of its content and the departmental guidelines. Normally, no substitutions for these courses are allowed, but if you have done graduate coursework elsewhere, you may be permitted to substitute previous graduate coursework in exceptional cases.

Teaching Experience

Before receiving a Ph.D., you are required to spend three quarters as a teaching assistant at UCLA.

Qualifying Examinations

The master’s comprehensive examination consists of four different examinations. One is in logic on the materials covered in Philosophy 31 and 32. Consult the Manual for Graduate Students in Philosophy for further information about this examination.

There are also examinations on each of the three first-year seminars. These examinations last two hours each and occur soon after the completion of the seminar to which it applies. The examination is passed or failed as a whole, which does not necessarily require passing of all four parts.

In the second and third years, you must write two papers, prepared in accordance with a specific format, called “propositions.” One must be on a topic in metaphysics or epistemology and the other on a topic in ethics or value theory.

The first proposition should be submitted before the end of the second year; the second, before the end of the third year. Both propositions must be accepted by the department before you can take the University Oral Qualifying Examination. Consult the Manual for Graduate Students in Philosophy for further details.

In the third year, you begin a new series of individual studies courses (Philosophy 596) with your dissertation supervisor to develop a well-defined dissertation project. A doctoral committee is selected and the University Oral Qualifying Examination is scheduled. The primary purpose of this examination is to determine whether you will be able to complete the dissertation successfully. The scope of the examination varies according to the definiteness of the dissertation topic and the extent of your preliminary investigations. In case of failure, the doctoral committee makes a recommendation for or against allowing a second oral examination.

Candidate in Philosophy Degree

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination

The final oral examination may be waived by the doctoral committee. This determination is usually made at the time of the oral qualifying examination.

Lower Division Courses

1. The Beginnings of Western Philosophy. Lecture, three hours; discussion, one hour. The views of Plato, Aristotle, and other thinkers from before Socrates to St. Augustine on such topics as the nature of the physical universe, the nature of knowledge, the concept of God, soul, and body, the foundations of morality, the Greek and Christian ideas of love.

Mr. Albritton, Mr. Furth
2. Introduction to the Philosophy of Religion. Lecture, three hours; discussion, one hour. An introductory study of such topics as the nature of religious belief, the relation between religion and ethics, the nature and existence of God, the problem of evil, and what can be learned from religious experience.

Mr. Adams, Mr. Furth, Mrs. Adams

3. Personal and Social Ideals. Lecture, three hours; discussion, one hour. A study of various conceptions of human perfection and social utopias. Readings are chosen from such authors as Freud, Thomas More, Marx, F.B. Skinner, and Sartre.

Mr. Kaplan, Mr. Yost

4. Philosophical Analysis of Contemporary Moral Issues. Lecture, three hours; discussion, one hour. A critical study of principles and arguments advanced in discussion of current moral issues. Possible topics include revolutionary violence, rules of war, sexual morality, the right of privacy, punishment, nuclear warfare and deterrence, abortion and mercy killing, experimentation with human subjects, rights of women, the drug culture.

Ms. Hampton, Mr. Quinn

5A. Philosophy in Literature. Lecture, three hours; discussion, one hour. Analysis of some main themes in Afro-American political writings (e.g., assimilation, cultural nationalism, and separatism) in the writings of Booker T. Washington, Frederick Douglass, W.E.B. Du Bois, Mrs. Healey

5B. Recurring Philosophical Themes in Black Literature. Lecture, three hours; discussion, one hour. Analysis of some main themes in Afro-American political writings (e.g., assimilation, cultural nationalism, and separatism) in the writings of Booker T. Washington, Frederick Douglass, W.E.B. Du Bois, Mrs. Healey.

6. Historical Introduction to Moral and Political Philosophy. Lecture, three hours; discussion, one hour. A study of some classic works in moral and political philosophy. Questions that may be discussed include What is justice? Why? Why obey the law? Which form of government is best? How much personal freedom should be allowed in society?

Ms. Hampton

7. Introduction to the Philosophy of Mind. Lecture, three hours; discussion, one hour. An introductory study of philosophical issues about the nature of the mind and its relation to the body, including materialism, functionalism, behaviorism, determinism and free will, the nature of psychological knowledge.

Mr. Burge, Mr. Adams

8. Introduction to the Philosophy of Science. Lecture, three hours; discussion, one hour. An introduction to philosophical questions about the nature of science, drawing examples from specific scientific theories and controversies. Science can be understood without much mathematical or technical background. What role do observation and explanation play in building and evaluating scientific theories? How should we view the relation between science and common sense?

9. Principles of Critical Reasoning. The course concerns the nature of arguments: how to analyze them and assess the soundness of the reasoning they represent. Common fallacies that often occur in arguments are discussed and avoided. The ability to construct a good deductive or inductive inference. Other topics include the use of language in argumentation to arouse emotions as contrasted with conveying thoughts, the logic of scientific experiments and hypothesis-testing in general, and some general ideas about probability and its application in making normative decisions (e.g., betting).

Mr. Kaplan

10. Virtues and Vices. Lecture, three hours; discussion, one hour. A study of the traditional theory of the virtues and vices. Readings include the four cardinal virtues as laid down in Aristotle, Aquinas, and contemporary authors; discussion of concepts such as courage, wisdom, and justice. Should we accept the traditional list of the virtues and vices, or should it be revised?

Mrs. Foot

21. Skepticism and Rationality. Lecture, three hours; discussion, one hour. Can we know anything with certainty? How can we justify our beliefs? An introduction to the study of these and related questions through the works of such great philosophers of the modern period, such as Descartes, Leibniz, Berkeley, and Hume.

Mr. Donnellan, Mr. Furth, Mr. Yost

22. Introduction to Ethical Theory. Lecture, three hours; discussion, one hour. Recommended or required for many upper division courses in Group III. A systematic introductory treatment of the major questions of moral philosophy: the meaning of ethical terms, relativism, etc.

Mr. Quinn

31. Logic, First Course. Lecture, three hours; discussion, one hour. Recommended for students who plan to pursue more advanced studies in logic. The elements of symbolic logic, sentential and quantification, forms of reasoning and structure of language.

Mr. Almog, Mr. Burge, Mr. Kalish, Mr. Kaplan, Mr. Nelson

32. Logic, Second Course. Lecture, three hours; discussion, one hour. Prerequisite: course 31 (preferably in the preceding quarter). Symbolic logic: extension of the systematic development of course 31.

Quantiifiers, identity, descriptions. Readings by Almog, Burge, Kalish, Kaplan, Nelson

Upper Division Courses

Group I: History of Philosophy

100A. History of Greek Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Survey of Greek philosophy, with emphasis on the metaphysics and epistemology of Plato and Aristotle.

Mr. Albrition, Mr. Furth

100B. Medieval and Early Modern Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Survey of the development and transformation of Greek metaphysics and epistemology within the context of philosophical theology, and the transition from the medieval to the modern period. Emphasis on Augustine, Anselm, Aquinas, and Descartes.

Mrs. Adams

100C. History of Modern Philosophy, 1650-1800. Lecture, three hours; discussion, one hour. Prerequisite: course 100B. Courses 100A, 100B, and 100C should be taken in immediately successive quarters if possible. Survey of the development of metaphysics and the theory of knowledge from 1650 to 1800, including Leibniz, Locke, and, Berkeley, and culminating in Hume and Kant. The views of these (and perhaps other) philosophers of the period on mind and body, causality, the existence of God, skepticism, empiricism, the limits of human knowledge, and the philosophical foundations of modern science are among the topics that may be studied.

Mr. Adams

101A. Plato — Earlier Dialogues. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. A study of selected topics in the early and middle dialogues of Plato.

Mr. Furth

101B. Plato — Later Dialogues. Lecture, three hours; discussion, one hour. Prerequisite: course 101A. A survey of selected dialogues from the later period of Plato's life. Readings in Aristotle, Aquinas, and contemporary authors.

Mr. Furth

102. Aristotle, Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. A study of selected works of Aristotle.

Mr. Furth

104. Topics in Islamic Philosophy. Lecture, three hours; discussion, one hour. A survey of selected works of Islamic philosophers in their great age (from Kindo to Avemiro, 850 to 1200), considered in connection with Muslim theology and mysticism.

105. Medieval Philosophy from Augustine to Maimonides. Prerequisite: one course in philosophy or consent of instructor. The development of medieval metaphysics within the framework of Judeo-Christian theology and its assimilation and criticism of the Greek philosophical heritage. Focus on the problem of free will, the nature of God, the problem of evil, and the doctrines of the Trinity and atonement. Selected writings from Augustine through Maimonides read in English translation.

Mrs. Adams

106. Later Medieval Philosophy. Prerequisite: one course in philosophy or consent of instructor. A study of the works of such philosophers as 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.

Mrs. Adams

107. Topics in Medieval Philosophy. Prerequisite: one course in philosophy. Recommended: course 105 or 106. The study of the philosophy and theology of one medieval philosopher such as Augustine, Anselm, Abelard, Aquinas, Scotus, or Ockham, or the study of a single area such as logic or theory of knowledge in several medieval philosophers. Topic is announced each quarter. May be repeated for credit with consent of instructor.

Mrs. Adams

C109. Descartes. Prerequisites: course 21 or two courses in philosophy or consent of instructor. A study of the works of Descartes, with emphasis on the Meditations. Such issues as the problem of skepticism, the foundations of knowledge, the existence of God, the relation between mind and body are discussed. Limited to 30 students when concurrently scheduled with course C209.

Mr. Burge, Mr. Yost

C110. Spinoza. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or consent of instructor. A study of the philosophy of Spinoza. May be concurrently scheduled with course C210, in which case there will be a weekly discussion meeting, plus fewer readings and shorter papers for undergraduates. Limited to 30 students when concurrently scheduled.

Mr. Adams

C111. Leibniz. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or consent of instructor. A study of the philosophy of Leibniz. May be concurrently scheduled with course C211, in which case there will be a weekly discussion meeting, plus fewer readings and shorter papers for undergraduates. Limited to 30 students when concurrently scheduled.

Mr. Adams

C112. Locke and Berkeley. Prerequisite: one course in philosophy or consent of instructor. A study of the philosophical writings of Locke and Berkeley; emphasis may sometimes vary from one figure to the other. May be concurrently scheduled with course C212.

Mr. Donnellan

C114. Hume. Prerequisite: one course in philosophy or consent of instructor. Selected topics from the metaphysical, epistemological, and ethical writings of Hume. Limited to 40 students when concurrently scheduled with course C214.

Mr. Donnellan

115. Kant. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or 22 or consent of instructor. A study of Kant's views on related topics in theory of knowledge, ethics, and politics. May be repeated for credit by consent of instructor.

Mrs. Hampton

116. 19th-Century Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Selected topics in 19th-century thought.

117. 20th-Century Philosophy. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Selected topics in the work of one or more of the following philosophers: Bolzano, Frege, Husserl, Heidegger, G. Moore, the early Russell, and Wittgenstein. May be repeated for credit by consent of instructor.

Mr. Almog, Mr. Burge
Group II: Logic, Semantics, and Philosophy of Science

126A. Philosophy of Science. Lecture, three hours; discussion, one hour. Prerequisite: course 31, 126A, or consent of instructor. An introduction to contemporary philosophy of science, focusing on problems of methodology and theory choice.

126C. Philosophy of Science: Social Sciences. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. A discussion of topics in the philosophy of social science, including methods of the social sciences in relation to the physical sciences, value-bias in social inquiry, concept formation, theory construction, explanation and prediction, the nature of social laws.

127A. Philosophy of Language. Prerequisite: course 31 or consent of instructor. Syntax, semantics, pragmatics. The structure and meaning of natural languages, and the formation of new languages. Concepts of generality and denotation, synonymy and analyticity, modalities and tenses, indirect discourse, indexical terms, semantical paradoxes. May be repeated for credit by consent of instructor.

127B. Philosophy of Language. Prerequisite: course 32 or consent of instructor. Course 127A is not prerequisite to 127B. Selected topics similar to those considered in course 127A are discussed but at a more advanced and technical level.

Mr. Church, Mr. Kaplan

128A. Philosophy of Mathematics. Prerequisites: courses 31, 32, and preferably one additional course in logic. The philosophy of mathematics: logicism of Frege and Russell; the concepts of function and number; the logicism of Bertrand Russell; type theory and impredicative definition (Russell, Poincare, the early Weyl).

Mr. Church

128B. Philosophy of Mathematics. Prerequisite: course 128A or consent of instructor. Intuitionism of Brouwer, Heyting, and the later Weyl; proof theory of Hilbert.

Mr. Church

129. Philosophy of Psychology. Lecture, three hours; discussion, one hour. Prerequisites: one or more courses in psychology, one course in philosophy. Selected philosophical questions arising from cognitive and neurological theories. Relevance of computer simulation to accounts of thinking and meaning; relations between semantical theory and learning theory; psychological aspects of the theory of syntax; behaviorism, functionalism, and alternatives; physiology and psychology.

Mr. Burge

130. Philosophy of Space and Time. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or one course in philosophy and one course in physics, or consent of instructor. Selected philosophical problems concerning the nature of space and time. The philosophical implications of space-time theories, such as those of Newton and Einstein. Special and general relativity, the nature of continuity, conventionality, absolutism versus relationism, views of space and time, philosophical impact of relativity theory.

Mr. Healey

131. Science and Metaphysics. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or one course in philosophy and one course in physics. An examination of one or two metaphysical topics on which the results of modern science have been thought to bear. Topics may include the nature of causation, the reality and discovery of time, time-travel, backwardness in time, prediction, realism, etc. May be repeated for credit by consent of instructor.

Mr. Healey

133. Topics in Logic and Semantics. Prerequisite: course 32. Possible topics include formal theories, definitions, alternative theories of descriptions, many-valued logics, deviant logics. Mr. Kalish, Mr. Kaplan, Mr. Martin

134. Introduction to Set Theory. Prerequisites: course 32 or upper division standing in mathematics, consent of instructor. Introduction to axiomatic set theory, sets, natural numbers, relations, functions, cardinality, infinity, Russell’s paradox. Mr. Martin

135. Introduction to Metamathematics. Prerequisite: course 32. Recommended: course 134 or equivalent. Models, satisfaction, truth, definability; logical truth and logical consequence; consistency and completeness.

Mr. Church, Mr. Kalish, Mr. Kaplan, Mr. Martin

136. Modal Logic. Prerequisite: course 32. Recommended: course 133 or 135. The logic of necessity and possibility. Various formulations of the syntax and semantics of such logics. The problem of interpreting quantified modal logic, deontic and other extensions.

Mr. Kaplan, Mr. Martin

Group III: Ethics and Value Theory

150. Society and Morals. Lecture, three hours; discussion, one hour. Prerequisite: course 22 or consent of instructor. A critical study of principles and arguments advanced in discussion of current moral and social issues. Topics are similar to those in course 4, but familiarity with some basic philosophical concepts and methods is presupposed. May be repeated for credit by consent of instructor.

151A. History of Moral Philosophy. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. Course 151A is not prerequisite to 151B. Selected Classics in Early Ethical Theories; Selected Classics in Later Ethical Theories.

153A. Topics in Ethical Theory: Normative Ethics. Prerequisite: course 22 or consent of instructor. A study of selected topics in normative ethical theory. Topics may include the analysis of moral language and the justification of moral beliefs. May be repeated once for credit by consent of instructor.

Mr. Quinn

153B. Topics in Ethical Theory: Metaethics. Prerequisite: course 22 or consent of instructor. A study of selected problems in metaethical ethical theory. Topics may include the analysis of moral language and the justification of moral beliefs. May be repeated once for credit by consent of instructor.

Mrs. Foot, Mr. Quinn

155. Medical Ethics. An examination of the philosophical issues raised by problems of medical ethics, such as abortion, euthanasia, and medical experimentation.

Mrs. Foot

156. Topics in Political Philosophy. Lecture, three hours; discussion, one hour. Prerequisites: one or two topics or works in philosophy or consent of instructor. Recommended: course 22. Analysis of some basic concepts in political theory. May be repeated for credit by consent of instructor.

157A-157B. History of Political Philosophy. (Formerly numbered 157.) Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. May be repeated by consent of instructor. 157A. Reading and discussion of classical works in earlier political theory, including those by Hobbes, Locke, Hume, and Rousseau. 157B. Reading and discussion of classical works in later political theory, especially those by Kant, Hegel, and Marx.

Mr. Hamilton

161. Topics in Aesthetic Theory. Lecture, three hours; discussion, one hour. Prerequisite: one course in philosophy or consent of instructor. Philosophical theories about the nature and importance of art and art criticism, aesthetic experience, and aesthetic values. May be repeated for credit by consent of instructor.

Mr. Quinn

166. Introduction to Legal Philosophy. Prerequisite: one course in philosophy or consent of instructor. An examination, through the study of recent philosophical writings, of such topics as the nature of law, the relationship of law and morals, legal reasoning, punishment, and the obligation to obey the law.

Ms. Hampton, Mr. Morris

Group IV: Metaphysics and Epistemology

170. Philosophy of Mind. Lecture, three hours; discussion, one hour. Prerequisites: two relevant courses in philosophy or consent of instructor. An analysis of various problems concerning the nature and role of the mind and mental phenomena, such as the relation between the mind and the body, and our knowledge of other minds. May be repeated once for credit by consent of instructor.

Mr. Donnellan

172. Philosophy of Language and Communication. Prerequisites: two relevant courses in philosophy or linguistics or consent of instructor. Theories of meaning and communication; how words analysis linguistic; limits of meaningfulness; analysis of speech acts; role of everyday language to scientific discoveries.

Mr. Donnellan

175. Topics in Philosophy of Religion. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or 22 or consent of instructor. An intensive investigation of one or two topics or works in the philosophy of religion, such as the attributes of God, theistic arguments for or against the existence of God, or the relationship between science and religion. Topics are announced each quarter. May be repeated for credit by consent of instructor.

Mr. Adams, Mrs. Adams, Mr. Albritton

177A. Existentialism. Lecture, three hours; discussion, one hour. Prerequisite: one or two topics or works in philosophy or consent of instructor. Course 151A is not prerequisite to 151B. A study of the central philosophical texts of one of the following: Kierkegaard, Nietzsche, Heidegger, Sartre, Marce, and Camus. Possible topics include metaphysical foundations, nature of mind, freedom, problem of the self, other people, ethics, existential psychoanalysis.

177B. Historical Studies in Existentialism. Prerequisite: one course in philosophy or consent of instructor. Analysis of the methods, problems, and views of some of the following: Kierkegaard, Nietzsche, Heidegger, Sartre, Marce, and Camus. Possible topics include metaphysical foundations, nature of mind, freedom, problem of the self, other people, ethics, existential psychoanalysis.

178. Phenomenology. Lecture, three hours; discussion, one hour. Prerequisites: two courses in philosophy or consent of instructor. An introduction to the phenomenological method of approaching philosophical problems via the works of some of the following: Brentano, Husserl, Heidegger, Scheler, Sartre, Marcel-Long, Ricoeur. Topics include ontology, epistemology, and particularly philosophy of mind.

179. Oriental Philosophy: Buddhism. An examination of the central concepts and arguments in Buddhist philosophy, focusing on the history and development of Mahayana Buddhism. Appropriate parallels are drawn with social concepts in the Western tradition.

182. Elements of Metaphysics. Lecture, three hours; discussion, one hour. Prerequisite: course 21 or consent of instructor. Study of basic metaphysical questions; nature of the physical world, of minds, and of universals; and the answers provided by alternative systems (e.g., phenomenalism, materialism, dualism).

Mr. Adams, Mr. Yost

183. Theory of Knowledge. Prerequisite: course 21 or consent of instructor. An analysis of the concept of empirical knowledge.

Mr. Yost

184. Topics in Metaphysics. Prerequisite: course 21 or consent of instructor. An intensive investigation of one or two topics or works in metaphysics, such as personal identity, the nature of dispositions, possibility and necessity, universals and particulars, causality. Topics are announced each quarter. May be repeated for credit by consent of instructor.

Mr. Adams, Mr. Kaplan, Mr. Healey

186. Topics in the Theory of Knowledge. Prerequisite: course 182 or 183 or consent of instructor. An intensive investigation of one or two selected topics or works in the theory of knowledge, such as a priori knowledge, the problem of induction, memory, knowledge as justified true belief. Topics are announced each quarter. May be repeated for credit by consent of instructor.

Mr. Albritton, Mr. Yost
187. Philosophy of Action. Prerequisites: two courses in philosophy or consent of instructor. A study of various concepts employed in the understanding of human action. Topics may include rational choice, desire, intention, weakness of will, and self-deception. Mr. Albritton, Mr. Burge, Mr. Donnellan

188. Philosophy of Perception. Prerequisites: two courses in philosophy or consent of instructor. A critical study of the main philosophical theories of perception and the arguments used to establish them. Mr. Yost

189. Major Philosophers of the 20th Century. Prerequisites: two courses in philosophy or consent of instructor. A study of the writings of one or more major modern philosophers (e.g., Russell, Moore, Wittgenstein; Carnap, Quine). May be repeated for credit by consent of instructor. Mr. Albritton, Mr. Burge, Mr. Donnellan

Special Studies

190. Third World Political Thought. Lecture, three hours; discussion, one hour. The political philosophy of various Third World thinkers. Topics may vary from year to year, but typically are chosen from Franz Fanon, Sanghor and Cesaire’s “Négritude,” W.E.B. du Bois’ Pan-Africanism, Che, and Mao.

191. Philosophical Analysis of Issues in Women’s Liberation. Prerequisite: one course in philosophy or consent of instructor. A critical study of concepts and principles which arise in the discussion of women’s rights and liberation. Topics may include economic and educational equality, preferential treatment, abortion, sex roles, sexual morality, marriage, love, friendship.

192. Christian Ethical Thought. Lecture, three hours; discussion, one hour. Reading of selected classic and contemporary authors in the Christian ethical tradition, with philosophical analysis and assessment of their views on morality and the religious life. Mr. Adams

193. 19th- and 20th-Century Religious Thought. Lecture, three hours; discussion, one hour. A philosophical approach to Western religious thought of the last two hundred years, through study of selected works by such authors as Kant, Schleiermacher, Kierkegaard, Buber, Camus, and Tillich. Mr. Adams

194. Undergraduate Seminar in Philosophy. Lecture, one hour; discussion, three hours. Prerequisite: consent of instructor. Variable topics; consult Schedule of Classes or “Department Announcements” for current topic. May be repeated for credit by consent of instructor.

195. Reading and Writing Philosophy. Lecture, three hours; discussion, one hour. Prerequisites: two lower or upper division courses in philosophy. The course is designed to help philosophy students who wish to improve their ability to read philosophical texts and to write philosophical essays. Selected texts are used to illustrate problems of reading and writing, and students are required to do and redo many written exercises. Mr. Quinn

196. Special Studies (2 to 8 units). Prerequisite: consent of instructor. Eight units may be applied toward the degree requirements, but the course cannot be substituted for a course in one of the four groups on the basis of similarity of subject matter.

Graduate Courses

200A-200B-200C. Seminar for First-Year Graduate Students. Limited to and required of all first-year graduate students in philosophy. Selected topics in metaphysics and epistemology, history of philosophy, and ethics.

Group I. History of Philosophy

201. Plato. Prerequisite: consent of instructor. A study of the later dialogues. Mr. Furth

202. Aristotle. Prerequisite: consent of instructor. Analysis of major problems in Aristotle’s philosophy based on the reading, exposition, and critical discussion of relevant texts in English translation. Mr. Furth

203. Seminar: History of Ancient Philosophy. Prerequisite: consent of instructor. Selected problems and philosophers. May be repeated for credit by consent of instructor. Mr. Furth

206. Topics in Medieval Philosophy. Prerequisite: consent of instructor. The study of the philosophy and theology of one or several medieval philosophers, such as Augustine, Anselm, Abelard, Aquinas, Scotus, or Ockham or the study of a single area such as logic or theory of knowledge in several medieval philosophers. Topics are announced each quarter. May be repeated for credit by consent of instructor. Mrs. Adams

207. Seminar: History of Medieval and Renaissance Philosophy. Prerequisite: consent of instructor. Selected problems and philosophers. May be repeated for credit by consent of instructor. Mrs. Adams

208. Hobbes. Prerequisite: consent of instructor. Hobbes’ political philosophy, especially the Leviathan, with attention to its relevance to contemporary political philosophy. Ms. Hampton

219. Descartes. Prerequisite: consent of instructor. A study of the works of Descartes, with emphasis on the Meditations. Such issues as the problem of skepticism, the foundations of knowledge, the existence of God, the relation between mind and body are discussed. May be concurrently scheduled with course C109.

210. Spinoza. Prerequisite: consent of instructor. Selected topics in the philosophy of Spinoza. May be concurrently scheduled with course C110, in which case there will be a two-hour biweekly discussion meeting, plus additional readings and a longer term paper for graduates. Mr. Adams

211. Leibniz. Prerequisite: consent of instructor. Selected topics in the philosophy of Leibniz. May be concurrently scheduled with course C111, in which case there will be a two-hour biweekly discussion meeting, plus additional readings and a longer term paper for graduates. Mr. Adams

212. Locke and Berkeley. Prerequisite: consent of instructor. Selected topics in the philosophy of Locke and Berkeley. May be repeated for credit by consent of instructor. May be concurrently scheduled with course C112. Mr. Donnellan

214. Hume. Prerequisite: consent of instructor. Selected topics in the philosophy of Hume. May be repeated for credit by consent of instructor. May be concurrently scheduled with course C114. Mr. Donnellan

215. Kant. Prerequisite: consent of instructor. An intensive study of selected writings of Immanuel Kant. Mr. Quinn

216. 19th-Century Philosophy. Prerequisite: consent of instructor. Topics in 19th-century philosophy. May be repeated for credit by consent of instructor.

219. Seminar: History of Modern Philosophy. Prerequisite: consent of instructor. Selected problems and philosophers. May be repeated for credit by consent of instructor.

220. Seminar: Topics in History of Philosophy. Seminar, three hours. Prerequisite: consent of instructor. Selected problems and philosophers which may be drawn from different periods. May be repeated for credit by consent of instructor. Mr. Adams, Mrs. Adams

Group II. Logic, Semantics, and Philosophy of Science

221A. Topics in Set Theory. Prerequisite: Mathematics 112A or consent of instructor. Sets, relations, functions, partial and total orderings; well-orderings. Ordinal and cardinal arithmetic, finiteness and infinity, the continuum hypothesis, inaccessible numbers. Formalization of set theory: Zermelo-Fraenkel; von Neumann-Godel set theory. May be repeated for credit by consent of instructor. Mr. Kalish, Mr. Martin

221B. Non-Neumannian Set Theory. Prerequisite: course 221A or consent of instructor. Standard (so-called Z-F) set theory relies on a principle of limitations of size as a means of avoiding antinomy. As this principle was first formulated as an attempt to avoid the set theory by von Neumann, set theories in which it fails may appropriately be spoken of as non-Neumannian. Possibilities in regard to non-Neumannian set theories are explored; proposed axiomatizations and relative consistency proofs based on the assumed consistency of Z-F set theory or of Z-F set theory plus a strong axiom of infinity. Mr. Church

221C. History of Set Theory. Prerequisite: consent of instructor. This course traces the development of the concept of set and axiomatic set theory by examining selected writings of Frege, Cantor, Russell, Zermelo, Godel, and several others. The aim is to understand the origins and significance of certain key developments in the history of set theory, axiomatic set theory as a reaction to the paradoxes, formal first-order axiomatic set theory as opposed to informal axiomatism, type theory and the rank hierarchy, ramification and predicativity, proper classes and sets as small classes, and the particular Zermelo-Fraenkel axiomatic theory. The main focus is on the actual expressed ideas and views of various influential authors. Mr. Martin

222A-222B-222C. Gödel Theory. Prerequisite: several courses in logic, preferably including course 135. First in a series of three courses leading to Gödel’s incompleteness theorem and Tarski’s definition of truth.

222B. Prerequisite: course 222A. Second-order arithmetic. Second in series of three courses leading to Gödel’s incompleteness theorem and Tarski’s definition of truth.

222C. Prerequisite: course 222B. Gödel numbering and Gödel theory. Final course in the Gödel theory series. Mr. Church, Mr. Martin

224. Philosophy of Physics. Prerequisite: consent of instructor. Selected philosophical topics related to physical theory, depending on interests and background of the participants, including space and time; observation in quantum mechanics; foundations of statistical mechanics. May be repeated for credit by consent of instructor. Mr. Healey

225. Probability and Inductive Logic. Prerequisites: course 134 or Mathematics 112A-112B or consent of instructor.

226. Topics in Mathematical Logic. Prerequisite: consent of instructor. Content varies from quarter to quarter. May be repeated for credit by consent of instructor. Mr. Kalish, Mr. Kaplan, Mr. Martin

227. Philosophy of Social Science. Prerequisite: consent of instructor. An examination of philosophical problems concerning concepts and methods used in the social sciences. Topics may include the relation between social processes and individual psychology, the logic of explanation in the social sciences, determinism and spontaneity in history, the interpretation of culture, the radical distinction of one's own group from others with a primary interest and advanced preparation in a social science are encouraged to enroll. May be repeated for credit by consent of instructor.

230. Seminar: Logic. Prerequisite: consent of instructor. May be repeated for credit by consent of instructor. Mr. Church, Mr. Kaplan, Mr. Martin
Group III. Ethics and Value Theory

241. Topics in Political Philosophy. Prerequisites: course 150, 155, 157A, or 157B or any two courses in philosophy or consent of instructor. An examination of one or more topics in political philosophy (e.g., justice, democracy, human rights, political obligation, alienation). May be repeated for credit by consent of instructor. Mr. Hampton

245. Seminar: History of Ethics. Prerequisite: consent of instructor. Selected topics. May be repeated for credit by consent of instructor. Ms. Hampton

246. Seminar: Ethical Theory. Prerequisite: consent of instructor. Selected topics. Content varies from quarter to quarter. May be repeated for credit by consent of instructor. Mr. Quinn

247. Seminar: Political Theory. Prerequisite: consent of instructor. May be repeated for credit by consent of instructor. Ms. Hampton

248. Problems in Moral Philosophy. Prerequisite: consent of instructor. An intensive study of some leading current problems in moral philosophy. May be repeated for credit by consent of instructor. Mr. Morris

255. Seminar: Aesthetic Theory. Prerequisite: consent of instructor. Selected topics. May be repeated for credit by consent of instructor. Mr. Quinn

M256. Topics in Legal Philosophy. (Same as Law M217.) Lecture, three hours. Prerequisite: consent of instructor. An examination of topics such as the concept of law, the nature of justice, problems of punishment, legal reasoning, and the obligation to obey the law. May be repeated for credit by consent of instructor. Mr. Munzer

M257. Seminar: Philosophy of Law. (Same as Law M524.) Lecture, three hours. Prerequisite: consent of instructor. Selected topics in the philosophy of law. May be repeated for credit by consent of instructor. Mr. Morris

Group IV. Metaphysics and Epistemology

271. Seminar: Topics in Metaphysics and Epistemology. Discussion, three hours. Prerequisite: consent of instructor. May be repeated for credit by consent of instructor. Mr. Arblitton

275. Human Action. Prerequisites: two upper division philosophy courses or consent of instructor. An examination of theories, concepts, and problems concerning human actions. Topics may include analysis of intentional actions; determinism and freedom; the nature of explanations of intentional actions. May be repeated for credit by consent of instructor. Mr. Arblitton, Mr. Donnellan

280. 20th-Century Continental Philosophy. Prerequisite: consent of instructor. Selected topics in 20th-century continental European philosophy. May be repeated for credit by consent of instructor.

281. Seminar: Philosophy of Mind. Prerequisite: consent of instructor. May be repeated for credit by consent of instructor. Mr. Burge

282. Seminar: Metaphysics. Prerequisite: consent of instructor. May be repeated for credit by consent of instructor.

283. Seminar: Theory of Knowledge. Prerequisite: consent of instructor. May be repeated for credit by consent of instructor. Ms. Donnellan

284. Seminar: Philosophy of Perception Prerequisite: consent of instructor. May be repeated for credit by consent of instructor.

285. Philosophy of Psychoanalysis. Prerequisite: consent of instructor. An examination of topics such as the nature and validity of psychoanalytic explanations and interpretations, psychoanalysis and language, metapsychological concepts such as the unconscious, the ego, id, superego, defense mechanisms, and the psychoanalytic conception of human nature. Mr. Morris

287. Seminar: Philosophy of Language. Prerequisite: consent of instructor. Selected topics. May be repeated for credit by consent of instructor. Mr. Burge, Mr. Donnellan, Mr. Furth

288. Seminar: Wittgenstein. Prerequisite: consent of instructor. Mr. Arblitton

289. Seminar: Philosophy of Religion. Prerequisite: consent of instructor. May be repeated for credit by consent of instructor. Mr. Arblitton

Special Studies

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

495. Teaching of College Philosophy (2 to 4 units). Prerequisite: consent of instructor. Seminars, workshops, and apprentice teaching. Selected topics, including evaluation scales, various teaching strategies and their effects, and other topics in college teaching. May be repeated for credit. S/U grading.

596A-596B. Directed Individual Studies (2 to 8 units). Properly qualified graduate students who wish to pursue a problem through reading or advanced study may do so if their proposed project is acceptable to a staff member. May be repeated for credit. S/U (course 596B) and letter (course 596A) grading.


599. Research for Ph.D. Dissertation (2 to 8 units). Prerequisite: advancement to Ph.D. candidacy. May be repeated for credit. S/U grading.

Physics

3-174 Knudsen Hall, 825-3224

Professors

Ernest S. Abers, Ph.D.
Rubin Braunstein, Ph.D.
Charles D. Buchanan, Ph.D.
Nina Byers, Ph.D.
Marvin Chester, Ph.D.
W. Gilbert Clark, Ph.D.
John M. Cornwall, Ph.D.
Ferdinand V. Coroniti, Ph.D.
John M. Dawson, Ph.D.
Robert J. Finkelestein, Ph.D.
A. Theodore Forrester, Ph.D.
Burton D. Fried, Ph.D.
Christian Fronsdal, Ph.D.
Walter N. Gekelman, Ph.D., in Residence
George Gruner, Ph.D.
Roy P. Haddock, Ph.D.
George J. Igo, Ph.D.
Charles F. Kennel, Ph.D.
Leon Knopoff, Ph.D.
George J. Morales, Ph.D.
Steven A. Moszkowski, Ph.D.
Bernard M. K. Neffens, Ph.D.
Richard E. Norton, Ph.D.
Raymond L. Orbach, Ph.D.
Seth J. Putterman, Ph.D.
Isadore Rudnick, Ph.D.
Joseph Rudnick, Ph.D.
Robert A. Saiten, Ph.D.
Peter E. Schlein, Ph.D.
Julian S. Schwinger, Ph.D. (University Professor)
William E. Slater, Ph.D.
Reiner L. Stenzel, Ph.D.
Donald H. Stork, Ph.D.
Charles A. Whitten, Jr., Ph.D.
Alfred Y. Wong, Ph.D.
Chun Wa Wong, Ph.D.
Eugene Y. Wong, Ph.D.

Emeritus Professors

Alfredo Banos, Jr., Dr.Eng., Ph.D.
Hans E. Bommel, Ph.D.
Joseph Kaplan, Ph.D., Sc.D., L.H.D.
Kenneth R. Machle, Ph.D.
J. Reginald Richardson, Ph.D.
Norman A. Watson, Ph.D.
Byron T. Wright, Ph.D.

Associate Professors

Claude W. Bernard, Ph.D.
E.T. Tombouls, Ph.D.
Gary A. Williams, Ph.D.

Assistant Professors

Robijn F. Bruinisma, Ph.D.
Robert D. Cousins, Ph.D.

Adjunct Assistant Professors

Elizabet H. Bieszynski, Ph.D.
Marek K. Bieszynski, Ph.D.
Bernard J. Leikind, Ph.D.

Adjunct and Visiting Lecturers

Maha Abdalla, Ph.D., Adjunct
David Barbosa, Ph.D., Adjunct
Hans-Uno Bengtsson, Ph.D., Adjunct
S. Merton Burkhard, M.S., Visiting
Arthur H. Huffman, Ph.D., Adjunct
Jesus V. Kinderman, Ph.D., Visiting
Philip Pritchett, Ph.D., Adjunct
Marian S. Soni, Ph.D., Adjunct
Srinivas Sridhar, Ph.D., Adjunct
Shiu Chung Sung, Ph.D., Visiting
Stephen Trentalange, Ph.D., Adjunct

Scope and Objectives

Physics is a basic science with actual and potential applications in many fields. The undergraduate curriculum is broad and general with respect to physics but includes an introduction to theoretical and experimental work in specialized subfields of physics in the senior year.
The department offers a comprehensive graduate program leading to the Master of Science degree, the Master of Arts in Teaching (M.A.T.), and the Ph.D., which is offered in theoretical or experimental work in a choice of subfields.

Undergraduate Study
The Department of Physics offers a choice of two undergraduate majors: the B.S. degree program in Physics and the B.A. degree program in General Physics. Courses taken to fulfill any of the requirements for either major must be taken for a letter grade.

Bachelor of Science in Physics
This major should be taken if you intend to continue toward the Ph.D. in Physics.

Preparation for the Major
Required: Physics 8A, 8B/8BL, 8C/8CL, 8D/8DL, 8E; Chemistry 11A, 11B/11BL, 11C (11CL is recommended but not required); Mathematics 31A, 31B, 32A, 32B, 33A, 33B. A detailed brochure on the major is available in the Undergraduate Physics Office.

The Major
Required: Physics 105A, 105B, 110A, 112, 115A, 131, one course from the 180 series, two upper division physics electives (excluding 185 and 199), and five upper division courses in no more than two other UCLA departments. A C average in the upper division physics courses is required.

Teaching Credentials
You may earn credentials for teaching physical sciences and other subjects in California elementary and secondary schools. Completion of the Teacher Credential Program in the Teacher Education Laboratory is required. Consult the Graduate School of Education (201 Moore Hall) for information.

Graduate Study
The Department of Physics offers opportunities for graduate study leading to the M.S., M.A.T. (Master of Arts in Teaching), and Ph.D. degrees. Special emphasis is given to preparation in the following fields of physics: acoustics/low temperature, elementary particles, intermediate energy and nuclear physics, plasma and astrophysics, solid-state and condensed matter, spectroscopy.

Admission
You must have an excellent undergraduate record in addition to meeting the University minimum requirements. You are required to take the Graduate Record Examination (GRE) Advanced Test in Physics and to submit three letters of recommendation. Foreign applicants who are applying for financial support (fellowships, teaching assistantships, and research assistantships) should have a letter of recommendation (included as one of the three required letters of recommendation) which comments on their verbal ability in English.

Application materials may be obtained by writing to the Graduate Office, Department of Physics, 3-145G Knudsen Hall, UCLA, Los Angeles, CA 90024.

Master of Science Degree
Major Fields or Subdisciplines
It is not required to designate an area of specialization for a terminal master's degree.

Course Requirements
The University requires a total of nine courses for the M.S. degree. The Physics Department requires that a minimum of six of the nine be graduate courses in physics of which you must pass the five fundamental (core) courses: Physics 210A, 210B, 215A, 221A, 221B. To complete the minimum six graduate courses you are required to pass one of the following courses with a B or better: 220, 221C, 231A. The remaining three courses (to complete the nine courses for the M.S. degree) may be satisfied by upper division or graduate courses, not necessarily in physics, which are acceptable to the Physics Department. No more than two of the three courses may be from Physics 596 or seminar courses. Only eight units of 500-series courses may be applied toward the total course requirement for the M.S. degree (courses 597 and 598 may not be applied).

Comprehensive Examination Plan
A passing grade on a written comprehensive examination is required. It is recommended that the examination be taken during the first year by UCLA graduate students in physics and must be taken no later than the fourth quarter in residence by other students. This examination is given twice a year.

Although the department operates under the comprehensive examination plan rather than the thesis plan, arrangements generally can be made to write a master's thesis, provided you have a particularly interesting research problem and a professor is willing to undertake the guidance of your work. You must petition the departmental committee of graduate advisers for permission to pursue the thesis plan. The comprehensive examination requirement is waived if the petition is approved.

Master of Arts in Teaching
Major Fields or Subdisciplines
It is not required to designate an area of specialization for the M.A.T. degree.

Course Requirements
This degree leads to qualification for teaching credentials at the secondary school or junior college level. Five graduate courses, five professional (300 series) courses, and 12½ total courses are required.

(1) The five graduate physics courses must include Physics 370 and four courses from 210A, 210B, 215A, 221A, 221B.

(2) Also required are the courses necessary for completion of the preliminary State of Cali-
All departmental graduate students (master's completing the core course requirements and question. You may arrange for the comprehensive oral examination at the Ph.D. level of achievement, or (3) fail. In case of failure, you must petition to repeat the examination in the first quarter of residence. Although it is not required course or a part of or prerequisite to any general physics sequence of courses, its purpose is to indicate the nature of current research problems in physics.

Physics 1Q is intended for entering freshman physics majors and will normally be taken in the first quarter of residence. Although it is not a required course or a part of or prerequisite to any general physics sequence of courses, its purpose is to indicate the nature of current research problems in physics.

The doctoral committee conducts the University Oral Qualifying Examination, which may include (1) material in your field of specialization, (2) related material that members of the committee from other departments may wish to ask, and (3) discussion of the proposed dissertation problem. Committee members will guide, read, approve, and certify the dissertation. At least two members from the Physics Department and at least one outside member must act in this capacity. A decision is also made at this time as to whether a final oral examination will be required.

When a satisfactory report on the completion of the written and oral qualifying examinations has been submitted, you will be eligible to be formally advanced to candidacy for the Ph.D. Final Oral Examination

This examination ordinarily will be a discussion of your original work, including your dissertation and other related matters to be determined by the committee. It may be, if the committee so desires, a survey or comprehensive examination.

Lower Division Courses

Physics 6A, 6B, 6C form a one-year sequence of courses in general physics (with laboratory). In this sequence only algebra and trigonometry are used in providing a mathematical description of physical phenomena; calculus is not used.

The department takes into account prior preparation in physics. If you feel your background would permit acceleration, you may be exempted from courses 8A through 8E by taking the final examination with a class at the end of any quarter. These will serve as placement examinations. You should discuss such possibilities with your departmental advisor.

Physics 10 is a one-quarter, non-laboratory course which surveys the whole field of physics. Any two or more courses from Physics 3A, 6A, 8A, and 10 will be limited to six units credit.

1Q. Contemporary Physics (2 units). Limited to physics majors. A review of current problems in physics, with emphasis on those being studied in the research laboratories at UCLA. The significance of the problems and their historical context. (F)

3A. General Physics: Mechanics of Solids and Fluids. Lecture/demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisites: three years of high school mathematics including trigonometry or two years of high school mathematics and a one-term college course in mathematics with trigonometry included in the group of corequisite or equivalent courses. Not open for credit to students with credit for course 8A or equivalent. The fundamentals of classical mechanics: Newton’s laws; conservation of momentum, angular momentum, energy; Kepler’s laws; dynamics of systems of particles; fluid mechanics. (F,W)

3B. General Physics: Heat, Sound, Electricity and Magnetism. Lecture/demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: course 3A or equivalent. Temperature, heat, and the laws of thermodynamics. Introduction to wave motion, resonance. Sound and acoustics. Electric and magnetic fields. Electric power. Elements of DC and AC circuits. (F,W)

3C. General Physics: Light, Relativity, and Modern Physics. Lecture/demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: course 3B or equivalent. Light, optical instruments. Introduction to relativity. The electron and the atom. Matter waves. Nuclear and particle physics. (F,S)

6A. Physics for Life Science Majors: Mechanics and Wave Motion. Lecture/demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: Mathematics 3A, 3B, 3C (may be taken concurrently), or equivalent. (F,W)

6B. Physics for Life Science Majors: Electricity and Magnetism. Lecture/demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: course 6A. (F,Sp)

6C. Physics for Life Science Majors: Light and Modern Physics. Lecture/demonstration, three hours; discussion, one hour; laboratory, two hours. Prerequisite: course 6B. (F,S)

8A. Physics for Scientists and Engineers: Mechanics. Lecture/demonstration, four hours; discussion, one hour. Prerequisite: Mathematics 31A or equivalent. Recommended: high school physics and chemistry. Corequisites: course 8AL. Mathematics 31B. Motion, Newton’s laws, work, energy, and angular momentum, rotation, equilibrium, gravitation. (F,W)

8AL. Physics Laboratory for Scientists and Engineers: Mechanics (1 unit). Lecture, one hour; laboratory, 90 minutes. Corequisite: course 8A or consent of instructor. (F,W)

8B. Physics for Scientists and Engineers: Waves, Sound, Heat. Lecture/demonstration, three hours; discussion, one hour. Prerequisite: course 8A, Mathematics 31B. Corequisites: course 8BL. Mathematics 32A (or equivalent). Harmonic oscillators, standing and traveling waves, fluid dynamics, sound, kinetic theory of gases, laws of thermodynamics. (F,W)

8BL. Physics Laboratory for Scientists and Engineers: Waves, Sound, Heat (1 unit). Lecture, one hour; laboratory, 90 minutes. Corequisite: course 8B or consent of instructor. (F,W)
8BH. General Physics: Vibration, Wave Motion, Sound, Fluids, Heat, and Kinetic Theory (Honors). Lecture/demonstration, three hours; discussion, one hour. Prerequisite: course 8A with a grade of A or recommendation of 8A instructor, Mathematics 31B (or preferably 31BH) completed and 32A (or preferably 32AH) concurrent, or equivalent. The course covers the same material as course 8B but in greater depth.

8BH. Physics for Scientists and Engineers (Honors) (5 units). Lecture, four hours; discussion/laboratory, two and one-half hours. Prerequisite: same as for the Physics 8 and 8L series. Limited to the top 20 students (determined by previous Physics 8 grades) by consent of instructor. Intended for outstanding students with a deep interest in physics. Honor students participate in the lectures and examinations of the regular Physics 8 series. Discussions and laboratories are given by an honors instructor who discusses challenging problems in depth. (F,W,Sp)


10. Physics. Lecture/demonstration, three hours; quiz/discussion, one hour. Not open for credit to students with credit for courses 3A, 6A, 8A, or an equivalent course in mechanics. Special mathematical preparation beyond that necessary for admission to the University in freshman standing is not required. The course satisfies in part the Letters and Science requirements in the physical sciences for nonphysical science majors. Topics: Newton's laws, gravitation, electricity and magnetism, wave motion, light, sound, and heat, relativity, quantum mechanics, atoms, and subatomic particles. As time permits, the development of physics theories are placed in cultural and historical perspective. (F,W,Sp)

11. Modern Physics for Nonscience Majors. Lecture/demonstration, three hours; quiz/discussion, one hour. Prerequisite: course 10. Topics include the concept of energy, quantum theory, nuclear physics, relativity. 14A-14B. Mechanics: Preparatory Courses. Lecture, three hours; discussion, one hour. Prerequisites: Mathematics 3A, 3B, and 3C, or 31A. Corequisites for course 14A: Mathematics 31B. Introductory courses in mechanics that satisfy the physics prerequisite for course 6B or 8B. Primarily intended for students who are inadequately prepared for course 6A or 8A, the course in physics, lectures, demonstrations, discussions, laboratory, and small group problem-solving sessions. (F,W,Sp)

Upper Division Courses
Prerequisites for all upper division courses: Physics 8A through 10E, Mathematics 31A, 31B, 32A, 32B, 33A, and (except for Physics 105A, 116) 33B, or consent of instructor. Students must complete one quarter of upper division physics before enrolling in the 180 laboratory series.


105B. Analytic Mechanics. Prerequisite: course 105A. Relativity with four vectors, non-inertial reference frames, dynamics of rigid bodies, coupled oscillators, normal modes of oscillation, vibrating strings, and wave propagation.

108. Optical Physics. Prerequisite: course 110B. Interaction of light with matter; dispersion theory, oscillator strength, line widths; Molecular scattering/B (or preferably 32BH) completed and 33A (or preferably 33AH) concurrent, or consent of instructor. The course covers the same material as course 8D but in greater depth.

110A. Electricity and Magnetism. Lecture, three hours. Prerequisite: course 131. Electrodynamics and magnetostatics.


112. Thermodynamics. (Formerly numbered 112A.) Lecture, three hours; discussion, one hour. fundamentals of controlled fusion. Particle motion in magnetic fields; fluid behavior, plasma waves; resistivity and transport; equilibrium and stability; kinetic effects. Illustrative laboratory experiments are discussed.

115A. Elementary Quantum Mechanics. Lecture, three hours; discussion, one hour. Prerequisites: courses 105B (may be taken concurrently), 131. The classical background, basic ideas, and methods of quantum mechanics.

115B. Elementary Quantum Mechanics. Prerequisite: course 115A. Development of the methods and concepts of quantum mechanics.

116. Electronics. Lecture, three hours; laboratory, three hours. Alternating current circuits, vacuum tube characteristics and parameters, transistor characteristics, device parameters, oscillators, nonlinear and linear circuits.

M122. Plasma Physics. (Same as Electrical Engineering M118.) Prerequisite: course 110A or Electrical Engineering 100B. Senior-level introductory course to physics of plasmas and ionized gases and fundamentals of controlled fusion. Particle motion in magnetic fields; fluid behavior, plasma waves; resistivity and transport; equilibrium and stability; kinetic effects. Illustrative laboratory experiments are discussed.


124. Nuclear Physics. Lecture, three hours; discussion, one hour. Prerequisite: course 115B. Nuclear charge, mass, radius, spin, and moments; nuclear models; nuclear forces; alpha, beta, and gamma emission.

126. Elementary Particle Physics. Prerequisite: course 115B. Experimental determination of the properties of elementary particle states. Relativistic kinematics and the special theory of relativity, and isotopic spin formalism; elastic and inelastic scattering; invariance principles and conservation laws; strong, electromagnetic, and weak interactions. Survey of important experiments.

131. Mathematical Methods of Physics. (Formerly numbered 131A.) Lecture, three hours; discussion, one hour. Vectors and fields in space, linear transformations, matrices, and operators; Fourier series and integrals.

132. Mathematical Methods of Physics. (Formerly numbered 131B.) Lecture, three hours; discussion, one hour. Prerequisite: course 131. Green's functions and boundary value problems, complex variables, and topics selected from tensors, Laplace transforms, probability theory, approximation techniques.

140. Introduction to Solid-State Physics. Prerequisite: course 115B or equivalent. Introduction to the basic theoretical concepts of solid-state physics with applications. Crystal symmetry; cohesive energy; dielectric and insulating behavior; metal behavior; band theory. Atomic structure of metals; electronic, magnetic, and optical properties in a lattice; the reciprocal lattice; phonons and their interactions; free electron theory of metals; energy bands.

180A. Nuclear Physics Laboratory.

180B. Optical Physics and Spectroscopy Laboratory.
370. The Teaching of Physics. Prerequisite: consent of instructor. A study of the physics laboratory experiments and demonstrations available today for secondary school and community college physics courses. The course is part of the Master of Arts in Teaching (M.A.T.) program but is open to other interested students.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

495. Teaching of College Physics (2 units). Lecture/discussion (five or more one-hour meetings during the quarter, plus intensive training week at the beginning of Fall Quarter). Required of all new teaching assistants. A special course for teaching assistants designed to deal with the problems and techniques of teaching college physics. The 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 units). May be repeated for credit. S/U grading.

597. Preparation for Master’s Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units). May be repeated. S/U grading.

598. Master’s Thesis Research and Writing (2 to 8 units). May be repeated. S/U or letter grading.

599. Ph.D. Research and Writing (8 to 12 units).

**Political Science**

4289 Bunche Hall, 825-4331

**Professors**
Richard E. Ashcraft, Ph.D.
Hans H. Baerwald, Ph.D.
Richard D. Baum, Ph.D.
Irving Bernstein, Ph.D.
David T. Cattell, Ph.D.
Mattei Dogan, Docteur es Lettres
Leonard Freedman, Ph.D.
Robert C. Fried, Ph.D.
Robert S. Gerstein, LL.B., Ph.D.
Edward Gonzalez, Ph.D.
Arnold Horelick, Ph.D.
Michael Intriligator, Ph.D.
Roman Kolowski, Ph.D.
Andrzej Korbutowski, Ph.D.
Michael F. Lotfchie, Ph.D.
Dwaine Marvick, Ph.D.
Charles R. Nixon, Ph.D.
David C. Rapport, Ph.D.
John C. Ries, Ph.D.
Ronald L. Rogowski, Ph.D.
David O. Sears, Ph.D.
Richard Sisson, Ph.D., Chair
Richard L. Sklar, Ph.D.
Stephen L. Spiegel, Ph.D.
David O. Wilkinson, Ph.D.
David A. Wilson, Ph.D.
E. Victor Wolfenstein, Ph.D.
Charles E. Young, Ph.D.
Ciro Zoppo, Ph.D.

**Emeritus Professors**
Winston W. Crouch, Ph.D.
Ernest A. Engelbart, M.P.A., Ph.D.
David G. Farrelly, Ph.D.
J.A.C. Grant, Ph.D., LL.D.
Marvin Hoffenberg, M.A.
Foster H. Sherwood, Ph.D., LL.D.
H. Arthur Steinr, Ph.D.

**Associate Professors**
L. Blair Campbell, Ph.D.
Douglas S. Hobbs, Ph.D.
Karen J. Orrin, Ph.D.
John R. Petrock, Ph.D.
Raymond A. Rocci, Ph.D.
Stephen L. Skowronek, Ph.D.
Duane E. Smith, Ph.D.
Leo E. Snowiss, Ph.D.
Arthur A. Stein, Ph.D.

**Assistant Professors**
Jeffry A. Frieden, Ph.D.
Barbara Geddes, M.A., Acting
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**Scope and Objectives**

The undergraduate program in political science aims to provide an understanding of basic political processes and institutions as these operate in different national and cultural contexts. It also covers the interaction between national states, the changing character of the relations between citizens and governments, and the values and criteria by which the quality of political life is judged. This 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.

**Bachelor of Arts Degree**

Students entering UCLA during the 1985-86 academic year with less than 45 units and those planning to enter Fall Quarter 1986 or thereafter must fulfill the requirements for the political science major listed in this catalog. Those entering in 1985-86 with 45 or more units may fulfill the requirements listed in the 1983-84 UCLA General Catalog.

**Pre-Political Science Major**

All students intending to major in political science under the requirements listed in this catalog must enroll as pre-political science majors. After completion of "Preparation for the Major" courses, you must petition to enter the major in the Undergraduate Office, 4256 Bunche Hall.

**Preparation for the Major**

Required: Four lower division courses from Political Science 10, 20, 40, 50, 70, 80, including at least two courses from 10, 20, and 50. These lower division courses are prerequisites to upper division courses and are required in those fields designated as your concentration or distribution field.

The general education requirement for political science majors is 12 courses. If you scored less than 600 on the Quantitative SAT (or 550 on CEEB Math), the quantitative reasoning requirement must be met by successfully completing one of the following: Political Science 6, Economics 40, Mathematics 50, Philosophy 31, Public Health 100B or 100C or 100D, Sociology 18.

Note: You must complete all premajors with a 2.0 grade-point average by the time you attain 135 units. Admission to the major will be granted only after successful completion of all lower division requirements.

**The Major**

Required: Ten upper division courses (40 units) selected from Political Science 102 through 199 taken for a letter grade. You are also required to complete four upper division courses (16 units) in one or two of the following social sciences: anthropology, communication studies (only 160), economics, geography, history, management (only 150, 190), psychology (except 115, 116, 117), sociology. These courses must be taken for a letter grade. You are required to maintain a 2.0 overall grade-point average in all upper division political science courses.

Upper division political science courses are organized into six fields: (I) political theory, (II) international relations, (III) politics, (IV) comparative politics, (V) public law, and (VI) public administration and local government.

In fulfilling the requirement of ten upper division political science courses, you 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. It is recommended that one of these courses be an undergraduate seminar (C197A-C197C; see field concentration requirements below).

2. A distribution of the two lower division courses and two courses in each of two other fields (four upper division courses).

3. Two additional elective courses in political science to comprise the total of ten.

Continuing students are expected to follow the 1983-84 UCLA General Catalog requirements. If you must meet the Political Science 110 requirement, you may do so by successfully completing course 10.

**Field Concentration Requirements:** The lower division course is prerequisite to upper division courses in those fields designated as the concentration field and the two distribution...
fields for majors. Specific requirements for 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 upper division courses in Field II. Four units from courses 175A-175B may be applied as one of the four courses in Field II. Only one of the defense studies courses—138A, 138B, 138C—may be applied toward the field concentration requirement.

(III) Politics: Course 40 and any four courses in Field III. Course 182A may also be applied toward concentration in this field.

(IV) Comparative Politics: Courses 50, 168, and any three additional courses in Field IV. Course 115, 186A, or 186B—no more than one of them—may also be applied toward concentration in this field.

(V) Public Law: Courses 70, 170, and any three additional courses in Field V. Course 70 is prerequisite to 172A and 172B.

(VI) Public Administration and Local Government: Course 80 and any four courses in Field VI. Course 138C, 173, or 174—but no more than one of them—may also be applied toward concentration in this field.

Note: No course may be applied toward both concentration and distribution requirements.

Also, courses 119, 139, 149, 169, 179, and 189 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 195A-195B-195C and 199 may not be applied toward either the concentration or distribution requirement.

### Undergraduate Seminars

Each quarter the department offers a series of seminars (Political Science C197A-C197F) in each field. The prerequisites are two upper division courses in the field in which the seminar is offered, a 3.25 average at the upper division level in political science, or discretion of the instructor. These courses may be applied toward either the concentration or distribution requirement, and students who qualify are encouraged to take them.

### Honors Program

Students wishing to qualify for graduation with departmental honors must maintain a 3.5 grade-point average in upper division political science courses and complete the following:

(1) Political Science 195A-195B-195C, in which a senior thesis is written; (2) eight upper division courses (excluding courses 119, 139, 149, 169, 179, and 189) distributed as follows: four courses in one field and four additional courses, two in each of two other fields; (3) four upper division courses in one or two of the social sciences other than political science.

### M.A. and Ph.D. Degrees

The aim of the graduate program is to train scholars in the discipline of political science, while also providing the additional professional skills relevant to their particular career objectives. The department ordinarily accepts only students who are seeking the Ph.D. degree (a master's degree may be earned as part of the process of completing the requirements for the Ph.D.).

The program, unless you choose the M.A. thesis option, consists of three fields of study (two major fields in political science and a minor field which may be outside the department). You will take coursework in these fields during the first two years of the program, at the end of which you will take qualifying examinations in your two major fields. If you qualify for the Ph.D. on the basis of these examinations, you will take an examination the following year in your minor field and complete the course requirements for the Ph.D. You will also prepare a research design for your dissertation and, finally, complete the dissertation.

You are eligible to receive a master's degree when you qualify for the Ph.D. If you do not qualify for the Ph.D., you will still receive a master's degree if your qualifying examinations merit it and you have completed the coursework required for the first two years. If you choose the thesis program, you will not have a minor field and will write a thesis at the end of two years instead of taking examinations. You will receive a master's degree after successfully completing the program.

### Admission

In addition to University minimum requirements, the department requires three letters of recommendation, scores of the General Test of the Graduate Record Examination (GRE), and a sample of your analytical writing skills (e.g., senior or M.A. thesis, term paper). Applicants are selected on the basis of perceived promise irrespective of their preference for the M.A. or Ph.D. degree. Prospective students may write for departmental brochures to the Graduate Studies Office, Department of Political Science, 4250 Bunche Hall, UCLA, Los Angeles, CA 90024. The department does not have an application form in addition to the one used by the Graduate Admissions Office. The deadline for receipt of all application materials is December 31 prior to the Fall Quarter in which you plan to register.

### Major Fields

Six fields of study are offered to graduate students in the department: political theory; international relations; politics; comparative politics; public law; and public administration and local government.

### Foreign Language or Research Methodology Requirement

There is no foreign language requirement for the M.A. degree.

For the Ph.D., you must fulfill one of the following requirements:

(1) Foreign language proficiency may be demonstrated by passing the Educational Testing Service (ETS) examination with a minimum score of 550. In languages for which no ETS examination is given, you must take a departmental examination to test your proficiency at a level comparable to an ETS score of 550. You may also satisfy the requirement by having completed, with a grade of B or better, the final course in a two-year sequence of college courses in a foreign language.

(2) Research methodology proficiency may be demonstrated by completing three courses (normally Political Science 204A, 204B, 204C) with grades of B or better. Comparable courses in quantitative methodology may be substituted for courses 204A and 204B by petition, but you are expected to take course 204C to complete the requirement.

You are required to pass the foreign language or methodology requirement before you can be advanced to candidacy for the Ph.D., but you may pass the requirement after the University Oral Qualifying Examination.

### Course Requirements

During the first two years of the program you are required to take a minimum of 13 substantive courses (exclusive of Political Science 597 and 598), of which eight must be in two major fields in political science. The 13 courses must be distributed as follows during the two years of study:

(1) First-year students will take Political Science 200, normally in the Fall Quarter of their first year.

(2) A minimum of four graduate courses is required in each of your two major fields. Each field will designate the core courses needed to fulfill a major in that field. Where approved by a field, you may take one designated Concepts and Methods (CAM) course (Political Science 203A or 203B) to satisfy one of the four course requirements in either of the two major fields, but not in both fields.

(3) In addition, you will be required to take one course in statistics (normally course 204A). Graduate statistics courses in other departments may be substituted by petition.

(4) Unless you select the thesis plan, you must take a minimum of two courses in a minor field, of which at least one must be at the graduate level. The minor field may be taken in one of the six fields of political science, in the CAM series offered by the department, or in an outside discipline, area studies program, or professional school. If the minor is outside the Political Science Department, your plan of
study must be approved by the graduate studies committee.

(5) If you select the M.A. thesis plan, you must take two courses related to your thesis in lieu of the minor field requirements.

(6) All students must take an additional graduate course as an elective, selected from within or outside the department. If your minor is taken outside the department, the elective must be in one of the six fields, excluding the two major fields. It may not be course 596.

(7) A maximum of three 596 courses may be applied toward the requirement of 13 substantive courses, but no more than two 596 courses may be taken in any of the two major fields.

Transfer Students: With the approval of the relevant field committee and the Dean of the Graduate Division, a maximum of two graduate courses taken at another institution may be applied toward the 13-course requirement in the first two years of the program. If the courses were taken at another UC campus, the number is increased to four, and if you already have an M.A. in Political Science, to six. Although you may have a master’s degree at entrance, you must go through the qualifying examination process to qualify for the Ph.D.

After the two-year program is completed and you have qualified to pursue the Ph.D., as a result of the qualifying examinations, you will select your individual research adviser and chart the plan of study to be followed. You must be in residence for a minimum of two quarters, during which time you are to satisfy the following minimum requirements:

(1) Minor Field: You must complete your third course in the minor field and take a written examination or submit a paper appropriate for determining proficiency in the minor field. In case of failure you may retake the examination once.

(2) Elective: With the approval of your research adviser and graduate adviser, you will take one elective course within or outside the department. The elective should be relevant to the dissertation topic and may be a 596 course provided it is a substantive course.

(3) Directed Reading and Research: You must take Political Science 590A to research your proposed dissertation topic and 590B to prepare your research design for the dissertation. Normally, course 590B is taken preceding or during the quarter in which the oral examination is taken. With the approval of your research adviser, you may take more than one elective or 590A or 590B course.

Teaching Experience
All graduate students in the Department of Political Science, before being granted the Ph.D., are required to have formal teaching experience in an institution of higher learning. Waiver of this requirement is possible in exceptional circumstances by petition to the graduate studies committee.

Thesis Plan
If you select the thesis plan, you will qualify solely for the M.A. degree. The two courses you take instead of a minor field will be under the direction of your thesis adviser. They will usually be Political Science 596 which is normally taken in the Fall and Winter Quarters of the second year, followed by course 598 in Spring Quarter.

You must decide on the thesis plan by the middle of the Spring Quarter of your first year and must form a thesis committee. You will begin researching and writing the thesis by the Fall Quarter of your second year, working closely with members of the committee. The final version of the thesis must be submitted to the committee no later than the sixth week of the Spring Quarter so that the M.A. degree can be conferred by the end of that quarter, provided all requirements have been met and the thesis has been approved.

If the committee does not receive or does not approve the thesis, you will be considered to have failed the requirement and will not be allowed to resubmit the thesis. If you have received the M.A. on the thesis plan, you may register for the Ph.D. program without reapplying, but you must take the qualifying examinations in the two major and one minor fields by the Spring Quarter of your third year at UCLA.

Qualifying Examinations
You must take the qualifying examinations in your two major fields in the Spring Quarter of your second year unless you have selected the M.A. thesis plan. Retake examinations will be taken in the Fall Quarter of the subsequent year. The outcome of the spring examinations determines whether you (1) qualify for the Ph.D. and obtain an M.A.; (2) obtain an M.A. degree but do not qualify for the Ph.D.; (3) obtain an M.A. but must retake an examination in one or both fields to qualify for the Ph.D.; or (4) fail to obtain an M.A. and are terminated from the program.

Written examinations will be given in each of the major fields. Each field committee will provide assessments of the examinations as to whether (1) your performance is sufficient for the M.A. degree and (2) it also qualifies you to begin work at the Ph.D. level. The following two-tier grading system is used for each examination: for the M.A., grades are pass and not pass; for the Ph.D., grades are not qualified, marginal, qualified, and qualified with distinction. To obtain an M.A. degree only, you must receive a grade of pass on at least one field examination. If you obtain a pass on both field examinations, you will receive a departmental letter certifying qualification in both fields.

To qualify for the Ph.D., you must (1) receive grades of pass on both field examinations and (2) receive a grade of qualified or qualified with distinction in both examinations. If grades of marginal are received on both examinations, an ad hoc committee will be formed to determine whether you will be allowed to retake the examinations.

There are no retake examinations for the M.A. degree. Retake examinations are given to determine whether you qualify for the Ph.D. track. They may be retaken once only, provided you receive a grade of qualified in one field and not qualified or marginal in the second field.

Once you have successfully completed all course and examination requirements and have prepared a formal research design for the proposed dissertation acceptable to the research adviser, you may proceed to the University Oral Qualifying Examination. The research design must be submitted to the oral examination committee at least two weeks before the examination. The purpose of the oral examination is to assess the adequacy of your preparation in undertaking the proposed dissertation, to suggest ways in which the research design may be strengthened, and to determine whether the proposed dissertation is feasible and can be completed successfully. After successful completion of the University Oral Qualifying Examination and the language or methodological requirement, you will be advanced to candidacy.

Approval of a written dissertation by your doctoral committee constitutes the final requirement for the Ph.D. degree in Political Science.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
The doctoral committee for each candidate decides whether or not a final oral examination should be required.

Lower Division Courses
1. Introduction to American Government
   Lecture, three hours; discussion, one hour. An introduction to the principles and problems of government, with particular emphasis on national government in the United States. Fulfills the American History and Institutions requirement but does not fulfill a "Preparation for the Major" requirement.

6. Introduction to Quantitative Research
   An introduction to the collection and analysis of political data. The course emphasizes the application of statistical reasoning to the study of relationships among political variables. Students use the computer as an aid in analyzing data from various fields of political science, among them comparative politics, international relations, American politics, and public administration.

10. Introduction to Political Theory
    (Formerly numbered 110.) Lecture, three hours; discussion, one hour. Meets the Political Science 110 requirement for all students who need 110 for the major. An exposition and analysis of selected political theorists and concepts from Plato to the present.

Mr. Ashcraft, Mr. Campbell, Mr. Rapoport, Mr. Smith

20. World Politics: Problems of Power Politics
    (Formerly numbered 2A.) Lecture, three hours; discussion, one hour. Required of all students concentrating in Field II. Introduction to problems of world politics.

Mr. Wilkinson
40. Introduction to Politics. The course examines the basic institutions and processes of democratic politics. A treatment of themes such as constitutionalism, representation, participation, and leadership is coupled with particular emphasis on the American case.

50. Introduction to Comparative Politics. (Formerly numbered 3.) Lecture, three hours; discussion, one hour. A comparative study of constitutional principles, governmental institutions, and political processes in selected contemporary states, with emphasis on the major European governments.

70. The Supreme Court. (Formerly numbered 171.) Lecture, four hours; discussion, one hour. Required of all students concentrating in Field V. An introduction to American constitutional development, the role of the Supreme Court as interpreter of the U.S. Constitution. Students read Supreme Court cases as well as various historical and current commentaries.

80. Introduction to Public Administration. (Formerly numbered 181.) An introduction to the role of the bureaucracy in the modern state. Particular attention to the performance of American administrative systems.

Mr. Fried, Mr. Ries

Upper Division Courses

Prerequisite for all upper division courses: upper division standing or consent of instructor.

102. The Statistical Analysis of Political Data. (Formerly numbered C102.) Prerequisite: course 6. An introduction to statistical inference. Topics include measures of central tendency, elementary probability theory, common probability distributions, least-squares and maximum likelihood estimation, confidence intervals and statistical tests, comparison of means, the analysis of variance, and multiple regression and correlation. Statistical techniques and topics are illustrated with applications to a variety of political data.

Mr. Marwick, Mr. Petrock

104A-104B. Introduction to Survey Research. Prerequisite: course 6. Courses in the fundamentals of survey research as a method. 104A covers sampling theory and methods, the writing of questions, questionnaire construction, and interviewing. In addition, students are introduced to attitudes, attitude measurement and scale development. Students participate in the formulation of a research problem. 104B. Prerequisite: course 104A. Involves conducting a survey. Students are responsible for developing a survey questionnaire, designing a sample, collecting interviews, maintaining quality control, and coding the interviews for machine tabulation. The final requirement is that students perform a computer-aided analysis of some part of the data and submit a written report of that research. Both quarters must be taken to receive credit.

Mr. Marwick, Mr. Petrock

M105. Economic Models of Public Choice. (Formerly numbered M103A.) (Same as Economics M135.) Prerequisites: Economics 101A, any lower division political science course other than Political Science 1, and junior/senior standing, or consent of instructor. The course analyzes the methods and consequences of arriving at collective decisions through political mechanisms. Topics include the free-rider problem, voting and majority choice, demand revelation, and political bargaining.

Mr. Hirshleifer, Mr. Rogowski, Mr. Stein

M106. Economic Models of Political Conflict and Conflict Resolution. (Formerly numbered M103B.) (Same as Economics M136.) Prerequisites: Economics 101A, any lower division political science course other than Political Science 1, and junior/senior standing, or consent of instructor. Biological, cultural, and organizational sources of political conflict. The role of threats, promises, commitments, and organizational incentives of the onset and termination of conflict. The conduct of war: strategy and tactics.

Mr. Hirshleifer, Mr. Rogowski, Mr. Stein

Field I: Political Theory

111A. History of Political Thought: Ancient and Medieval Political Theory. An exposition and critical analysis of the major political philosophers and schools from Plato to Machiavelli. Mr. Campbell

111B. History of Political Thought: Early Modern Political Theory. An exposition and critical analysis of the major political philosophers and schools from Hobbes to Bentham. Mr. Ashcraft, Mr. Nixon, Mr. Wolfenstein

111C. History of Political Thought: Late Modern and Contemporary Political Theory. An exposition and critical analysis of the major political philosophers and schools from Hegel to the present. Mr. Ashcraft, Mr. Nixon, Mr. Wolfenstein

112. Nature of the State. A systematic analysis of modern concepts and problems of political association.

Mr. Nixon

113. Problems in 20th-Century Political Theory. A study and interpretation of theorists who have focused their analyses on the social and political problems of the 20th century.

Mr. Smith

114A-114B. American Political Thought.

114A. An exposition and critical analysis of American political thinkers from the Puritan period to 1865. Mr. Smith

114B. Prerequisite: course 114A or consent of instructor. An exposition and critical analysis of American political thinkers from 1865 to the present. Mr. Smith

115. Theories of Political Change. A critical examination of theories of political change, the relation of political change to changes in economic and social systems, and the relevance of such theories for the experience of both Western and non-Western societies. May be applied toward either Field I or IV.

Mr. Lofchie

116. Marxist. A critical analysis of the origins, nature, and development of Marxist political theory.

Mr. Ashcraft, Mr. Wolfenstein

117. Jurisprudence. 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. May be applied toward either Field I or IV.

Mr. Gerstein

119A-119Z. Special Studies in Political Theory. Prerequisites: course 10, one additional course in Field I, consent of instructor. Intensive examination of one or more special problems appropriate to political theory. Emphasis on regular texts with topics announced in the preceding quarter. Courses 119, 139, 149, 169, 179, and 189 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.

Mr. Gerstein

Field II: International Relations

120. Foreign Relations of the United States. Lecture, three hours; discussion, one hour. A survey of the factors and forces entering into the formation and implementation of American foreign policy, with special emphasis on contemporary problems.

Mr. Spiegel, Mr. Stein

121. Studies in Formulation of American Foreign Policy. A study of the formation of American foreign policy with respect to individual cases. Specific topics are announced in the Schedule of Classes each quarter.

Mr. Zoppo

122. World Order. (Formerly numbered 21.) Lecture, three hours; discussion, one hour. Prerequisite: course 20. A study of the problems of the international system seen as a community capacity of cooperation and development.

Mr. Wilkinson


Mr. Zoppo

125. Arms Control and International Security. An analysis of the relationships between arms control and international security. The relationship between regional conflictual systems and the central deterrent system, including the potential for escalation, is examined, with emphasis on current arms control issues.

Mr. Zoppo

126. Peace and War. Prerequisites: courses 6, 20. Theory and research on the causes of war and the conditions of peace.

Mr. Wilkinson

127A-127B. The Atlantic Area in World Politics. (Formerly numbered 127.)

127A. Western Europe. The external relations of the United Kingdom, West Germany, France, Italy, and other European members of NATO, in regard to European security in the context of the Atlantic Alliance.

Mr. Zoppo

127B. U.S. and Europe. Prerequisite: course 127A or consent of instructor. Relations between the United States and Western European members of the Atlantic Alliance, in the context of U.S.-Soviet relations.

Mr. Zoppo

128A-128B. The Soviet Sphere in World Politics. Prerequisite: course 20. Course 128A or consent of instructor is prerequisite to 128B. A contemporary survey of the foreign policies and aspirations of the Soviet Union and other states in the Soviet bloc; analysis of the impact and effects of Communist regimes and their policies affecting relations between the Soviet and democratic spheres.

Mr. Cattielli, Mr. Kolowicz, Mr. Korbinski


Mr. Lake


Mr. Frieden

131. Latin American International Relations. Prerequisite: course 20. The major problems of Latin American international relations and organization in recent decades.

Mr. Gonzalez

132A-132B. International Relations of the Middle East:

132A. Prerequisite: course 20. Contemporary regional issues and conflicts, with particular attention to inter-Arab politics, the Arab-Israeli problem, and the Persian Gulf. Mr. Gonzalez

132B. Role of the great powers in the Middle East, with emphasis on American, Soviet, and West European policies since 1945.

Mr. Lake

133. International Relations of Sub-Saharan Africa. Contemporary regional issues and conflicts; foreign policies of African states; the role of external powers.

Mr. Lofchie, Mr. Sklar

135. International Relations of China. Prerequisite: course 20. The relations of China with its neighbors and the other powers, with emphasis on contemporary interests and policies of China vis-a-vis the United States and the Soviet Union.

Mr. Baum

136. International Relations of Japan. Prerequisite: course 20. The foreign policies of Japan and the interests and policies of other countries, particularly the United States, as they relate to Japan.

Mr. Baerwald

C137A-C137B. International Relations Theory. (Formerly numbered 137.)

C137A. An examination of various theoretical approaches to international relations. May be concurrently scheduled with course C201. Mr. Lake

C137B. Approaches to the analysis of international politics and their application to historical and contemporary cases.

Mr. Stein

138A-138B-138C. Defense Studies. Prerequisite: course 20:

138B. The Conduct of Modern War. A study of recent and contemporary wars, with special emphasis on political and strategic problems.

138C. Military Policy and Organization. A study of the institutional and policy framework in the national military field. May be applied toward either Field II or VI.

139A-139B. Special Studies in International Relations. Prerequisites: two courses in Field II, or course 20 and one course in Field II, and consent of instructor. Intensive examination of one or more special problems appropriate to international relations. Sections are offered on a regular basis, with topics announced in the preceding quarter. Courses 119, 139, 149, 169, 179, and 189 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.

M139A. Political and Economic Issues in the Proliferation of Nuclear Weapons. (Formerly numbered M139.) (Same as Economics M103A.) The course provides an interdisciplinary approach to the problem of nuclear proliferation. It also deals with the economic aspects of the acquisition of nuclear weapons and economic aspects of nuclear energy treating technological, bargaining, and stability issues.

Mr. Ries (Instructor) (Alternate years)

Also see courses 175A-175B

Field III: Politics

M140. Political Psychology. (Same as Psychology M136.) Prerequisite: Psychology 10. Examination of political behavior, political socialization, personality and politics, racial conflict, and the psychological analysis of public opinion on these issues.

Mr. Sears

141. Public Opinion and Voting Behavior. Lecture, three hours; discussion, one hour. A study of the character and formation of political attitudes and public opinion. The role of public opinion in elections, the relationship of political attitudes to the vote decision, and the influence of public opinion on public policy formulation are emphasized.

Mr. Petrock

142. The Politics of Interest Groups. A systematic investigation of the role of political interest groups in the governmental process, with attention to the internal organization, leadership, and politics of such groups to the goals and functions of various types of groups and to the strategy and tactics of influence.

Ms. Orren, Mr. Skowronek

143. Legislative Politics. A study of those factors which affect the character of the legislative process and the capacity of representative institutions to govern in contemporary society.

Mr. Marvick, Mr. Snowiss

144. The American Presidency. A study of the nature and problems of presidential leadership, emphasizing the impact of the bureaucracy, congress, public opinion, interest groups, and the party system on the presidency and national policy-making.

Ms. Orren, Mr. Skowronek, Mr. Snowiss

145. Political Parties. The organization and activities of political parties in the United States. Attention to the transformation and development of the parties, the nature of party change, campaign functions and the electoral role of the parties, membership problems and party activists, political finance, and policy formulation.

Mr. Petrock

146. Political Behavior Analysis. Prerequisite: course 141. The use of quantitative methods in the study of political behavior, especially in relation to voting patterns, political participation, and techniques of political action.

Mr. Marvick, Mr. Petrock

Field IV: Comparative Politics

152. British Government. The government and politics of the United Kingdom; the British constitution, parliament, parties and elections, foreign policies, administrative problems, and local governments.

Mr. Freedman

153. Governments of Western Europe. The constitutional and political structure and development of France and other states of the Western European countries, with particular attention to contemporary problems.

Mr. Dogan, Mr. Rogowski

154. Governments of Central Europe. The constitutional and political structure and development of Germany and other Central European states, with particular attention to contemporary problems.

Mr. Rogowski

155. The Government of the Soviet Union. An intensive study of the political and institutional organization of the Soviet Union and its component parts, with special attention to contemporary political issues, as well as party and governmental structures.

Mr. Cattell, Mr. Kolkowicz, Mr. Korbonski

157. Governments of Eastern Europe. A study of the political and governmental organization of the Communist countries of Eastern and Central Europe (exclusive of the U.S.S.R.), with special reference to the institutions, practices, and ideologies including interregional relations.

Mr. Korbonski

159. Chinese Government and Politics. Organization and structure of the government, with particular attention to the policies, doctrines, and institutions of Chinese Communism; political problems of contemporary China.

Mr. Baum

160. Japanese Government and Politics. The structure and operation of the contemporary Japanese political system, with special attention to domestic political forces and problems.

Mr. Baerwald


Mr. Gerstein

162. Government and Politics in South Asia. A comparative study of political change and the development and performance of public institutions in Southern Asia, with special emphasis on India, Pakistan, and Bangladesh.

Mr. Sisson

163A-163B. Government and Politics in Latin America:

163A. A comparative study of governmental and political development, organization, and practices in the states of Middle America.

Mr. Gonzalez

163B. A comparative study of governmental and political development, organization, and practices in the states of South America.

Mr. Gonzalez

164. Government and Politics in the Middle East. A comparative study of government in the Arab States, Turkey, Iran, and Pakistan.

Mr. Gerstein, Mr. Hobbs


Mr. Lofchie, Mr. Sklar

167. Ideology and Development in World Politics. A comparative study of the major modes of political and economic development in the world today. Relations between industrial and nonindustrial societies are examined in light of the current debate about imperialism.

Mr. Sklar

168L. Comparative Political Analysis. Lecture. Prerequisites: two courses in Field IV, or course 50 and one course in Field IV. Either course 168L or 168S is required of all students concentrating in Field IV (students with credit for course 168S will not receive credit for this course). The course is conducted as a seminar. Major approaches to the study of comparative politics. Concepts and methodology of comparative analysis.

169A-1692. Special Studies in Comparative Politics. (Formerly numbered M169A-M1692.) Prerequisites: two courses in Field IV, consent of instructor. Either course 169A or 169B is required of all students concentrating in Field IV (students with credit for course 169L will not receive credit for this course). The course is conducted as a seminar. Major approaches to the study of comparative politics. Concepts and methodology of comparative analysis.

Field V: Public Law

170. The Anglo-American Legal System. Lecture, four hours; discussion, one hour. Required of all students concentrating in Field V. Evolution of the English common law courts and their legal system, with emphasis on the development of the basic concepts of law which were received from that system in the United States and remain relevant today.

Mr. Gerstein

172A-172B. American Constitutional Law. Prerequisite: course 70.

172A. Constitutional questions concerning the separation of powers, federalism, and the relationship between government and property.

Mr. Gerstein, Mr. Hobbs

172B. The protection of civil and political rights and liberties under the constitutional system.

Mr. Gerstein, Mr. Hobbs

173. Government and Business. The nature of the corporation; the regulation of competition; government promotion of economic interests; regulation of industries clothed with a public interest; government control and corruption. May be applied toward either Field V or VI.

Mr. Bernstein, Ms. Orren
174. Government and Labor. The labor force and the nature of the trade union; regulation of labor relations; programs to encourage full employment and to mitigate unemployment; protective labor legislation. May be applied toward either Field V or VI. Mr. Bernstein

175A-175B. International Law. A study of the nature and place of international law in the conduct of international relations. May be offered in consecutive terms or concurrently. If offered consecutively, course 175A is prerequisite to 175B, and a student may take 175A alone for four units credit. If offered simultaneously, a student must take both courses for eight units. A maximum of four units may be applied toward Field II.

179A-179Z. Special Studies in Public Law. Prerequisites: course 70, one additional course in Field V, any special requirements, consent of instructor. Intensive examination of one or more special problems appropriate to public law. Sections are offered on a regular basis, with topics announced in the preceding quarter. Courses 179A, 179B, 179C, 179D, 179E 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. Also see courses 117, 187

Field VI: Public Administration and Local Government

180. State and Local Government. A study of state political systems, including their administrative and local subsystems; intergovernmental relationships; their policy outputs, with specific attention to California. Mr. Hammond

182A. Metropolitan Area Government and Politics. An overview of the political and social organization, decision-making processes, policy problems, and conflicts of metropolitan areas and their central cities and suburbs. Attention to the impact on these areas of the national and state political systems and racial, ethnic, and protest movements. May be applied toward either Field III or VI.

182B. City Government and Politics. Prerequisite: course 182A or consent of instructor. Intensive analysis of contemporary urban governance in the United States. Emphasis on such student participatory activities as fieldwork, research, and gaming of urban politics and policy problems.

183. Administration of International Agencies and Programs. An examination of the administrative patterns and practices of the United Nations and its primary program offices, including the United Nations Development Programs, Inter-American Development Bank, and the World Bank, as well as those of the World Food Program and the United Nations Children's Emergency Fund. May be repeated subject to instructor consent for a maximum of sixteen units.

185. Public Personnel Administration. The process of formulating and administering public personnel policies; concepts and principles utilized in selected governmental personnel systems. Focus is on governmental systems in the United States (national, state, local, foreign service, military), but comparisons are also made with other selected governmental systems.

186. National Policy and Administration. A study of the major policies and programs of the national government and their administration as illustrated in such areas as national defense, social welfare, agriculture, etc. Particular attention to the role of the President and other administrators in formulating public policy and in maintaining a responsible bureaucracy. Mr. Fried

187. Law and Administration. Legal controls of administration action. Substantive and procedural limits on administrative discretion imposed by legislation, executive and judicial agencies, and the sources of legal powers of administrative bodies within these limits. May be applied toward either Field V or VI.

188A. Comparative Public Administration. An analysis of bureaucratic structures and function in the United States, other industrialized, and less developed countries, primarily at the national level. Special attention to methods of comparative analysis and the utility of various models. May be applied toward either Field IV or VI. Mr. Fried

188B. Comparative Urban Government. A cross-cultural examination of the forms and processes of urban government. Particular attention to the role of urbanization in political development. May be applied toward either Field IV or VI. Mr. Fried

189A-189Z. Special Studies in Public Administration. Prerequisites: two courses in Field VI, consent of instructor. Intensive examination of one or more special problems appropriate to public administration. Sections are offered on a regular basis, with topics announced in the preceding quarter. Courses 189A, 189B, 189C, 189D, 189E 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.

190. Theories of Organization. An examination of the theoretical frameworks for studying public and private bureaucracies, with emphasis on ideologies, values, behavioral patterns, and concepts of organization.

191. Urban and Regional Planning and Development. A comparative study of governmental policies, programs, and agencies involved in the planning and development of urban and regional communities and areas. Also see courses 139C, 173, 174

Special Studies

195A-195B-195C. Honors Seminar and Thesis. Prerequisites: one course in the C197 series, a 3.5 GPA at the upper division level in political science courses, eligibility for Letters and Science honors status. Course 195A is prerequisite to 195B, which is prerequisite to 195C. A one-year honors seminar and thesis-writing sequence. Students entering course 195A are expected to have some experience in writing research papers and to have in mind a research topic suitable for treatment at length and in depth. 195A. Students define their research topic, select a suitable research method, determine appropriate sources of information, prepare a research proposal, find a 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 considerations of political science research topics and methods of current or continuing interest. Students also meet privately with the instructor to discuss the progress of their research.

195B-195C. Writing of an honors thesis under the direction of a faculty member. The thesis is read by the appropriate field committee and graded high honors, honors, or no honors.

C197A-C197F. Seminars for Majors. Prerequisites: political science major, upper division standing, a 3.25 GPA at the upper division level in political science courses, upper division courses in the field in which the seminar is offered. May be applied toward the concentration or distribution requirement. May be concurrently scheduled with various graduate courses.

199. Readings in Political Science (2 to 4 units). Prerequisites: upper division standing, 3.0 overall GPA, consent of instructor and department chair. Individual study. May not be applied toward the concentration or distribution requirement. May be repeated for a maximum of sixteen units.

Graduate Courses

200. Survey of the Discipline. Seminar, three hours. Required of all graduate students and normally taken during the Fall Quarter of the first year. Other students may be admitted by consent of instructor. An introduction to major areas of inquiry within the fields of political science. S/U grading. Mr. Siesson

C201. International Relations. An examination of various theoretical approaches to international relations. May be concurrently scheduled with course C137A. Mr. Lake

203A-203B. Introduction to Political Inquiry. (Formerly numbered 203A-203B-C203C.):


203B. Major Conceptual Frameworks and Approaches to Political Science. Prerequisite: course 203A or equivalent.

204A. Quantitative Applications. An introduction to the quantitative analysis of political data. Students are introduced to problems of measurement, the logic of analysis, and hypothesis testing, basic statistical techniques, and the use of the computer and standard data analysis programs.

204B. Statistical Analysis. Prerequisite: course 204A. Statistical techniques and their applications to political science data.

204C. Problems in Statistical Analysis of Political Data. Lecture, three hours. Prerequisites: courses 204A, 204B. A practicum in which students examine particular techniques and their applications to contemporary research issues in political science.

210A-210B. An Introduction to Political Theory. Lecture, three hours:

210A. Classical and Medieval Formulations. An exploration of major texts and issues in political theory from Plato through Aquinas.

210B. The Early Modern Period. An exploration of major texts and issues in political theory from Machiavelli through the Enlightenment.

211. Political Theory. An analysis of the central problems of political inquiry and their relation to political philosophy.

212A-212B. International Relations Theory. (Formerly numbered 212.) Discussion, three hours. Approaches to the central problems of international relations theory:

212A. Major Theorists and Approaches.

212B. A Survey of the Major Theories. Mr. Stein

214A-214B. Survey Courses in American Politics. Students taking M.A. or Ph.D. examinations in the politics field will ordinarily have completed these courses before the examination sequence.

214A. Political Parties and the Electoral Process. Mr. Marvick, Mr. Petrocik

214B. American Political Institutions. Mr. Orren, Mr. Skowronek, Mr. Snowiss

215A-215B. Comparative Politics. Course 215A or consent of instructor is prerequisite to 215B. Approaches to the study of comparative politics and problems of comparative political analysis.

216. Public Law. A systematic analysis of the scope and nature of public law, with particular attention to its materials and methods as illustrated in the concepts and doctrines drawn from various of its subject fields. May be concurrently scheduled with course C197E. Mr. Gerstein

218A. Public Administration and Democratic Government. An analysis of the nature and scope of public administration and its role in modern political systems. May be concurrently scheduled with course C197F. Mr. Engelbert
C218B. Approaches to Organizational Analysis. Analysis of several of the major conceptual alternatives for the study of organizations, with emphasis on public administrative organizations. Topics include structural-functional and systemic approaches to organization, rational-legal norms, and social psychological analyses. Each alternative is critically evaluated for its strengths and weaknesses as a guide to understanding organizational analysis. May be concurrently scheduled with course C197F.

Ms. Ries

C218C. Public Administration and Public Policy. Discussion, three hours. A systematic analysis of the nature and scope of public policy and its programmatic implications. Special emphasis on government organizations and their political contexts, as well as types of government intervention and stages of the policy process. Substantive focus primarily on American public policy and analysis. May be concurrently scheduled with course C197F.

C221. Selected Texts in Political Theory. A critical examination of major texts in political theory, with particular attention to their philosophic system, their relations to the contemporary political and intellectual currents, and the importance of the system for present-day political analysis. May be concurrently scheduled with course C197A.

C222. Selected Topics in Political Theory. A critical examination of a major problem in political theory. May be concurrently scheduled with course C197A.

C224A-C224K. Studies in Politics:

C224A. Politics and Economy. An analysis of the theoretical and practical relationships between economic organization and governmental institutions. Includes the development and political implications of the market system, banking and finance, corporate enterprise, and organizations of public service. Mr. Marvick

C224B. Political Recruitment. A critical evaluation of the literature concerned with the backgrounds of public figures and with the screening and sponsoring mechanisms affecting their careers and political perspectives. May be concurrently scheduled with course C197F.

C224C. Politics and Society. The application of selected classical and contemporary sociological theories to politics. May be concurrently scheduled with course C197C.

Ms. Orren, Mr. Skowronek

C224D. Group Theories of Politics. Critical appraisal of "group theory" approaches to the study of political behavior, political socialization, personality and political structure on the other. Mr. Fried

C224E. State Administrative Systems. An analysis of state administrative systems, their local subsystems, and their outputs. May be concurrently scheduled with course C197F.

Mr. Fried

C228A. Political and Administrative Aspects of Planning. A study of the political constraints and support for effective planning. Topics include the relationships between planning performance on the one hand, and forms of government, distribution of power, political culture, law, and social structure on the other.

Mr. Ries

C228D. The Federal Bureaucracy. Seminar, three hours; discussion, one hour. An examination of the formulation and implementation of policy at the federal level. The consequences of administrative performance for American political and social life are explored. May be concurrently scheduled with course C197F.

C228E. Urban Government. (Same as Architecture and Urban Planning M2025.) An analysis of the policies, processes, interrelations, and organization of governments in heavily populated areas. May be concurrently scheduled with course C197F.

Mr. Fried

C230. Comparative Development Administration. Seminar, three hours; discussion, one hour. An analysis of the administration of development programs and the development of administrative institutions, with special attention to empirical research problems and findings.

Ms. Orren

C230E. Legislative Behavior. The analysis of the major approaches to the study of representative institutions, with special emphasis on the assumptions, concepts, methods, and theoretical implications associated with each approach. May be concurrently scheduled with course C197C.

Ms. Marvick, Mr. Snowiss

C224F. Executive Politics and the Presidency. An analysis of executive organization and leadership, with emphasis on the American Presidency. Special attention to theories of organization and personality and the relationship between the executive and other institutions and groups. May be concurrently scheduled with course C197C.

Ms. Orren, Mr. Skowronek, Mr. Snowiss

C224G. Political Psychology. (Same as Psychology M228.) Discussion, three hours. Prerequisite: course 214A or Psychology 220A. Examination of political behavior, political socialization, personality and politics, racial conflict, and the analysis of public opinion on these issues.

Mr. Sears

C224H. Mass Attitudes and Behavior. Prerequisite: course 141 or 214A or consent of instructor. Analysis of the development and change of political attitudes in mass publics and their relationship to voting, protest, and violence. May be concurrently scheduled with course C197B.

Mr. Petrock

C224L. Political Parties. A critical examination of the literature on party systems and organization. Special attention to political functions, electoral campaigns, and party cadres. May be concurrently scheduled with course C197C.

Mr. Marvick, Mr. Petrock

C228A. Personnel and Human Relations. An analysis of the policies, processes, organizations, and interpersonal relationships involved in managing the public service.

C228B. Public Planning, Programming, and Budgeting. Public budgeting processes within a political and administrative framework. Special emphasis on the federal program/budgeting system and the interplay between contemporary bureaucratic and decision theory of rational allocation of resources. May be concurrently scheduled with course C197F.

C228C. Political and Administrative Aspects of Planning. A study of the political constraints and support for effective planning. Topics include the relationships between planning performance on the one hand, and forms of government, distribution of power, political culture, law, and social structure on the other.

Mr. Fried

C228D. The Federal Bureaucracy. Seminar, three hours; discussion, one hour. An examination of the formulation and implementation of policy at the federal level. The consequences of administrative performance for American political and social life are explored. May be concurrently scheduled with course C197F.

C228E. Urban Government. (Same as Architecture and Urban Planning M2025.) An analysis of the policies, processes, interrelations, and organization of governments in heavily populated areas. May be concurrently scheduled with course C197F.

Mr. Fried

C228F. Government and Economy. An analysis of the theoretical and practical relationships between economic organization and governmental institutions. Includes the development and political implications of the market system, banking and finance, corporate enterprise, and organizations of public service.

Mr. Marvick

C228G. Political Recruitment. A critical evaluation of the literature concerned with the backgrounds of public figures and with the screening and sponsoring mechanisms affecting their careers and political perspectives. May be concurrently scheduled with course C197F.

Ms. Orren

C228H. Politics and Society. The application of selected classical and contemporary sociological theories to politics. May be concurrently scheduled with course C197C.

Ms. Skowronek

C228I. State Administrative Systems. An analysis of state administrative systems, their local subsystems, and their outputs. May be concurrently scheduled with course C197F.

Mr. Ries

C228J. Urban Government. (Same as Architecture and Urban Planning M2025.) An analysis of the policies, processes, interrelations, and organization of governments in heavily populated areas. May be concurrently scheduled with course C197F.

Mr. Fried

C228K. Legislative Behavior. The analysis of the major approaches to the study of representative institutions, with special emphasis on the assumptions, concepts, methods, and theoretical implications associated with each approach. May be concurrently scheduled with course C197C.

Ms. Orren

C231A-C231D. Studies in International Relations:

C231A. Contemporary Problems in United States Foreign Policy. An intensive analysis of the policy formulation process and the substance of selected contemporary problems in foreign policy. Political and institutional factors affecting foreign policies are stressed, along with the analysis of policy options. May be concurrently scheduled with course C197B.

C231B. Politics and Strategies of Modern War. Seminar, three hours; discussion, one hour. The course analyzes various national security problems in both their military/technical and political dimensions. It seeks to develop in some depth issues likely to be raised in course 138A (not a prerequisite). May be concurrently scheduled with course C197B.

Mr. Kolkwicz

C231C. The Foreign Process. (Formerly numbered 231C.) Discussion, three hours. Prerequisites: courses 120, and 2011 or 212A or 212B, or consent of instructor. Political science and policy science approaches to the foreign policy process and primary focus on the formulation and implementation of American foreign policy. May be concurrently scheduled with course C197B.

Mr. Zoppo

C231D. International Relations Theory. An introduction to the study of political and institutional aspects of international relations theory. May be concurrently scheduled with course C197B.

Mr. Stein, Mr. Wilkinson

C232A-C232B. International Political Economy. (Formerly numbered 232.) Discussion, three hours.

C232A. International Trade and Advanced Industrialized Nations. An intensive examination of various theoretical approaches to international political economy, particularly as they affect international trade and the study of advanced industrialized nations.

Mr. Lake

C232B. International Capital and International Relations. The interaction of international lending and investment and the domestic political economies of both industrialized and industrializing societies.

Mr. Frieden

C233A-C233B-C233C. Political Economy Workshop. Discussion, two hours. Open only to graduate students who have successfully completed market failure field examinations. Workshop for those students writing or preparing to write dissertations. Reading and discussion of research and progress presented by UCLA faculty, visiting scholars, and advanced graduate students. A research paper and quality is required.

Mr. Frieden, Mr. Lake

C235. Selected Topics in Comparative Politics. A critical examination of a major problem in comparative politics.


C236C. An introduction to the literature on the development of elective institutions and their performance. The course takes an interdisciplinary approach, emphasizing historical as well as contemporary cases and modes of analysis.

C236D. Prerequisite: course 236A or consent of instructor. A research seminar devoted to the analysis of particular problems and countries.

Ms. Sisson, Mr. Snowiss

C236A-C236D. Studies in Public Law:

C236A. Evolution of Anglo-American Law Books. Surviving early records. Case reporting, from the legal treatises from Glanville to today. Statutes and how to find them. The language of the law. Although emphasis is on American materials, the entire English-speaking world is covered. May be concurrently scheduled with course C197F.

Mr. Gerstein

C236B. Making of the Constitution. An examination of the development of constitutional law during selected periods of American history, such as founding, the Marshall and Taney eras, and the New Deal. Emphasis on both judicial and nonjudicial materials. May be concurrently scheduled with course C197E.

Mr. Gerstein

C236C. The Bill of Rights and the States. An examination of the problems surrounding the application to the states of Amendments 1 to 9. May be concurrently scheduled with course C197E.

Mr. Hobbs

C236D. Current Problems in Public Law. A discussion of selected contemporary problems in jurisprudence, the judicial process, judicial behavior, and legal control on social conduct. May be concurrently scheduled with course C197E.

Mr. Gerstein, Mr. Welsh

Prerequisite for graduate seminars (C250A through C271) is advance consent of instructor.

C250A-C250L. Seminars in Regional and Area Political Studies:

C250A. Latin American Studies. Seminar, three hours; discussion, one hour. May be concurrently scheduled with course C197D.

Mr. Gonzalez

C250B. Russian and Slavic Studies. May be concurrently scheduled with course C197C.

Mr. Cattell, Mr. Kolkwicz, Mr. Korbonski
509B. Directed Research for Ph.D. Dissertation Proposal. Prerequisite: course 509A. Required of all Ph.D. students. Must be taken under the supervision of the research adviser prior to or during the quarter in which the oral examination is taken. Development and writing of the research design for the Ph.D. dissertation. May be repeated by consent of research adviser and graduate adviser.

596. Directed Individual Study or Research (2 to 4 units). May be applied only three times toward the minimum course requirement in the first two years. May be repeated.

597. Preparation for Ph.D. Qualifying Examinations (2 to 12 units). May be repeated. S/U grading.

598. Research for and Preparation of M.A. Thesis (2 to 12 units). This course is rarely taken because students normally receive the M.A. degree under the comprehensive examination plan. S/U grading.


Program in Computing
See Computing, Program in

Psychology
1285 Franz Hall, 825-2961

Professors
Howard S. Adelman, Ph.D.
Arthur P. Arnold, Ph.D.
Bruce L. Baker, Ph.D.
Peter M. Bentler, Ph.D.
Elizabeth L. Bjork, Ph.D.
Robert A. Bjork, Ph.D.
Marlynn S. Brewer, Ph.D.
Wiliam E. Broen, Jr., Ph.D., Vice Chair, Graduate Affairs
Larry L. Butcher, Ph.D.
Edward C. Carterette, Ph.D.
Barry E. Collins, Ph.D.
Andrew L. Comrey, Ph.D.
Gaylord D. Ellison, Ph.D.
Norma Festeback, Ph.D.
Seymour Feshbach, Ph.D.
Morton P. Friedman, Ph.D.
Rosslyn Gaines, Ph.D., in Residence
John Garcia, Ph.D.
Harold B. Gerard, Ph.D.
Michael J. Goldstein, Ph.D.
Patricia M. Greenfield, Ph.D.
Constance L. Hammen, Ph.D.
Barbara A. Henker, Ph.D.
Nancy M. Henley, Ph.D.
Eric W. Holman, Ph.D.
John P. Houston, Ph.D.
Wendell E. Jeffrey, Ph.D.
Harry J. Jerison, Ph.D., in Residence
Harold H. Kelley, Ph.D.
Franklin B. Krasne, Ph.D.
John C. Liebeskind, Ph.D.
O. Ivan Lovas, Ph.D., Litt.D.
John H. Lyman, Ph.D.
Donald G. MacKay, Ph.D.
Irvng Maiztman, Ph.D.
Albert Mehrabian, Ph.D.

Charles Y. Nakamura, Ph.D.
Donald Novin, Ph.D.
Amado M. Padilla, Ph.D.
Allen Pardiucci, Ph.D.
L. Anne Pepplau, Ph.D.
Bertram H. Raven, Ph.D., Chair
David O. Sears, Ph.D.
David Shapiro, Ph.D.
Edwin S. Sheldman, Ph.D., in Residence
Gerald H. Shure, Ph.D.
Stanley Sue, Ph.D.
Shelley E. Taylor, Ph.D.
James P. Thomas, Ph.D.
Bernard Weiner, Ph.D.
J. Arthur Woodward, Ph.D.
Eran Zaidel, Ph.D.

Emeritus Professors
James C. Coleman, Ph.D.
S. Carolyn Fisher, Ph.D.
Joseph A. Gengerelli, Ph.D.
Milton E. Hahn, Ph.D.
F. Nowell Jones, Ph.D.
George F. J. Lehrner, Ph.D.
Donald B. Lindsay, Ph.D., Sc.D.
Jessie L. Rhulman, Ed.D.
Eliot H. Rodnick, Ph.D.

Associate Professors
Paul R. Abramson, Ph.D.
Richard P. Barthol, Ph.D.
Andrew Christensen, Ph.D.
Patrice L. French, Ph.D.
Gerald M. Goodman, Ph.D.
George E. Mount, Ph.D.
Hector F. Myers, Ph.D.
Charles Y. Nakamura, Ph.D.
Thomas D. Wickens, Ph.D.

Assistant Professors
Duane Buhmester, Ph.D.
Felipe Castro, Ph.D.
Christine A. Dunkel-Schetter, Ph.D.
Halford H. Fairchild, Ph.D.
Ralph E. Geiselman, Ph.D.
Carlos V. Grjgqva, Ph.D.
Daniel B. Kaye, Ph.D.
Vicki M. Mays, Ph.D.
Marie A. Moreill, Ph.D.
D. Dean Richards, Ph.D.

Adjunct Professors
Joseph Bogen, Ph.D.
Marion Jacobs, Ph.D.
James G. Miller, Ph.D.

Adjunct Associate Professors
M. Douglas Anglin, Ph.D.
Jacqueline D. Goodchilds, Ph.D.
Jill Waterman, Ph.D.

Adjunct and Visiting Assistant Professors
Paula Geiselman, Ph.D., Visiting
Dennis McGinty, Ph.D., Adjunct
Dahla Zaidel, Ph.D., Adjunct

Adjunct Lecturers
Darrell C. Dearmore, M.A.
Pamela C. Freund, Ph.D.
Morris K. Holland, Ph.D.
Nancy Kaser-Boyd, Ph.D.
Kenneth R. Pfeiffer, Ph.D.
Linda L. Taylor, Ph.D.

Scope and Objectives
We all practice some form of intuitive psychology to understand ourselves and the world around us. In contrast, the psychology curriculum at UCLA focuses on psychology as a sci-
entific discipline which uses systematic methods of investigation to understand general principles of human behavior, cognition, and emotion.

The curriculum treats psychology as a biosocial science; man's behavior is viewed from both biological and social viewpoints. The biosocial perspective allows students to study a broad range of topics such as psychobiology, animal behavior, learning, motivation, perception, cognition, measurement, memory, social psychology, personality, clinical psychology, and community psychology.

According to recent surveys, the UCLA Psychology Department is ranked as one of the top departments of its kind in the country in terms of faculty quality. The curriculum is both wide in terms of range of courses, and deep in terms of quality of the faculty.

The undergraduate curriculum provides a basic liberal arts foundation. It does not focus on training students to be only professional psychologists, but rather helps them to understand the world and our place in it. A choice of four majors, leading to either the B.A. or B.S. degree, is offered.

At the graduate level, the department offers training leading to the Ph.D. degree with emphases in various fields. The program is designed to prepare psychologists to function effectively as scientific investigators, college and university teachers, and professional psychologists.

Undergraduate Study

To meet the diverse needs of students, there are four different major curricula: the psychology major, the cognitive science major, the psychology/developmental disabilities immersion program major, and the psychobiology major. The first three lead to a Bachelor of Arts degree; the fourth culminates in a Bachelor of Science degree.

All courses required for these majors (which include lower division courses and major courses) must be taken for a letter grade.

Bachelor of Arts in Psychology

The general psychology major emphasizes the experimental and research aspects of the field. It is a good choice for students with an interest in human behavior who wish to receive a general education in the liberal arts and sciences.

Preparation for the Major

You are identified as a pre-psychology major until the “Preparation for the Major” requirements have been satisfied. The following required courses must be completed for a letter grade (a C- or better in each course and a 2.3 overall grade-point average in the preparation courses) before you reach 135 total units: Anthropology 11 or 2; Biology 2 or 5; Chemistry 2 (if you have completed one year of high school chemistry with a C or better, this requirement will be waived) or 11A; Mathematics 2 or two quarters of calculus; Physics 10 or 3A or 6A or 8A; one course from Philosophy 1, 3, 4, 6, 7, 8, 9, 10, 21, 22; Psychology 10, 42; Psychology 41 (recommended) or Mathematics 50 or Economics 40. Psychology 41 and 42 should be taken early in your career.

These are minimum requirements in preparing for the major. More advanced courses in science and statistics would provide stronger preparation.

The Major

After completing the preparation courses, you must petition to enter the major at the Psychology Undergraduate Office, 1531 Franz Hall. You must have a 2.0 grade-point average in your upper division major courses, and each must be taken for a letter grade.

Required: (1) Psychology 110, 115, 120, 125, 135; (2) one course from 111, 116, 121, 126, 132B, 136A, C136B, 143, M155, 170B, 174, 176, M181A, M181B, 186; (3) an additional four upper division elective courses (16 units) in psychology.

Bachelor of Arts in Cognitive Science

This major focuses on the study and implementation of intelligent systems, both human and artificial. Cognitive science involves the study of cognitive psychology, computer science, mathematics, and related disciplines.

Preparation for the Major

Admission to the major is limited. You are identified as a pre-cognitive science major until the “Preparation for the Major” requirements have been satisfied. The following required courses must be completed for a letter grade (a C- or better in each course and a 2.5 overall grade-point average in the preparation courses): Anthropology 11 or 1 or 2; Biology 2 or 5; Chemistry 2 (if you have completed one year of high school chemistry with a C or better, this requirement will be waived) or 11A; Mathematics 31A, 31B, 61; Philosophy 7 or 9; Physics 10 or 3A or 6A or 8A; Program in Computing 10, 20, 60; Psychology 10, 42; Psychology 41 (recommended) or Mathematics 50 or Economics 40. Psychology 41 and 42 should be taken early in your career.

The Major

After completing the preparation courses, you must petition to enter the major at the Psychology Undergraduate Office, 1531 Franz Hall. You must have a 2.0 grade-point average in your upper division major courses, and each must be taken for a letter grade.

Required: (1) Psychology 110, 115, 120, 125 or 135, 185, 186, 188; (2) an additional three upper division elective courses (12 units) from Psychology 102 through 124B, M153, Computer Science 111 through 199, Linguistics 100 through 199, Mathematics 101A through 199, Philosophy 126A through 136.

Quantitative Methods Specialization

This specialization is intended to give students more extensive preparation in statistics. The following additional courses are required: Mathematics 32A, 33A, and either 150A-150B or 150C or 152A-152B. Psychology 41 is not required if you select this specialization.

Bachelor of Science in Psychobiology

This major is designed for students who plan to go on to postgraduate work in psychobiology or the health sciences.

Preparation for the Major

You are identified as a pre-psychobiology major until the “Preparation for the Major” requirements have been satisfied. The following required courses must be completed for a letter grade (a C- or better in each course and a 2.0 overall grade-point average in the preparation courses): Biology 5, 5L, 6, 7, 8; Chemistry 11A, 11B/11BL, 11C/11CL, 21, 23, 25, Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 6A, 6B, and 6C, or 3A, 3B, and 3C, or 8A/8AL, 8B/8BL, and 8C/8CL; Psychology 10, 42; Psychology 41 (recommended) or Mathematics 50 or Economics 40. Psychology 41 and 42 should be taken early in your career.

The Major

After completing the preparation courses, you must petition to enter the major at the Psychology Undergraduate Office, 1531 Franz Hall. You must have a 2.0 grade-point average in your upper division major courses, and each must be taken for a letter grade.

Required: (1) Biology 129 or Psychology 118A or Anthropology 128A and 128B, and Psychology 110, 115, 116, 120; (2) one course from Psychology 125, 127, 130, 135; (3) four courses from the following list: Psychology 117 (only one section may be used); Biology 107, 112, 113, 114 (no more than one from this group); Psychology 118B, 118C, 118D, 118E, M118F, M119, M153, 190 (one course only), 199 or Biology 199 (one course only), Biology 102, 105, 110, 111, 120, 122, 124, 131, 135, 138, 139, 143, 144, 145A, 145B, 145C, 153, CM156, 158, 164, 166, 167, 168, 169, 171, 172A, 172B, 173, 177, 179, Kinesiology 140, Chemistry 152.
Bachelor of Arts in Psychology/Developmental Disabilities Immersion Program

This major combines a general education in the liberal arts and sciences with research and fieldwork experience in the area of developmental disabilities. Students participate in courses and research under the Mental Retardation and Child Psychology Program at Lanterman State Hospital and Developmental Center. A complete description of the Developmental Disabilities Immersion Program (DDIP) is given below.

Preparation for the Major

Admission to the major is limited. You are identified as a pre-psychology major until the "Preparation for the Major" requirements have been satisfied. The following required courses must be completed for a letter grade (a C- or better in each course and a 2.5 overall grade-point average in the preparation courses) by the time you reach 135 total units: Anthropology 11 or 1 or 2; Biology 2 or 5; Chemistry 2 (if you have completed one year of high school chemistry with a C or better, this requirement will be waived) or 11A; Communication Studies 10; Mathematics 2 or two quarters of calculus; Physics 10 or 3A or 6A or 8A; one course from Philosophy 1, 3, 4, 6, 7, 8, 9, 10, 21, 22; Psychology 10, and 42 or M182A and M182B; Psychology 41 (recommended) or Mathematics 50 or Economics 40; Sociology 1. Psychology 41 and 42 should be taken early in your career.

The Major

After completing the preparation courses, you must petition to enter the major at the Psychology Undergraduate Office, 1531 Franz Hall. You must have a 2.0 grade-point average in your upper division major courses, and each must be taken for a letter grade.

Required: (1) Psychology 110, 115 or M183, 120 or M182C, 125, 127, 130, 135, M180A, M180B, M181A-M181B, 193 (two quarters required); (2) one laboratory course from 111, 116, 121, 126, 132B, 136A, C136B, 143, M155, 170B, 174, 176, M181A, M181B, 166; (3) four courses from M133B, 133E, 170A, M182A, M182B, M182D.

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, emphasize readings in the original literature, student oral and written reports, and field or research experience. All such courses offer credit toward departmental honors and College Honors.

Departmental Honors

Psychology majors intending to continue study at the graduate level are encouraged to apply for departmental honors. In addition to the regular requirements for your major, you must take at least two honors-designated courses. Different courses are designated for honors each year, and you may choose among them. You also must engage in advanced research and study leading to a formal bachelor's thesis under the tutorial guidance of a faculty member while enrolled in Psychology 190A-190B-190C. If your thesis is judged acceptable by the honors committee, you are awarded the degree with honors or highest honors. Consult the Psychology Undergraduate Office early in your educational planning for further information and application forms.

Developmental Disabilities Immersion Program

The Developmental Disabilities Immersion Program is cosponsored by the Department of Psychology and the Department of Psychiatry and Biobehavioral Sciences and by the Office of Instructional Development — Field Studies Development. Each year a group of 28 students is selected for the program which runs during the Winter/Spring Quarters. Students participate in courses and research at Lanterman State Hospital and Developmental Center, a facility for mentally retarded citizens in Pomona, and do related fieldwork while living at the site.

During each quarter of the program up to 20 units of coursework related to developmental disabilities are offered. Most of the courses are in the Psychology/Psychiatry M180 through M184 series, but courses from other departments (such as Biology) may supplement these offerings. Many of the courses fulfill psychology undergraduate major requirements (consult the Psychology Undergraduate Office for details). Student individualized research projects are also part of the immersion experience.

To supplement their academic activities, students spend ten hours a week working with developmentally disabled by assisting teachers in the special education classes in nearby public schools or by helping supervise at sheltered workshops. For more information, contact the Psychology Undergraduate Office or Field Studies Development (70 Powell Library).

Preparation for Graduate Study

Although requirements for admission to graduate programs in psychology in most universities will be satisfied by the above major requirements, both admission to graduate work and progress toward the degree may be impeded in certain areas of psychology if additional preparation is not obtained at the undergraduate level. For this reason, if you plan to do graduate work in psychology, you are advised to take additional work in methodology and statistics and to take advantage of the many advanced undergraduate courses in specific fields offered both by the Psychology Department and related departments. Consult the Psychology Undergraduate Office for more information.

Ph.D. Degree

The graduate program in psychology leads to the granting of the Ph.D. degree. Although you may obtain the M.A. degree en route to the Ph.D., the department does not admit candidates for the M.A. degree only. For the Ph.D. degree, a thorough background in research methodology and psychological theory is required. Major specialized training is available in the areas of psychology listed below under "Major Fields or Subdisciplines."

A departmental brochure describing the graduate program in psychology is available in 3453 Franz Hall.

Admission

Admission to the Ph.D. program normally requires an undergraduate degree in psychology. However, students from other areas (particularly the mathematical, physical, biological, and social sciences) may be admitted. Admission is for Fall Quarter only and on a full-time basis only. Applicants must mail the following documents directly to the Psychology Department, 3453 Franz Hall, UCLA, Los Angeles, CA 90024, by December 30 to be considered for admission the following Fall Quarter:

(1) The departmental Application for Admission to the Doctoral Program, available in 3453 Franz Hall.
(2) Three letters of recommendation.
(3) One official transcript from each college attended.
(4) Scores from the Graduate Record Examination (GRE) Aptitude Test and the Advanced Test in Psychology (taken within the last three years).
(5) An official score report of the Miller Analogy Test. Foreign students or U.S. students currently overseas are exempt from this requirement.
(6) The Test of English as a Foreign Language (TOEFL), required of all foreign applicants whose native language is not English.

Students who are being considered as finalists for the clinical program may be required to meet with the clinical faculty for an interview.

Incoming students are expected to have had courses equivalent to the following: (1) Psychology 41; (2) two courses from Psychology 110, 115, 120; and (3) two courses from the following alternatives: (a) Psychology 125 or...
Major Area Course Requirements: Each area has its own specific requirements. A course may not be applied toward requirements in more than one major or minor area unless no other course options are designated. Requirements are as follows:

- Clinical: Psychology 270A-270B-270C, 271A-271B-271C, the area’s two-quarter assessment course (272 series), two additional courses in the 272 series, and at least two other advanced clinical courses outside the 272 series; cognitive: courses 260A-260B, plus two courses from 261, 262, 263, 264, 266; developmental: course 240; one course from 220A, 235, 286; one course from 200B, 261, 262, 263, 264, 266, or three modules of 205; three courses from 242A through 242F, 243A, 243B, 244 in addition to the quantitative courses listed under second-year requirements above, developmental majors must take a second quantitative course selected from the same list); learning and behavior: courses 200A, 200B, plus two courses from 204A, 204B, 208, 210, 281, 293, and Psychopathology 271; measurement and psychometrics: courses 249, 252, 253, 254, 255, 257, and other measurement courses which are regularly offered; personality: courses 232, 233, 235, M239, 278 (the personality major may not be taken in combination with a psychopathology minor); physiological: course 205 (all modules), three quarters of course 212, two approved physiological seminars, and Anatomy M206A, M206B; social: courses 220A-220B, C223 or 224, three social seminars taught by three different faculty members, and course 226 each quarter for the first three years of the program.

Minor Area Course Requirements: You must select two minor areas. These minors are normally satisfied by taking three to four specified courses. See departmental bulletins for further details.

Qualifying Examinations
The qualifying examination consists of three separate portions. The first is a standardized examination, administered by the major area, which examines in breadth your knowledge of the major field. The second part is an individualized examination which examines in depth your knowledge of your area of specialization within the major field. The third part is the University Oral Qualifying Examination. All Ph.D. requirements listed above must be completed before this portion can be taken. After successful completion of the oral examination, you are advanced to candidacy and may begin work on the dissertation.

Contact the department for the specific examination requirements of the various areas of specialization.

Practicum and Internship Requirements for Clinical Students
(1) At least six quarters of approved supervised preinternship practicum (Psychology 401 — 12 to 15 hours per week) are required and are usually taken in the second and third years.

(2) The equivalent of one calendar year of supervised internship (Psychology 451) in an acceptable setting approved by the faculty, taken either full-time in one year or half-time in two years in one or two settings, is required. This is usually taken in the fourth or fifth year. Contact the department for further information on internship assignments.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
The final oral examination is required of all candidates for the Ph.D. degree.

Psychology Clinic
The Psychology Clinic in the Department of Psychology is a major training center for clinical psychology students in the Ph.D. program. It provides a broad range of psychological services to clients, including assessment and individual, family, couples, and group therapy. Clients cover the entire age range and represent diverse populations in the community.

Student therapists receive very close supervision and are encouraged to relate their case material to academic learning and current research. Students and faculty members are also involved in a variety of clinical research projects.

Fernald Clinic and Laboratory
Established in 1921, this research and training center is one of the oldest ongoing University-based facilities focusing on psychoeducational problems. In pursuing its research and training objectives, Fernald offers a variety of services (e.g., assessment, classroom instruction, psychotherapy, and tutoring). It presently treats both children and adults of average or better intelligence who are experiencing learning and related psychobehavioral problems.

Research activity is directed toward analysis of causal factors and processes mediating intervention efficacy. The facility also provides a general research resource to faculty and students in psychology and other fields. Training opportunities include extensive clinical and research practicum and internship placements, and brief participation and observations scheduled in conjunction with seminars in various departments.
Infant Development Program

The Infant Development Program is designed as a teaching and research facility for the department and is set up to accommodate both cross-sectional and longitudinal investigation of infants, toddlers, and their parents. In addition, the program provides an opportunity for students in developmental psychology and other areas to acquire firsthand experience working with infants and toddlers on an individual basis or in a group setting. The program is located in Franz Hall and provides child care for 13 infants ranging in age from four months to two and one-half years.

Spanish Speaking Mental Health Research Center

The Spanish Speaking Mental Health Research Center (SSMHRC) promotes basic and applied research on the mental health needs of the Hispanic population. SSMHRC provides an interdisciplinary research environment for scholars, students, and professionals interested in Hispanic mental health. Previous research projects have included studies on acculturation and ethnicity, bilingualism, community studies, health and behavior, personality assessment, and psychosocial issues. In January 1984 the National Institute of Mental Health's Center for the Studies of Minority Health's Center for the Studies of Minority and Psychosocial Issues (MHCSD) was awarded the SSMHRC a five-year grant to study the effects of stress on Mexican Americans.

Lower Division Courses

10. Introductory Psychology. A general introduction including topics in cognitive, experimental, perceptual, developmental, social, and clinical psychology. Students participate in six hours of psychological research.

15. Introductory Psychobiology. Designed for nonmajors. A survey of genetic, evolutionary, physiological, pharmacological, and experiential factors affecting behavior. Using the comparative approach where appropriate, the relevance of biological mechanisms to an understanding of man and his interaction with his environment is emphasized.

41. Psychological Statistics. Lecture, five hours. Prerequisites: course 10, Mathematics 2, and psychology premajor standing or consent of instructor. Basic statistical procedures and their application to research and practice in various areas of psychology.

42. Research Methods in Psychology. (Formerly numbered 100.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 10, 41 with grades of C- or better. Introduction to research methods and critical analysis in psychology. Lecture and lab topics include experimental and nonexperimental research methods, statistical design and analysis as applied to a broad range of basic and applied research issues.

95. Lower Division Seminars. Prerequisite: course 10. Limited to freshmen and sophomores. Intensive analysis in seminar situations of selected topics of current psychological interest. See the Schedule of Classes for current topics and instructors. May be repeated for credit.

Upper Division Courses

102. History and Systems of Psychology. Prerequisite: senior standing or consent of instructor. A historical and systematic analysis of psychological thought and points of view.

110. Fundamentals of Learning. Prerequisite: course 41. Experimental findings on animal and human conditioning; retention and transfer of training; the relation of learning and motivation. The course is intended to provide an empirical basis for theory and research in this area.

111. Learning Laboratory. Lecture, two hours: laboratory, three hours. Prerequisites: courses 41, 42, 110 (may be taken concurrently), psychology major standing. Laboratory exercises are designed to test current theories of the study of learning, especially with animals.

112A. Human Learning. Prerequisite: course 110. Acquisition, retention, and transfer of verbal and nonverbal human learning.


112C. Thinking. Prerequisite: course 110. An analysis of experimental studies of problem solving, reasoning, insight, concept formation, and related topics.

112E. Current Topics in Learning. Prerequisite: courses 10, 41, 42, 110 (may be taken concurrently). A survey of current problems in the fundamentals of learning. Topics vary with the interests of the instructor and class. May be repeated for credit by consent of instructor.

114. Alcoholism. Prerequisite: upper division standing. Theories and research on the impact, causes, characteristics, and treatment of alcoholism considered from a biobehavioral point of view.

115. Physiological Psychology. Prerequisites for majors: course 41, Biology 2; for nonmajors: Biology 5, 7, 11, consent of instructor. Integrative activities, receptor and effector processes in relation to neuro-muscular structure and function. Facts, problems, and methods.

115H. Physiological Psychology (Honors). Lecture, three hours; discussion, one hour. Prerequisite: course 41. An honors course parallel to course 115.

116. Physiological Psychology Laboratory. Lecture, one hour; laboratory, three hours. Prerequisites: courses 41, 42, 115 (may be taken concurrently) psychology major standing. Laboratory experience with various topics in physiological psychology.

117. Seminar in Psychology. Prerequisite: course 115. Advanced topics in brain and behavior. Only one section of course 117 may be applied as an elective toward the psychology major. May be repeated for credit by consent of instructor.

118A. Comparative Psychology. Prerequisite: course 115. A survey of the determinants of species-specific behavior, including genetic influences and learning.

118B. Behavioral Pharmacology. Prerequisite: course 115. Experimental and theoretical treatment of drug-behavior interrelationships. Particular emphasis on behavior and pharmacological mechanisms of drug action and drug interaction with neural function; drugs as tools to investigate various behavior processes such as mood, aggression, learning, and motivation, experimental studies of addiction.

118C. Psychophysiology of Motivation. Prerequisite: course 115. The basic psychophysiology, including brain and endocrine mechanism, involved in the control of motivation. Discussion of homeostatic drives such as hunger and thirst and nonhomeostatic drives such as reproductive behavior is emphasized.

118D. Experimental Neuropsychology. Prerequisite: course 115. The experimental analysis of higher brain functions. Special emphasis on attention, memory, perception, and language.

118E. Current Topics in Physiological Psychology. Lecture, three hours. Prerequisite: course 115 or consent of instructor. Advanced topics of current interest in physiological psychology are presented in depth. The emphasis is on bringing students to the point where they can appreciate and evaluate current research papers on the topics covered. May be repeated for credit by consent of instructor.

M118F. Ethology: Physiology of Behavior and Learning. Prerequisite: course 115. Lecture, four hours; laboratory, one hour. Basic course for undergraduate students which integrates a systematic overview of common forms of behavioral plasticity and standard procedures in laboratory animals (in behavioral, neurophysiological, and pharmacological studies) with a broad biological, evolutionary perspective.

118G. Neuron Circuitry and Behavior. Prerequisite: course 115. Biology 171, or consent of instructor. A presentation of current data and theory concerning how neurons circuits produce behavior. Mechanisms of perception, response selection, motor pattern generation, learning, and motivation are discussed, with emphasis on the operation of these processes in well-defined neural circuits.

M119. Evolution of Intelligence. (Formerly numbered 119.) (Same as Psychiatry M119.) Lecture, two hours; discussion, two hours. Prerequisites: course 15 or 115, an introductory statistics course, junior or senior standing, consent of department. Intelligence is treated as neural information-processing capacity, and its evolution in vertebrates is correlated with the evolution of enlarged brains. Quantitative approaches in evolutionary biology and the neurosciences are emphasized.

120. Human Information Processing. Lecture, three hours. Prerequisites: courses 10, 41, 42. A survey of how people acquire and retain nonverbal and verbal information. Perception, attention, memory, and representation of knowledge are considered.

121. Laboratory in Human Information Processing. Prerequisites: courses 10, 41, 42, 120 (may be taken concurrently). Laboratory experience with methods and phenomena drawn from research on human perception, memory, and cognition.

122. Language and Communication. Prerequisite: course 41 or consent of instructor. A survey of language behavior, communication, and speech perception, including acquisition, sequential structure, and semantic factors. Experiments in experimental linguistics, theory of information transfer, analysis and synthesis of speech. Social communication. Aphasia and speech pathology. Animal communication.

123. Psycholinguistics. A survey of current theory and research in psycholinguistics: the description of language in generative grammars; the acquisition of language by children; experiments on speech recognition, production, and comprehension; errors in speech perception and production; speech physiology and pathology.

124A. Current Topics in Human Information Processing. Lecture, two hours; discussion, one hour. Prerequisites: courses 10, 41, 120. Advanced consideration of special topics in human information processing. May be repeated for credit by consent of instructor.

124B. Current Topics in Psycholinguistics. Prerequisite: course 123. Advanced consideration of special topics in the psychology of language. May be repeated for credit by consent of instructor.

125. Personality. Prerequisite: course 41. A survey of the major topics in the field of personality, including personality theory, personality assessment, and the physiological, behavioral, and cultural role of perception, learning, and motivation in personality.

126. Personality. Discussion, three hours; laboratory, three hours. Prerequisites: courses 41, 42, 125 (may be taken concurrently), psychology major standing. Laboratory experience with various topics in personality.
126H. Personality Laboratory: Emotions (Honors). Discussion, three hours; laboratory, three hours. Prerequisites: courses 10, 41, 42, psychology major standing. Presentations of the major approaches to emotion and experimentation of some hypotheses from theory of different (bias) statistical techniques and experimental methodologies.

127. Abnormal Psychology. Lecture, three hours. Prerequisite: course 10. Study of the dynamics and prevention of abnormal behavior, including neuroses, psychoses, character disorders, psychosomatic reactions, and other abnormal personality patterns.

127H. Abnormal Psychology (Honors). Lecture, three hours; discussion, one hour. Prerequisite: course 10. An honors course parallel to course 127.

128. Behavioral Medicine. Lecture, two hours; discussion, one hour. Prerequisites: courses 10, 127, junior or senior standing. Psychophysiological (psychosomatic) disorders are approached via a biopsychosocial model of disease, with emphasis on the interrelationships between physiology, personality, and social/environmental factors. Behavioral assessment and treatment approaches constitute a major focus (e.g., modified Type A behavior, treatment of anorexia and enuresis).

129A. Personality Measurement. Prerequisite: course 25. Advanced methods, designs, and statistical studies dealing with the problems of describing persons in terms of a limited set of dimensions. Detailed consideration of research literature dealing with a few representative personality dimensions.

129B. Personality Dynamics. Prerequisite: course 125. Detailed consideration of the development of one or two areas of personality in which the main and interactive effects of personality and situational variables have been investigated. Personality as related to the study of psychological processes, particularly motivation, includes an examination of current research literature.

129C. Personality and Cognition. Prerequisite: course 125. Theoretical and experimental analyses of cognitive processes such as imagery, attention, language, and memory and their implications for theories of personality.

129D. Special Topics in Personality. Prerequisite: course 125. Study of selected topics in the psychology of personality. Topics vary with the interests of instructor and class. May be repeated for credit by consent of instructor.

129E. Human Sexuality. Lecture, three hours. Prerequisite: senior psychology major standing. The course is designed to present an overview of the psychological, biomedical, and sociocultural aspects of human sexuality. Emphasis is placed on assessment, and therapy are described in a format which highlights their significance for understanding human sexual functioning. The ultimate objective is to articulate the psychological mechanisms underlying the expression of human sexuality.

130. Developmental Psychology. Lecture, three hours. Prerequisite: course 10. An elaboration of the developmental aspects of physical, mental, social, and emotional growth from birth to adolescence.

132A. Learning Disabilities Laboratory. Laboratory, 90 minutes; activity, seven hours. Prerequisites: courses 10, 41, 42, 132A (five units), psychology major standing, consent of instructor. Participation in special activities at the Fernald School is made available for research on different (bias) statistical techniques and experimental methodologies.

132B. Learning Disabilities Laboratory. Laboratory, 90 minutes; activity, seven hours. Prerequisites: courses 10, 41, 42, 132A (five units), psychology major standing, consent of instructor. Participation in special activities at the Fernald School is made available for research on different (bias) statistical techniques and experimental methodologies.

132C. Learning Disabilities Advanced Laboratory. Prerequisites: courses 10, 41, 42, 132B, consent of instructor. A personalized laboratory participation experience designed to allow the advanced student to explore relevant topics in depth.

133A. Adolescent Development. Lecture, three hours. Prerequisite: course 130. An examination of the adolescent, social, psychological, and physiological development of the adolescent.

133B. Exceptional Children. Formerly numbered M133B. (Same as Psychiatry M133.) Prerequisite: course 130. Study of the issues and research problems in the areas of mental retardation, giftedness, learning disorders, emotional disorders, and childhood psychosis.

133C. Psychological Development in the Adult Years. Prerequisite: course 130 or consent of instructor. Theory and research on changes in motivation, aptitudes, and abilities as related to genetics, age, sex, and sociocultural variables.

133D. Social and Personality Development. Lecture, two hours; discussion, one hour. Prerequisites: courses 10, 41, 130. An advanced course that surveys the theoretical and empirical 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.

133E. Current Issues in Developmental Psychology. Prerequisites: course 130, upper division psychology standing. A critical examination of current issues in developmental psychology. Specific topics vary depending on the interests of the class and instructor. May be repeated for credit by consent of instructor.

134. Psychology and Education. Lecture, three hours. Prerequisites: courses 10, 41, 130. Application of principles of cognitive development, learning, and perception to educational problems. Topics include general instructional issues, psychology of reading and mathematics, exceptional children, early childhood education, and education of the disadvantaged.

135. Social Psychology. Prerequisite: course 41. The interrelationships between the individual and his social environment. Social influences on motivation, perception, and behavior. The development and change of attitudes and opinions. Psychological analysis of small groups, social stratification, and mass phenomena.

135H. Social Psychology (Honors). Lecture, three hours; discussion, one hour. Prerequisite: course 41. An honors course parallel to course 135.

136A. Social Psychology Laboratory. Lecture, two hours; laboratory, two hours. Prerequisites: courses 10, 41, 130, psychology major standing. Laboratory experience with such topics as small group behavior, attitude measurement, and interpersonal influence.

136B. Survey Methods in Psychology. Lecture, two hours; laboratory, two hours. Prerequisites: courses 41, 42, psychology major standing. The nature of attitudes and opinions and their measurement by means of attitude scales and public opinion surveys. Class projects and fieldwork. Concurrently scheduled with course C223.

137A. Group Behavior. Lecture, three hours. Prerequisites: courses 10, 41, 135. Psychology of interdependence, group membership, leadership, and social influence.

137B. Attitude Formation and Change. Lecture, three hours. Prerequisites: courses 10, 41, 135. Effects of propaganda, information, social isolation, and social structure on private attitudes and public opinion.

137C. Interpersonal Relations. Lecture, three hours. Prerequisites: courses 10, 41, 135, consent of instructor. A study of the psychological facts, principles, problems, and theories concerned with interactions and relationships between persons. Focus on such phenomena as interpersonal attraction, exchange, aggression, conflict, control, power relations, and the initiation, development, and dissolution of relationships.

137D. Introduction to Health Psychology. Prerequisite: course 10. The course determines what areas of health, illness, treatment, and delivery of treatment can be elucidated by an understanding of psychological concepts and research, explores the psychological perspective on these problems, and considers on how the psychological perspective might be enlarged and extended in the medical sciences.

M139. Personality and Behavior of Women and Men. (Same as Women's Studies M137E.) Prerequisites: course 10 or Women's Studies 100, junior or senior standing. Examination of work behavior of men and women. Topics include antecedents of career choice, job finding, leadership, performance evaluation, discrimination and evaluation bias, job satisfaction, and interdependence of work and family roles.

137F. Special Topics in Social Psychology. Prerequisite: course 135. Study of selected topics in social psychology. May be repeated for credit by consent of instructor.

138. Political Psychology. (Same as Political Science M140.) Prerequisite: course 10. Examination of political behavior; political socialization, personality and politics, racial conflict, and the psychological analysis of public opinion on these issues.

139. Psychology of Social Issues. Prerequisite: course 10. An analysis of the contribution of current psychological theory and research to the understanding of selected historical, social, and political problems.

M142. Advanced Statistical Methods in Psychology. (Formerly numbered 142.) (Same as Psychiatry M142.) Lecture, two hours; discussion, two hours. Prerequisite: course 41. Chi square, special correlation methods, multiple regression, nonparametric methods, analysis of variance, reliability and validity.

143. Foundations of Psychological Investigation. Prerequisites: courses 41, 42, psychology major standing. Outline and examination of concepts associated with psychological investigation and interpretation of results. Readings, discussions, and reports; individual and class projects.

144. Psychological Tests and Evaluation. Prerequisite: course 41. Further study of the principles of measurement, stressing basic concepts. Application to tests of test construction, administration, and interpretation.

147. Elements of Psychology of Sport. The application of psychological theories, principles, and techniques to recreation, games, and sport. Includes current concepts of psychology of sport and their relationship to psychology of sport and the psychological effects of exercise and physical fitness.

148. Industrial and Organizational Psychology. Lecture, three hours. Prerequisite: course 10. Introduction to the applications of psychology in industrial and other organizations.
The Psychology of Gender. (Same as Women's Studies M165.) Lecture, two hours; discussion, one hour. The course considers psychological literature relevant to understanding contemporary sex differences. Topics include sex role development and role definitions, gender identity, female/male differences, and the lesser known factors in the process of defining the individual's sex role. 

Experimental Psychology Laboratory. (Same as Sociological Aspects of Death and Suicide.) Lecture, two hours; laboratory, three hours. Prerequisites: courses 10, 42, 120, or consent of instructor. An introduction to the psychological laboratory: laboratory techniques, ethical considerations, and statistical methods. Laboratory training through independent research projects.

Human Motivation. (Same as Psychology M139.) Lecture, three hours. Prerequisite: course 10 or consent of instructor. A study of the motivations of human behavior, including the role of personality, social, and biological factors. 

The Psychology of Gender. (Same as Women's Studies M165.) Lecture, two hours; discussion, one hour. The course considers psychological literature relevant to understanding contemporary sex differences. Topics include sex role development and role definitions, gender identity, female/male differences, and the lesser known factors in the process of defining the individual's sex role. 

Experimental Psychology Laboratory. (Same as Sociological Aspects of Death and Suicide.) Lecture, two hours; laboratory, three hours. Prerequisites: courses 10, 42, 120, or consent of instructor. An introduction to the psychological laboratory: laboratory techniques, ethical considerations, and statistical methods. Laboratory training through independent research projects.

Human Motivation. (Same as Psychology M139.) Lecture, three hours. Prerequisite: course 10 or consent of instructor. A study of the motivations of human behavior, including the role of personality, social, and biological factors.
188. Fieldwork in Cognitive Science. Lecture, two hours; fieldwork (approved community setting), six hours. Prerequisites: cognitive science major standing, department consent. Fieldwork in applications of cognitive science. The Psychology Undergraduate Office, 1531 Franz Hall, should be consulted under-graduates in the teaching of psychology. Students serve as junior teaching assistants and assist in the preparation of materials and the development of innovative programs. The Psychology Undergraduate Office, 1531 Franz Hall, should be consulted for contracts and further information. Only 12 units from courses 192, 193, and 194 may be applied toward the undergraduate degree. May not be applied toward course requirements for any of the psychology majors. P/NP grading.

190A-190B-190C. Honors Course. Lecture, three hours. Prerequisite: psychology honors program standing. Opportunity for the development and analysis of creativity and intellectual growth. Matriculation and research and their implementation by experimental research. Information and applications may be obtained from the Psychology Undergraduate Office, 1531 Franz Hall. Only one 190 course may be applied toward the elective course requirement for the psychology major.

192. Practicum in the Teaching of Psychology. (Formerly numbered 300.) Prerequisites: upper division psychology major, department consent. Training and supervisory practicum for advanced undergraduates in the teaching of psychology. Students serve as junior teaching assistants and assist in the preparation of materials and the development of innovative programs. The Psychology Undergraduate Office, 1531 Franz Hall, should be consulted for contracts and further information. Only 12 units from courses 192, 193, and 194 may be applied toward the undergraduate degree. May not be applied toward course requirements for any of the psychology majors. P/NP grading.

193. Fieldwork in Psychology. (Formerly numbered 350.) Seminar, two hours; fieldwork (approved community setting), six hours. Prerequisites: sophomore psychology major standing, department consent. Fieldwork in applications of psychology. The Psychology Undergraduate Office, 1531 Franz Hall, should be consulted for contracts and further information. Only 12 units from courses 192, 193, and 194 may be applied toward the undergraduate degree. May not be applied toward course requirements for any of the psychology majors. P/NP grading.

194. Research in Psychology. (Formerly numbered 351.) Seminar, one hour; interaction (approved research setting), seven hours. Prerequisites: sophomore pre-psychology or psychology major standing, department consent. Practical applications of psychology through research. The Psychology Undergraduate Office, 1531 Franz Hall, should be consulted for contracts and further information. Only 12 units from courses 192, 193, and 194 may be applied toward the undergraduate degree. May not be applied toward course requirements for any of the psychology majors. P/NP grading.

195. Current Issues in Psychology. Lecture, three hours. Prerequisite: junior or senior psychology major standing (some sections may require consent of instructor). A study of selected current topics of psychological interest. See Schedule of Classes for topics and instructors. May be repeated for credit by consent of instructor and may be applied as an elective toward the psychology major. May not be applied as an elective toward the pre-psychology or psychology major standing.

199. Directed Individual Research and Study. Prerequisites: senior psychology major standing or junior psychology major standing with at least a 3.0 GPA in the major, consent of instructor and Vice Chair for Undergraduate Affairs (based on a written proposal outlining the course of study). Students should consult the Psychology Undergraduate Office, 1531 Franz Hall, for further information and approval forms. Only one four-credit 199 course in psychology may be taken per quarter and only one for a letter grade (additional 199 courses may be taken in the department). Only four units may be applied toward the elective course requirement for the psychology major.

Graduate Courses

200A. Animal Learning and Behavior. Basic principles and characteristics of learning and behavior, including Pavlovian conditioning, instrumental learning, and species-specific behavior.

200B. Human Learning and Behavior. Topics include human learning and conditioning and the application of learning principles in the etiology and treatment of a variety of socially significant problems. Special emphasis on systematic desensitization of anxiety states, behavior modification programs for schizophrenic children and adults, behavioral pharmacology, control of autonomic behavior, among others.

204A-204B. Seminar in Critical Problems in Learning. Each course may be taken independently and in any order. Critical problems are drawn from the following:

204A. Psychophysiology of Attention and Learning. The study of research and theories concerned with the psychophysiologie of attention and learning primarily in humans. Concepts and areas include the orienting reflex, dominant focus, conditioned conditioning, and their implications for the psychophysiology of psychopathology and psychotherapy.

204B. Theories of Learning. Prerequisite: course 200A or equivalent. Critical discussion of major theories in learning and their current status.

204C. Applied Learning. Lecture, three hours. Prerequisite: graduate standing in psychology, consent of instructor. 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.

205A-205B. Physiological Psychology of Behavior. Lecture, three hours. The physiological substrate of behavior and the neural and endocrine mechanisms which underlie psychological phenomena and behavior. New concepts of structural and functional organization in the nervous system and the ways these relate to behavioral and neurological dysfunction.

206. Psychophysiology of Brain Function. Modern concepts of the functional organization of the brain, with particular reference to psychological phenomena. Consideration of methods in neurophysiology and electroencephalography bearing on perception, attention, drive, sleep-wakefulness, levels of consciousness, etc. Some emphasis on pathology of behavior resulting from brain injury.

207A-207B-207C. Seminar in Physiological Psychology. Prerequisite: course 115 or equivalent.

207A. Mr. Butcher, Mr. Ellison, Mr. Krasne

208. Seminar in Comparative Psychobiology. (Formerly numbered 208B.) Mr. Arnold

210. Comparative Psychobiology. Prerequisite: course 115 or equivalent, consent of instructor. A survey of the determinants of species-specific behavior, including genetic influences and learning.

212. Evaluation of Research Literature in Physiological Psychology (1 unit). Discussion, 90 minutes. Prerequisite: consent of instructor. Papers of current interest are presented by members of the seminar and their significance and methodology discussed and criticized in depth. May be repeated for credit. S/U grading.

218. Advanced Industrial Psychology. Selection and training of employees, factors influencing efficiency of work. Mr. Barthol

219. Special Problems in Industrial Psychology. Mr. Barthol

220A-220B. Social Psychology. Prerequisite: course 135 or equivalent. An intensive consideration of theories, concepts, and major problems in social psychology.

221. Seminar in Attitude Formation and Change. Discussion, three hours. Prerequisites: courses 220A-220B or consent of instructor. Social psychological research and theories on opinions and attitudes. Effects of mass communication, social factors in assimilation of information and influence. Mr. Gerard

222A-222B. Seminar in Group Behavior. Discussion, three hours. Prerequisites: courses 220A-220B or consent of instructor. Special topics in interpersonal attraction and groups. Power, control, structure and organization, group functioning.

223. Survey Research in Psychology. A critical review of the theory and practice of large-scale sampling, measurement, and analysis of beliefs, attitudes, and other psychological variables. Concurrently scheduled with course C136B.

236. Experimental Methods in Social Psychology. Lecture, three hours. Prerequisites: courses 220A-220B or consent of instructor. A critical review of laboratory techniques and problems of experimental control and measurement encountered in research on social psychological phenomena. Mr. Collins

225. Seminar: Critical Problems in Social Psychology. Discussion, three hours. Prerequisites: courses 222A-222B or consent of instructor. May be repeated for credit by consent of instructor.

226. Current Literature in Social Psychology (2 units). Recent and current research papers in social psychology are presented by members of the seminar and their significance and methodology discussed and criticized in depth. May be repeated for credit. S/U grading.

227. Health Psychology. Lecture, two hours; discussion, one hour. Prerequisite: undergraduate degree or training in psychology. Explores the psychological and physiological implications of the etiology of a variety of physical disorders, the treatment and course of illness, the long-term care and adjustment of the chronically ill or disabled, and the practice of institutional health care and self-care.

228. Political Psychology. (Same as Political Science M224G.) Discussion, three hours. Prerequisites: course 220A or Political Science 214A. Examination of political behavior, political socialization, personal and political identities, racial conflict, and the analysis of mass opinion and its influence on issues of public concern. Mr. Maltzman

229A. Issues in the Social Development of the Minority Child. Prerequisites: graduate standing, consent of instructor. A critical evaluation and integration of existing research on the social psychological development of the minority child. The seminar explores the sociocultural develop-mental foundations of socialization and personality development, with the goal of empirically critiquing the issues raised in this area of developmental study.

229B. Issues in the Social Development of the Minority Child. Mr. Myers


231. The Psychology of Gender. Seminar, three hours. Prerequisite: one prior course in gender/women's studies or consent of instructor. A critical evaluation of current research and theory concerning the psychology of gender. The seminar draws on work from various areas of psychology to understand the sources of gender differentiation and its consequences for human behavior and social interaction.

232. Survey Research in Psychology. A critical review of the theory and practice of large-scale sampling, measurement, and analysis of beliefs, attitudes, and other psychological variables. Concurrently scheduled with course C136B.
232. Human Sexuality. Lecture, three hours. Prerequisite: graduate standing. The course has been designed to teach students how to carry out research on human sexual behavior. The contents include theory construction, scale development, physiological and endocrinological implications, radio-immunoassay (measuring hormones in blood sample), ethical issues, methodological and statistical considerations, the measurement of sexual arousal, fantasy, and sexual dysfunction. The format is discussion-oriented, with emphasis on operationalizing predictions concerning human sexual functioning. Mr. Abramson

233. Seminar in Environmental Psychology. Prerequisites: courses 235, 250A, 250B. Critical review of work in environmental psychology designed to identify basic dimensions for the analysis of man-environment relationships. The framework of analyses uses human emotional responses to environments as intervening variables linking specific stimulus qualities to a variety of approach-avoidance behaviors. Individual differences and drug-induced states as those relate to the emotional response dimensions are employed to explain within-individual differences in response to the same environment over time. Emphasis is placed on the between-individual dimension leading to the same situation. Review of literature relating information rate from environments to arousal and preferences for those environments. Mr. Mehrabian


236. Seminar in Mental Measurements. Mr. Woodward

M239. Personality, Motivation, and Attribution. (Same as Education M215.) Examines current research and theory relating personality variables (e.g., attributional styles, self-esteem) to motivational concerns such as persistence and intensity of behavior. Perceived causes of outcomes in achievement and affective responses are examined.

240. Developmental Psychology. A consideration of the special problems of the control and measurement of the behavior of children as well as the young of other organisms, with emphasis on providing basic research relevant to both clinical and research work with children. Ms. Greenfield, Mr. Jeffrey

242A-242F. Seminar in Developmental Psychology. Lecture, one hour; discussion, two hours. Prerequisites: course 240 or equivalent, consent of instructor. Each course may be taken independently and may be repeated for credit.

242A. Perceptual Development. Ms. Greenfield, Mr. Jeffrey


242E. Cognitive Factors in Learning Disorder. Mr. Adelman

242F. The Development of Language and Communication. Mr. Adelman

243A-243B. Seminar in Practical and Societal Issues in Developmental Psychology. Prerequisites: course 240 or equivalent, consent of instructor. Socialization processes in human development and implication for social-political, educational, research issues, values, and societal change. In Progress grading. Mr. Nakamura

244. Critical Problems in Developmental Psychology. Prerequisites: course 240 or equivalent, consent of instructor. The course is concerned with current topics of interest to the intellectual life of the class and instructor. May be repeated for credit by consent of instructor.

245. Personality Development and Education. (Same as Education M217C.) Review of research and theory concerning pertinent areas in personality development that bear on school performance: achievement motivation, self-concept, aggression, sex differences, empathy, and other social behaviors; review of the status of emotional behavior in personality theory and development.

246. Psychological Aspects of Mental Retardation. (Same as Psychiatry M246.) Prerequisite: consent of instructor. Discussion of the psychological aspects of mental retardation, including classification, etiology, theory, prevention, treatment, assessment, modern and future developments, and input from other disciplines (ethics, law, religion, welfare systems). Ms. Jacobs, Mr. Tymchuk

247A-247B. Theory and Methods of Computing in the Behavioral Sciences. Mr. Wickens, Mr. Woodward

247B. Prerequisite: course 247A or consent of instructor. Topics in human problem solving, information processing, automata, language cognition, and problems arising in computer simulation of behavior. Each student undertakes a substantial project.

248. Evaluation Research. Prerequisites: 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. Mr. Woodward

250A. Advanced Psychological Statistics. Review of fundamental concepts. Basic statistical techniques as applied to the design and interpretation of experimental and observational research. Mr. Wickens, Mr. Woodward

250B. Advanced Psychological Statistics. Advanced experimental design and planning of investigations. Mr. Wickens, Mr. Woodward

251A-251B-251C. Research Methods. Limited to psychology graduate students. Students design and conduct original research projects under the supervision of the instructor in charge. It is anticipated that many students will complete their project in two quarters (normally three quarters are allowed). S/U grading (course 251A only).

252. Multivariate Analysis. Prerequisites: courses 250A, 250B. Introduction to the analysis of data having multiple dependent measures. Topics include multivariate distributions, principal components analysis, multiple regression, canonical correlation, discriminant analysis, and the multivariate analysis of variance. Example applications are drawn from a variety of psychological areas of research, including clinical, cognitive, physiological, and social. Computer implementation includes APL and standard statistical packages. Mr. Woodward


256. Seminar in Critical Problems in Psychological Measurement. Critical examination of issues in the major approaches to psychological measurements; relation in psychological methods and data to a general theory of measurement. Mr. Mount

257. Multivariate Analysis with Latent Variables. Prerequisite: consent of instructor. Introduction to models and methods for the analysis of data hypothesized to be generated by unmeasured latent variables, including latent variable analogues of traditional analysis of variance models in multivariate analysis. Causal modeling theory testing via the analysis of moment structures. Measurement models including confirmatory and compensatory factor order, and structural-means factory analytic models. Structural equation models, including path and simultaneous equation models. Parameter estimation, hypothesis testing, and other statistical issues. Mr. Beatty, Mr. Carterette

258. Special Problems in Psychological Statistics. Prerequisites: courses 250A and 250B, or consent of instructor. Special problems in psychological statistics and data analysis are examined. Mr. Wickens

259. Quantitative Methods in Cognitive Psychology. Prerequisites: courses 250A and 250B, or consent of instructor. The course considers a number of nonstatistical mathematical methods and techniques commonly used in cognitive psychology. Topics include Markov chains, other stochastic processes, queueing theory, information theory, frequency analysis, etc. Mr. Wickens

260A-260B. Proseminar in Cognitive Psychology. Presentation of research topics by students, faculty, and visiting scholars. May be repeated for credit. S/U grading.

261. Perception. Lecture, three hours. Prerequisite: consent of instructor. Concepts, theories, and research in the study of perception. Considers the questions: Why do things look, sound, smell, taste, or feel as they do? What is the nature of perceptual systems? How do these systems process information? Mr. Thomas

262. Human Learning and Memory. Lecture, three hours. Prerequisite: consent of instructor. Contemporary theory and research in human verbal learning and memory; verbal and nonverbal learning and memory processes, the structure and organization of short- and long-term memory. Mr. Bjork

263. Psycholinguistics. Lecture, three hours. Prerequisite: consent of instructor. Contemporary theory and research in psycholinguistics: coding and decoding, psycholinguistic parameters of language learning, speech recognition and perception. Mr. French, Mr. MacKay

264. Judgment and Decision Processes. Lecture, three hours. Prerequisite: consent of instructor. Contemporary theory and research in judgment and decision processes: psychophysical scaling, contextual effects, scaling stages, models for the analysis of value decisions. Mr. Parducci

265. Thinking. Lecture, three hours. Contemporary theory and research in thinking, problem solving, inference, semantic memory, internal representation of knowledge, imagery, concepts.

266. Cognitive Science. Lecture, three hours. Prerequisite: consent of instructor. Major issues in cognitive science. Central theme is the representation of cognitive structures and higher-level processes. Specific areas include perception, learning and memory, problem solving, and reasoning. Relationships to artificial intelligence are considered. Mr. Richards, Mr. Wickens

268A-268E. Seminar in Human Information Processing. Seminar, three hours. Prerequisite: consent of instructor. Topics vary with the interests of the instructor. Each course may be taken independent and may be repeated for credit.

268A. Perception. Mr. Thomas

268B. Human Learning and Memory. Mr. Bjork

268C. Judgment and Decision Processes. Mr. Parducci

268D. Language and Thought. Mr. MacKay

268E. Human Performance. Mr. Beatty, Mr. Carterette

270A. Analysis of phenomenological, theoretical, and research issues regarding the etiology and mediating mechanisms in neurotic, affective, schizophrenic spectrum, and other personality disturbances.

270B. Principles and methods of psychological assessment and evaluation.

270C. Principles and methods of psychological intervention in individuals, families, and community settings.


272A-272F. Advanced Clinical Psychological Methods. Seminar, three hours. Prerequisite or corequisite: course 401 or 451. Each course may be taken independently for credit.

272A. Behavior Modification with Children. Prerequisites: courses 271A-271B-271C or consent of instructor. A course in the series of 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.

272C. Psychotherapy with Adults.

272D. Clinical Interventions for Psychological Problems of Children.

272E. Family Therapy and Family Dynamics.

272F. Special Problems.

272G. Advanced Clinical Psychological Methods: Behavior Modification with Adults. Prerequisites: second-year graduate standing in clinical psychology. The course focuses on cognitive-behavior modification principles and techniques. Major conceptual issues are analyzed, and specific techniques are demonstrated and practiced by students to cover a range of adult problems such as depression, stress and anxiety, anger management, and other problems.

273. Interpersonal Communication Seminar. Prerequisite: course 282 or consent of instructor. Each student is supported in developing a design for studying help-oriented interchange in community and clinical settings. Initial focus on measuring interpersonal deficit, response styles, and training effects.

274A-274B. Group Therapy Dynamics.

275. Family Process: Psychological and Social Perspectives on the Family. Same as Social Welfare M275. The course reviews various theoretical perspectives applicable to the analysis of family structure and dynamics. Critical issues in the application of family constructs to clinical problems receive particular attention.

276. Clinical Approaches to Children with Learning and Related Behavior Problems. Lecture, three hours; discussion, one hour. Prerequisite: doctoral standing. The focus is on theoretical and research issues and problems related to purposes and practices involved in assessment and correction approaches for children with learning and behavior problems. Practicum experiences are offered to illustrate course content and provide opportunities to improve research and clinical competence.

277. Advanced Clinical Assessment. The course covers projective techniques, clinical interpretation, case studies, the psychological test battery, psychopathology, and application of assessment to problems in psychotherapy.

278. Seminar in Motivation, Conflict, and Neuroticism. Mr. Feshbach.

279. Seminar in Research in Psychopathology.

280. Seminar in Behavior Therapy. Mr. Lovass.

281. Interpersonal Forms Analysis of Human Interaction Structures. Conceptual and experimental study of six response modalities common to psychotherapy and everyday interaction: questions, silent, silent, interpretation, self-disclosure, and reflection. Laboratory work is performed in conjunction with lecture and seminar sessions.

282. Seminar in Clinical Psychology and Communication.


284. Critical Problems in Clinical Research Methodology. Prerequisites: courses 250A, 250B. Special problems of measurement and design in clinical research are examined.

285. Research in Personality (1 unit). Prerequisite: graduate standing in personality. Required of all students majoring in personality. The course covers current research, theoretical and professional issues within the area of personality. A brown-bag format is utilized to foster intellectual exchange and discussion. Students are at least one presentation per quarter and participate in discussions with faculty and guest lecturers.

286. History of Psychology. Philosophical and historical context of contemporary psychology. Major trends from the 19th century to contemporary issues are considered.

287. Principles of Behavioral Pharmacology. Prerequisite: consent of instructor. The course focuses on the nature and source of drugs, general aspects of pharmacology, neurotransmitters and basic neuropharmacology, principles of behavioral pharmacology, categories of psychopharmacological agents, and pharmacological approaches to the study of drug addiction, schizophrenia, and other behavioral processes, both normal and pathological.

288. Biobehavioral Mechanisms of Stress and Disease. Lecture, three hours. Prerequisite: graduate standing in psychology or consent of instructor. The course examines the behavior-physiology interaction in some common bodily systems: the nervous, cardiovascular, gastrointestinal, and endocrine systems. Usual and altered states of these systems (e.g., stress) are examined as these can promote permanent tissue injuries, disease, or improved bodily function, health enhancement.

289. Behavioral and Psychophysiological Problems of Alcoholism. Prerequisite: consent of instructor. Behavioral and psychophysiological characteristics of alcoholism are reviewed, along with theories concerning their etiology and treatment. Experimental approaches are emphasized.

290. Dissertations. Mr. Maltzman.

291. Special Problems in Psychology. Content depends on the interests of the particular instructor. May be repeated for credit.

292. Developmental Methodology. Coverage of both theory and methods in measuring age-related changes in behavior. Experimental designs and data-analytic solutions to problems in the measurement of change are highlighted. Course includes some experience in analysis of actual data sets.

293. Teaching Apprenticeship Practicum (1 to 4 units). Prerequisite: appointment as personnel assistant as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for the course and curriculum and instruction at the University. May be repeated for credit. S/U grading.

294. Fieldwork in Clinical Psychology (4 or 8 units). Prerequisites: courses 271A-271B-271C. Site practicum assignments are required to register for the course each quarter (except by consent of clinical program committee).

295. Fieldwork in Speech Pathology (4 or 8 units). Prerequisite: consent of instructor. Practical work in hospitals and clinics in diagnostic testing and psychotherapy with speech disorders.

296. Seminar in Research in Psychopathology. Prerequisites: completion of Ph.D. comprehensive examinations, advancement to candidacy or preparation for dissertation research actively underway. This course is considered to be a special interest of the clinical training committee. Study and practice of the knowledge, concepts, and theories on teaching and supervision of applied clinical psychology.


298. Seminar in Clinical Psychology. 402. Health Psychology Practicum (2 units). Prerequisites: courses 272A-272B. A practicum course determines what areas of health, illness, treatment, and delivery of treatment can be elucidated by an understanding of psychological concepts and research, explores the psychological perspective on these issues, and considers how the psychological perspective might be enlarged and extended in the medical area, and through a practical field placement helps the student apply the knowledge acquired in clinical research observation and/or clinical practice in the field.

299. Health Psychology Lecture Series (2 units). Clinicians and researchers in health psychology from the Los Angeles area present their research, programs, and clinical work as part of a training program in health psychology. May be repeated for credit. S/U grading.

300. Internship in Clinical Psychology (6 to 12 units). Prerequisite: course 401. Limited to students who have successfully completed departmental qualifying examinations. May be repeated for credit. S/U grading.

301. Internship in Industrial Psychology (2 to 4 units). Mr. Bartholomew.

302. Presentation of Psychological Materials. Supervised practicum in undergraduate teaching. Students serve as discussion section leaders in selected undergraduate courses.

303. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor, department chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

304. Directed Individual Research and Study in Psychology (2 to 12 units). One 596 course is required for students who are enrolled in the Ph.D. program. The minimum requirement is one 596 or 599 course is required during each succeeding year of graduate study. (Terminal M.A. candidates are exempt from this requirement.)

305. Individual Studies (2 to 12 units). Intended primarily for the student who has successfully completed departmental qualifying examinations. May be required by some area committees as a prerequisite for taking the examinations.

306. Research for Ph.D. Dissertation (2 to 12 units). Prerequisite: successful completion of qualifying examinations. One 599 course is required during each year following completion of qualifying examinations.
Religion, Study of (Interdepartmental)

274 Royce Hall, 825-2174, 206-8235

Professors
Marilyn Adams, Ph.D. (Philosophy)
Robert Merrhew Adams, Ph.D. (Philosophy)
Dennis Abitriton, Ph.D. (Philosophy)
Amin Banani, Ph.D. (Persian and History)
Arnold J. Band, Ph.D. (Hebrew)
Robert L. Benson, Ph.D. (History)
Kees W. Boile, Ph.D. (History)
Seeger A. Bonebakker, Ph.D. (Arabic)
Giorgio Buccellati, Ph.D. (Ancient Near East and History)
Marilyn Adams, Ph.D. (Philosophy)

Associate Professors

Assistant Professors
Edward G. Berenson, Ph.D. (History)
Ruth Bloch, Ph.D. (History)
Robert A. Hill, M.Sc. (History)
Deborah Lipstadt, Ph.D. (Jewish Studies)

Lecturer
David L. Lieber, D.H.L. (Hebrew)

Adjunct Associate Professor
S. Scott Barichy, Ph.D. (History)

Scope and Objectives

The UCLA major in the study of religion has a twofold purpose. In the first place it is designed to give students a broad humanistic perspective. It introduces students to several religious traditions and thus to an appreciation of the very nucleus of civilization in various periods of history and various parts of the world, as well as to an understanding of fundamental human orientations. In the second place, the program asks the student to select one particular religious tradition for study in greater depth. Coherence and integrity in the program are furthered by courses dealing with philosophical problems in religion and with general anthropological reflections.

The program requires one year of language study which should be related to the major tradition of concern. This minimum requirement will allow every student to develop some idea of the basic problems in understanding religious texts. Students contemplating graduate study will generally do more than fulfill the minimum requirement.

Bachelor of Arts Degree

Preparation for the Major

Required: Anthropology 22; History 4; Philosophy 2; two courses from History 1A, 1B, 1C, 9A, 9B, 9C, 9D, 10A, 10B.

The Major

Required: A minimum of 13 upper division courses and three related courses in foreign language. These must include History 193A or 193E; Anthropology 133R or 156; two courses from Philosophy 175, 177B or 195, 197, 199, Ancient Near East 170, Classics M170A; three courses in either Latin or Greek.

Group 1: Ancient Near East and Eastern Europe

Three courses from History 193D, Ancient Near East 130, 150A, 150B, 150C, 170, Indo-European Studies 131, 132, Iranian 170; three courses in either Ancient Egyptian or Akkadian.

Group 2: Indo-European Traditions

Three courses from English M111D, M111E, History 193B, Old Norse Studies 140, Iranian 170, Slavic M179; three courses in Sanskrit, Latin, or Greek.

Group 3: Greece and Rome

Three courses from Classics 161, 162, 166A, 166B, History 197 (Roman History: Christianity and Imperial Rome); three courses in either Latin or Greek.

Group 4: Israel and Judaism


Group 5: Christianity


Group 6: Islam

Three courses from Philosophy 104, History 106A, 107A, 107B, Arabic 150A, 150B, Iranian 150A, 150B; three courses in Arabic.

Group 7: South Asia

Three courses from History 188A, 193B, 193C, 197 (South Asian Religions), East Asian Languages and Cultures 167, Iranian 170; three courses in Sanskrit.

Group 8: Far East

Three courses from History 193C, East Asian Languages and Cultures 172, 173, 174; three courses in Sanskrit, Chinese, or Japanese.

Group 9: Traditional and Nonliterate Cultures

Three courses from Anthropology 171, 174P, 177, Folklore and Mythology M111, M123A, M125, M129, 130, History 157A, 157B, 157C, Linguistics M150; three courses in a language selected in consultation with an instructor in these areas.

Honors Program

The honors program provides exceptional students with an opportunity to do independent research under the guidance of a faculty member. If you are admitted to honors, you should take three 199 courses under the guidance of the sponsoring professor. These courses will be taken in the senior year and will count as part of the regular requirement of 13 upper division courses. The program culminates in an honors thesis.

In order to qualify for admission, you 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 Hartmut E.F. Scharfe at the program address.
Romance Linguistics and Literature
(Interdepartmental)

359 Royce Hall, 825-0237

Professors
Stephen R. Anderson, Ph.D. (Linguistics)
Shirley L. Arora, Ph.D. (Spanish)
José R. Barcia, Lic. F. y L. (Spanish)
Rubén A. Benítez, Ph.D. (Spanish)
Marc Benson, Ph.D. (French)
Franco Bettì, Ph.D. (Italian)
Giovanni Cecchetti, Ph.D., Dottore in Lettere

Joaquín Gimeno, Ph.D. (Spanish)

Franco Betti, Ph.D. (Italian)

Literature and Romance Professors
C. B. Morris, Litt.D.
Gerardo Luzuriaga, Ph.D.
Bengt T. M. Löfstedt, Ph.D. (Classics)

Carroll B. Johnson, Ph.D.

Margherita Cottino-Jones, Ph.D., Dottore in Lettere

Edward F. Tuttle, Ph.D. (Italian)

Margaretta Otero, Ph.D. (Spanish and Romance Linguistics)

Stephen D. Werner, Ph.D. (French)

Josef Chlapelli, Dottore in Lettere (Italian)

Hassan el Nouy, Docteur és Lettres (French)

E. Mayone Dias, Ph.D. (Portuguese and Romance Linguistics)

Joaquín Gimeno, Ph.D. (Spanish)

Carroll B. Johnson, Ph.D. (Spanish)

Bengt T. M. Löfstedt, Ph.D. (Classics)

Pier-Maria Pasinetti, Ph.D., Dottore in Lettere,
Emeritus (Italian)

Associate Professors
George D. Bedell, Ph.D. (Linguistics)

Patrick Coleman, Ph.D. (French)

E. Mayone Dias, Ph.D. (Portuguese and Romance Linguistics), Chair

Richard M. Reeve, Ph.D. (Spanish)

Enrique Rodríguez-Cepeda, Ph.D. (Spanish)

A. John Skirius, Ph.D. (Spanish)

Paul C. Smith, Ph.D. (Spanish)

Assistant Professors
Jean-Claude Carron, Ph.D. (French)

Shuhui Kao, Ph.D. (French)

Sara Melzer, Ph.D. (French)

James Reid, Ph.D. (French)

Timothy A. Slowell, Ph.D. (Linguistics)

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.

Master of Arts Degree
Admission
The UCLA Bachelor of Arts degree in French, Italian, Portuguese, or Spanish, or the equivalent, is required. Applicants are expected to have a grade-point average of at least 3.4 in upper division courses, especially in those judged germane to their proposed program. Three letters of recommendation and the Aptitude Test of the Graduate Record Examination (GRE) are also required and should be submitted to the Chair, Romance Linguistics and Literature Program, 359 Royce Hall, UCLA, Los Angeles, CA 90024. Students admitted from elsewhere whose preparation is considered deficient in view of their intended specialization are required to take specified upper division courses. Such courses may be taken concurrently with graduate courses, but they may not be applied toward the course requirements for the M.A. degree. Before enrolling for the first quarter in the program, new students must consult the program Chair concerning the formation of their guidance committee. Students who know only the language of their major should prepare in at least one other Romance language during the first graduate year so they can take courses in their minor no later than the second year of graduate study.

Foreign Language Requirement
In addition to the Romance language of major interest and that of minor interest, you are required to take either Latin 3 or the equivalent, or Italian 3 or the equivalent (provided Italian is not your major), whether you specialize in linguistics or in literature. The language requirement must be completed no later than the quarter before you expect to receive your degree.

Course Requirements
Twelve courses are the minimum requirement, of which six courses (at least five of them graduate) must be in your major language, with specialization either in linguistics or in literature. One course in the history or development of the major language is highly recommended. At least three courses would be in the minor language, also with specialization in either linguistics or literature. The remaining three courses should be selected in consultation with the guidance committee so as to be logically supportive of your major field of study. Linguistics 100 is required as a prerequisite of all students majoring in the linguistics field. Up to eight units of Romance Linguistics and Literature 596 may be applied toward the M.A. Courses 597 and 598 may not be applied toward the degree.

Teaching Experience
Teaching experience is not required but is desirable. Consult the Chair regarding the availability of teaching assistantships.

Thesis Plan
The program favors the comprehensive examination plan but will approve M.A. theses for exceptionally well-qualified students under special circumstances. You may petition for authorization to write an M.A. thesis only after completion of six courses applicable toward the degree. It is your responsibility to choose an appropriate topic and find a professor to direct the thesis. After completion of the thesis, you must pass a two-hour oral examination testing your knowledge of the field of the thesis and your general competence. Only those students who attain a 3.5 grade-point rating in the examination will be encouraged to proceed to candidacy for the Ph.D. degree.

Comprehensive Examination Plan
The comprehensive examination is administered by three members of the guidance committee, appointed by the Chair. The written examination, consisting of one four-hour examination in the major field, one two-hour examination in the minor field, and one oral examination not to exceed one hour, will be given each quarter two weeks prior to final examinations. If you fail the examination or any part thereof, you may retake the failed portions once when the examination is next regularly offered. Only those students who attain a high pass grade on the master's examination will be automatically admitted to the Ph.D. program.

Ph.D. Degree
Admission
The UCLA Master of Arts degree in Romance Linguistics and Literature or the UCLA M.A. in French, Italian, Portuguese, or Spanish, or the equivalent, is required. Three letters of recommendation and the Graduate Record Examination (GRE) Aptitude Test are also required.

Entering students who have completed the UCLA M.A. in Romance Linguistics and Literature with a high pass grade are automatically admitted to the Ph.D. program. All others must formally apply; those whose M.A. program registers deficiencies in scope or quality will be required to complete three graduate courses from the offerings of the sponsoring departments.

Following the determination of your eligibility, your guidance committee will be formed. You will then meet as soon as possible with your committee to work out your program of courses and set a tentative date for the qualifying examinations. The guidance committee has final authority to prescribe the course of study. Until you have met with this committee and placed yourself under its direction, you are not officially in the Ph.D. program.

Major Fields or Subdisciplines
The program recognizes two fields of specialization: linguistics and literature.

Linguistics: Major fields include (1) the present-day grammar of the Romance language of your major interest and its relation to the grammar of its sister languages and to language in general; (2) the development of the Romance language of your major interest in relation to its sister languages (and possibly other interrelated cultural aspects) from the perspective of
historical linguistics; (3) the genetic and typological relationships of the Romance languages to other Indo-European languages and to language in general. The two minors may be other Romance languages, or one other Romance language plus a field of Romance literature.

**Literature:** Major fields include one of the following in the literatures of at least two Romance languages: (1) early Romance literature and philology; (2) Renaissance and baroque; (3) modern literature, preferably with emphasis in one century. The first minor may be one of the preceding fields not selected for the major. The second minor may be the same field or a new field in another Romance language, or some other related field in the major language or in Romance linguistics.

### Foreign Language Requirement

In addition to the minimum of two Romance languages, Latin 3 or Italian 3 or the equivalent is required of all students in the program. Students selecting option 2 or 3 in linguistics or option 1 in literature must also take German, whereas those selecting option 1 in linguistics or option 2 or 3 in literature must take another foreign language to be determined by the guidance committee. In non-Romance languages, you must pass the Educational Testing Service (ETS) test. In languages where there is no such test, passing a departmental examination fulfills the requirement. This requirement may also be met by completing two years of college-level courses in the language at a grade of B or better or by fulfilling the foreign language requirement in connection with an M.A. or B.A. degree obtained elsewhere. The foreign language requirement must be satisfied no later than the quarter before the qualifying examinations are taken.

### Course Requirements

In each of the two specializations (linguistics or literature) the Ph.D. program consists of a major and two minors. These courses (a minimum program) will be distributed as follows: major—five courses, first minor—three courses, second minor—two courses. At least one seminar is required in each of the three fields. In addition to those required for the master’s degree (or equivalent) at least ten other graduate courses (of which no more than two 596 courses may be applied), as well as such courses as the guidance committee may prescribe, are required. Linguistics 100 is required as a prerequisite of all students majoring in the linguistics field.

### Teaching Experience

Teaching experience is not required but is desirable. Consult the Chair regarding the availability of teaching assistantships.

### Qualifying Examinations

The qualifying examinations, given by the doctoral committee during the Fall, Winter, and Spring Quarters, consist of (1) a three-hour written examination in the major field; (2) a two-hour examination in the first minor; (3) a one-hour examination in the second minor; and (4) a two-hour University Oral Qualifying Examination in the three fields, at which time your prospectus for the dissertation is also discussed and approved. Failed portions of the examination may be repeated once after any remedial preparation the committee may specify.

The dissertation may be on any subject within the general area of Romance linguistics and literature. If more than five calendar years elapse between advancement to candidacy and the presentation of the dissertation, the program may require revalidation of the qualifying examinations.

### Candidate in Philosophy Degree

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

### Graduate Courses

**211. Comparative Romance Syntax.** Lecture, three hours. Prerequisite: French 204A, Portuguese 204A, Spanish 204A, or consent of instructor. Comparative study of syntactic processes in Romance languages. Investigation of the parameters underlying linguistic variation.

**596. Directed Individual Study or Research (4 to 8 units).** Prerequisite: consent of instructor. Study or research in areas or on subjects not offered as regular courses. Eight units may be applied toward the M.A. degree requirements. S/U grading.

**597. Preparation for Graduate Examinations (4 to 8 units).** Prerequisite: consent of graduate adviser. Individual preparation for M.A. comprehensive examination or Ph.D. qualifying examinations. May be taken only once for each degree examination and only in the quarter that comprehensive or qualifying examinations are to be taken. S/U grading.


### Romance Linguistics and Literature Course List

In consultation with the appropriate adviser(s), courses should be selected with an eye to the organic relationship between them, preferably among those listed below and/or their prerequisites:

### Introductory Courses

**Italian**

201. Bibliography and Methods of Research

**Spanish**

M200. Research Resources

### Linguistics Courses

**Grammatical Theory:** Linguistics 201A. Phonological Theory: Current Issues

201B. Phonological Theory in the 20th Century

206A. Syntactic Theory: Current Issues in Formal Syntax

206B. Syntactic Theory: Current Issues in Functional and Typological Approaches to Syntax

### Development of the Romance Languages

**Hispano-Romance:** Spanish M203A-M203B. The Development of the Portuguese and Spanish Languages

**Indo-European:** Indo-European Studies 210. Indo-European Linguistics: Advanced Course

280A-280B. Seminar in Indo-European Linguistics

**Italic Dialects:** Latin 242. Italic Dialects and Latin Historical Grammar

**Italo-Romance:** Italian 259A. History of the Italian Language

**Latin History:** Latin 240. History of the Latin Language

**Medieval Latin:** Latin 231A-231B. Seminar in Medieval Latin

**Northern Gallo-Romance:** French 204A. Phonology and Morphology from Vulgar Latin to French Classicism

204B. Syntax and Semantics from Vulgar Latin to French Classicism

**Paleography:** History 219A. Paleography I

219B. Paleography II

**Romance Dialectology:** Italian 259C. Italian Dialectology

**Spanish 209. Dialectology**

**Romance Linguistics:** Linguistics 225G. Linguistic Structures

**Southern Gallo-Romance:** French 215E. The Medieval Language and Literature: Provencal Poetry

**Vulgar Latin:** Latin 232. Vulgar Latin

### Studies in the History of the Romance Languages

**Gallo-Romance:** French 215A. The Medieval Language and Literature: Old and Middle French

**Hispano-Romance:** Spanish M251A-M251B. Studies in Galego-Portuguese and Old Spanish

**Italo-Romance:** Italian 210A. Early Italian Literature: The Origins of Italian Language and Early Texts

259A-259B-259C. Studies in the History of Italian Language

### Synchronic Linguistics

**Advanced Grammar:** French 201. Literary Research and Composition

206. French Linguistics

**Italian 259B. The Structure of Modern Italian**

**Portuguese 204A-204B. Generative Grammar**

206. Synchronic Morphology and Phonology

**Spanish 204A-204B. Generative Grammar**

206. Phonology and Morphology

**Studies in Linguistics and Dialectology:** French 261. Studies in French Linguistics

262. Studies in Stylistics

**Spanish 256A-256B. Studies in Spanish Linguistics**

257. Studies in Dialectology

### Literature Courses

**French Literature:** French 205A-205D. The Intellectual Background of French Literature

**History of Ideas:** French 260A-260B. Studies in the History of Ideas

**Literary Criticism:** French 203A-203B. French Literary Criticism

258A-259B. Studies in Literary Criticism

**Italian 259A-259B. Methods of Literary Criticism**

**Spanish M201. Literary Theory and Criticism**

**Literary History:** History 218. Medieval Latin Literary History

**Philosophy and Literature:** French 259A-259B. Studies in Philosophy and Literature
Early Romance Literature

Petrarca: Italian 214D. Italian Literature of the 14th Century Petrarca

251. Seminar on Petrarch

Studies in Early Romance Literature: French 215B-215F. The Medieval Language and Literature

252A-252B. Studies in Medieval Literature

Italian 216B-216C. Early Italian Literature

214A-214G. Italian Literature of the 14th Century

215A-215B-215C. Italian Literature of the 15th Century

250A-250D. Seminar on Dante

252. Seminar on Boccaccio

250A-250D. Seminar on Dante

Italian 210B

The 18th Century

Studies In the 18th Century

Portuguese Literature

Modern Romance Literature

Genre Studies: Portuguese 252. Studies in Early Portuguese Literature

253. Studies in Modern Portuguese Literature

254. Studies in Early Brazilian Literature

255. Studies in Modern Brazilian Literature

Studies in the 18th Century: French 218A-218D. The 18th Century

254A-254B. Studies in the 18th Century

Italian 218A-218E. Italian Literature of the 18th Century

256A-256B. Seminar on the 18th Century

Portuguese C227. Romanticism and Realism in Portuguese Literature

C232. Romanticism in Brazilian Literature

Spanish 229. Romanticism

239. Romanticism and Realism in Spanish-American Literature

270A-270B. Studies in 18th-Century Spanish Literature

277A-277B. Studies in Colonial Spanish-American Literature


255A-255B. Studies in the 19th Century

Italian 219A-219F. Italian Literature of the 19th Century

257A-257B. Seminar on Romanticism

Portuguese C228. Post-Romanticism and Naturalism in Portuguese Literature

C233. Naturalism, Realism, and Symbolism in Brazilian Literature

Spanish 230. Realism and Naturalism

271A-271B. Studies in 19th-Century Spanish Literature

278A-278B. Studies in 19th-Century Spanish-American Literature


221A-221D. French-African Literature

256A-256B. Studies in Contemporary Literature

257A-257B. Studies in French-African Literature

Italian 220A-220B-220C. Italian Literature of the 20th Century

258A-258B. Seminar on Contemporary Italian Literature

Portuguese C229. 20th-Century Portuguese Literature

C234. 20th-Century Brazilian Literature: Poetry and Drama

C235. 20th-Century Brazilian Literature: Novel

Spanish 232. Spanish Prose Literature from 1898 to the Civil War

233. Spanish Prose Literature after the Civil War

234. Spanish Drama and Poetry from 1898 to the Civil War

235. Spanish Drama and Poetry after the Civil War

240. Major Currents in Modern Spanish-American Literature

243A-243B. Contemporary Spanish-American Poetry

244A-244B. Contemporary Spanish-American Novel

245. Contemporary Spanish-American Essay

272A-272B. Studies in 20th-Century Spanish Literature

280A-280B. Studies in Contemporary Spanish-American Literature

Renaissance and Baroque Literature

Cervantes: Spanish 227. Cervantes

Studies In Renaissance and Baroque Literature: French 216A-216H. The Renaissance

217A-217I. The 17th Century

251A-251B. Studies in the Renaissance

252A-252B. Studies in the Baroque

253A-253B. Studies in the 17th Century

256A-256B. Italian Literature of the 16th Century

217A-217B-217C. Italian Literature of the 17th Century

253A-253B-253C. Seminar on Chivalric Poetry in Italy

255A-255B. Seminar on the Baroque

Portuguese C225. Renaissance Portuguese Literature

C226. Baroque and Neoclassical Portuguese Literature

C231. Colonial Brazilian Literature

Spanish 224. Poetry of the Golden Age

225. Drama of the Golden Age

226. Prose of the Golden Age

237. Literature of the Spanish Conquest

264A-264B. Studies in Golden Age Spanish Literature

ROTC Programs

In accordance with the National Defense Act of 1920 and with the concurrence of The Regents of the University, a unit of the Senior Division Reserve Officer Training Corps (ROTC) was established on the Los Angeles campus of the University in July 1920.

This voluntary training allows you to qualify for an officer’s commission in the Army, Navy, Air Force, or Marine Corps while completing your 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). They are not considered academic majors, but ROTC courses may be taken as free electives and applied toward the total course requirements of your 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 students entering their junior year of undergraduate study. All have leadership laboratories which help to build management skills.

Scholarships

Students in all three departments are eligible to compete for scholarships based on merit and achievement. Scholarships, available for up to four years of study, normally cover the full cost of tuition, books, fees, and educational expenses and provide a living allowance of $100 per month during the academic year. For further information, contact the specific department in which you are interested.

Aerospace Studies

210 Men’s Gym, 825-1742

Professor

Richard L. Folks, M.A., Colonel, Chair

Adjunct Assistant Professors

Dean S. Allred, M.S., Captain

Donald W. Henney III, M.B.A., Captain

Murray D. Johannsen, M.B.A., M.A., Captain

Air Force ROTC Scope and Objectives

Air Force ROTC provides selected students the opportunity to develop those attributes essential to positions of high responsibility as commissioned officers in the U.S. Air Force. This includes understanding Air Force history, doctrine, and operating principles and national security policies, demonstrating ability to apply modern principles of management and human relations in the Air Force environment, and mastery of leadership theory and techniques. Students must demonstrate dedication to their assignments, willingness to accept responsibility, and the ability to think critically and communicate with clarity and precision.

Four-Year Program

The four-year program is available to first-quarter freshmen and those full-time students with at least four 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 and 20A-20B-20C), followed by a two-year Professional Officer Course (POC) described under “Two-Year Program.” GMC participation requires one hour of academic class and one hour of leadership laboratory per 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 expenses and are paid about $450 to cover 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 and 140A, 140B, 140C. POC participation requires three hours of academic class and one hour of leadership laboratory per week during the academic year.

A prerequisite for the two-year program is 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 course on an Air Force base during the summer preceding enrollment in the program.

Students interested in this program are encouraged to apply to the Professor of Aerospace Studies early during the Fall Quarter preceding the six-week summer field training course. The application deadline normally is March 1, and 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, medical examination results, and performance during an officer board interview.

Students selected for the six-week summer field training are provided meals, quarters, clothing, travel expenses, and approximately $675 to cover 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 POC incur a military obligation and are paid $100 per month during the academic year. Graduation and successful completion of POC leads to a commission as a second lieutenant. Cadets then report to one of the challenging assignments in the Air Force.

**Freshman-Year Courses**

1A-1B. U.S. Military Forces in the Contemporary World (1 unit each). Lecture, one hour; discussion, one hour. Air Force ROTC students should complete all three courses, preferably in sequence. Willingness to participate in class discussion is required. 1A presents a “threat assessment” of the U.S.S.R./Warsaw Pact and summarizes the United States agencies and armed services which specifically counter that “threat,” comparing and contrasting the U.S.S.R. and the U.S. in numerous areas. 1B specifically discusses doctrine and policy, giving students an opportunity to role play and create problems/solutions. Defense contracting and the attached and specialized units of the Air Force are discussed, as are civilian influence and Air Force contributions to industry. 1C presents the major commands of the Air Force, their contributions to civilian industry/economy, and the special programs/challenges of the future. The course is more technical in nature and covers basic improvements in Air Force weapon systems, humanitarian efforts, and the importance of current events. Pros and cons are discussed.

Capt. Johannsen (F,W,Sp)

**Sophomore-Year Courses**

20A-20B-20C. The Developmental Growth of Air Power (1 unit each). Prerequisites: courses 1A-1B-1C. The courses examine the development of air power over the past 60 years. They trace the development of various concepts of employment of air power and focus on factors which have prompted research and technological change. Key events and elements in the history of air power are stressed, especially where these provide significant examples of the impact of air power on strategic thought.

Col. Folks (F, W, Sp)

**Upper Division Courses**

130A-130B-130C. Concepts of Air Force Management and Leadership (3 units each). Course 130A is prerequisite to 130B, which is prerequisite to 130C. An analysis of the principles and functions of management, leadership, and organizational behavior, with special reference to the Air Force as a model. Includes problem solving, information systems and models, quantitative methods, and computer systems. Group discussions, case studies, films, and role-playing are used as teaching devices. Communicative skills are strengthened through preparation of written reports and oral presentations.

Capt. Henney (F, W, Sp)

140A. Military Judicial System (3 units). Seminar. Prerequisite: course 130C. An introduction to the military justice system, international laws of armed conflict relating to air operations, and the foundations of military professionalism. Oral and written reports to strengthen communicative skills are expected.

Capt. Alred (F)

140B. The Military in American Society (3 units). Seminar. Prerequisite: course 140A. Examines forces and issues in the social context of the American military. Analyzes the influence of social norms, societal pressures, and cultural factors on the functions and role of the military professional in the United States. Communicative skills are strengthened through extensive classroom presentation.

Capt. Alred (W)

140C. American Defense Policy (3 units). Seminar. Prerequisite: course 140B. Examines U.S. security policy with respect to factors that influence its formulation, the bureaucracy that formulates and implements it, and the forms it has taken and may take in the future. Communication techniques are strengthened, and communication abilities are oriented to Air Force requirements through preparation of papers and classroom presentation and discussion.

Capt. Alred (Sp)

**Military Science**

142 Men’s Gym, 825-7381

Professor
Richard H. Zeiler, M.A., Lieutenant Colonel

Assistant Professors
William Coffey, M.A., Major Anthony Dennard, M.A., Major Carla J. Smith, M.A., Captain J.L. Steuber, M.B.A., Captain

**Army ROTC Scope and Objectives**

Army ROTC prepares selected students for leadership as commissioned officers in the United States Army, Army Reserve, or National Guard. This training includes an in-depth study of the military establishment, military history, doctrine, leadership principles, management, and many other basic skills necessary to build motivated, effective leaders.

**Programs**

The military science curriculum is divided into two parts: (1) the Basic Course, two years of lower division study during which students must complete nine units of coursework and (2) the Advanced Course, two years of upper division study consisting of 13 units of coursework and a six-week summer camp.

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 of $100 a month for ten months during each of the two academic years, plus military science books and uniforms. After completion of the Advanced Course, students are commissioned as second lieutenants in one of the Army’s 14 specialty areas. Insofar as possible, students’ desires and academic major will be considered.

Students selected for Advanced ROTC must attend a six-week Advanced Camp between their Military Science III and IV years. Cadets will 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 only three months. Students accepting ROTC scholarships, a commission in the Regular Army, or who are selected to enter the Active Army will serve longer terms. ROTC students wishing to obtain advanced degrees may be granted a delay in reporting to their initial assignment.

**Four-Year Program**

Students are enrolled in the Basic Course (freshman and sophomore years) on a voluntary basis. After completion of the Basic Course and entrance into the Advanced Course (junior and senior years), students are required to execute a contract with the Department of the Army agreeing to complete the Advanced Course, enlist in the United States Army Reserve, and accept a commission if offered.

**Two-Year Program**

This program is designed for students who receive placement credit for two years of senior ROTC and directly enter the Advanced Course. Placement credit may be given for completing three years of high school Junior ROTC, attending a paid ROTC summer camp, joining the Army Reserve or National Guard (veterans may receive VA benefits concurrent-
ly with Advanced Course subsistence allowances), completing two years of college-level Air Force or Navy ROTC, completing an ROTC compression course, or previous military service.

Commissioning
Successful completion of the Advanced Course leads to a commission as a second lieutenant in the Army Reserve, National Guard, or Active Army. Distinguished graduates may qualify for a commission in the Regular Army.

Lower Division Courses

000. Leadership Laboratory (No credit). Laboratory, two hours. Cadets must be concurrently enrolled in a military science course and actively pursuing a commission through the ROTC program. Required of all Army ROTC students each quarter. Designed to allow cadets to apply the leadership techniques and military skills taught in the classroom and to develop the confidence needed to cope with the challenges associated with being an officer.


13. Theory of Warfare (2 units). Inquiry into the theory, nature, causes, and elements of warfare, with attention also to the evolution of weapons and warfare.

21. United States Military History, 1700-1860 (2 units). A survey of military history beginning with the heritage of classical warfare and extending to the year 1860. American wars are examined in the context of their interrelationship with and impact on Western society. Economic, political, and diplomatic factors are considered, along with other causes of war, strategy, tactics, and personalities.

22. United States Military History, 1860-1919 (2 units). A survey of American military history during the period from 1860 to 1919. The course explores the causes of war, strategy, tactics, and technological developments. Economic, political, diplomatic, and social history is woven into the fabric of war, and a special effort is made to reveal the character and personalities of the leading political and military figures of the period. The impact of war on society is also assessed.

23. United States Military History, 1919-1975 (2 units). Survey of American military history which examines American involvement in World War II, Korea, and Vietnam. Causes of war, strategy, tactics, and technology are set against character studies of leading political and military figures from Patton to Westmoreland. The impact of warfare on society is also stressed.

Upper Division Courses

111. The Psychology of Leadership I (2 units). Limited to military science students. Provides the basis for understanding the relationship of individual differences and the leadership process, group dynamics and their relationship to the leadership process, formal organizational constraints on the leadership process, and the impact of society on the leadership process. Introduction to the external environment in which a leader functions and the pressures that exist on a leader. The psychology of the individual as a follower is examined in the areas of motivation, peer pressure/conformity, and group norms to determine how they influence an individual.

112. The Psychology of Leadership II (3 units). Lecture, two hours. Limited to military science students. Introduction to various individual leadership styles and personalities to assist students in development of their own individual style. Different philosophies of leadership are examined, along with the dimensions of leader behavior. Special consideration to counseling, management, and communication techniques that must be mastered to be an effective leader. (W)

113. Theory of Learning Applied to Teaching (2 units). Limited to military science students. A study of instructional processes, lesson content planning procedures, techniques of appriciative education, role of testing (including evaluation and analysis). Emphasis on improvement of teaching and group process.

114. Principles of Land Navigation Applicable in Maneuver (2 units). Lecture, one hour; laboratory, one hour. Limited to military science students. 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 technologies, including Global Positioning Systems (GPS).


125. Decision Making (2 units). Limited to military science students. Designed to present students who will become commissioned officers with a new insight into the modern methods of managerial decision making and into the various steps involved in the process. Introduction to the various components of leadership and the functions of management in order to understand where the areas of problem analysis and decision making impact and how they fit into leadership and management. Students then cover the various steps which comprise the problem analysis and decision-making processes.

Two-Year Program

Applications are accepted from UCLA students as well as incoming junior college transferees. After a six-week summer training period, students enroll in NROTC as juniors, with the same obligations and privileges as in the College Program described above. The age limit is 27\frac{1}{2} years at the time of graduation. Applicants should contact the department no later than March 1 of their sophomore year.

Freshman-Year Courses


1B. Naval Ship Systems I. An introduction to the principles of ship hull and superstructure design. The concepts of ship structural integrity, stability, and buoyancy are examined in detail. Basic thermodynamic principles inherent in ship propulsion and salt water distillation systems are analyzed.

Naval Science

123 Men’s Gym. 825-9075

Professor
William G. Carson, MSME, Captain, U.S. Navy, Chair

Assistant Professor
Roy E. Adair, M.S., Commander, U.S. Navy, Vice Chair

Adjoint Assistant Professors
David R. Ianniello, B.S., Lieutenant, U.S. Navy
John M. Misiewicz, M.A., Captain, U.S. Marine Corps
Peter A. Shaner II, M.S., Lieutenant, U.S. Navy

Navy ROTC Scope and Objectives

Navy ROTC at UCLA offers subsidized and nonsubsidized programs for college students who wish to serve their country as commissioned officers in the U.S. Navy or Marine Corps. The primary objectives of NROTC are to provide students with an understanding of the fundamental concepts and principles of naval science; a basic understanding of associated professional knowledge; an appreciation of the requirements for national security; and a strong sense of personal integrity, honor, and individual responsibility.

NROTC enables college graduates to use their education in such military fields as marine engineering, nuclear propulsion engineering, aviation, and Marine Corps infantry and aviation. It also provides an opportunity to develop leadership and management skills in a challenging environment of high responsibility.

The Department of Naval Science offers several programs for which U.S. citizenship is required.

College Program

This is a four-year program open to physically qualified men and women between the ages of 17 and 21. Students receive $100 per month in their junior and senior years and complete one summer training cruise after their third year. After graduation, students will be commissioned as Ensign, U.S. Naval Reserve or Second Lieutenant, U.S. Marine Corps Reserve. A three-year active duty obligation is incurred.

Two-Year Program

Applications are accepted from UCLA students as well as incoming junior college transferees. After a six-week summer training period, students enroll in NROTC as juniors, with the same obligations and privileges as in the College Program described above. The age limit is 27\frac{1}{2} years at the time of graduation. Applicants should contact the department no later than March 1 of their sophomore year.
Sophomore-Year Courses

20A. Naval Ship Systems II. (Formerly numbered 20B.) A study of naval weapon systems, with emphasis on target designation and acquisition, methods of solving fire control problem and target detection systems. Analysis of transfer and feedback functions inherent in weapon systems. Infrared, radar, and sonar principles. Lt. Ianniello (W)

20B. Seapower and Maritime Affairs (2 units). (Formerly numbered 20A.) A conceptual study of seapower, emphasizing the historical development of naval and commercial power. Seapower is examined in relation to economic, political, and cultural strengths, focusing on current abilities of specific nations to use the oceans to attain national objectives.

Cdr. Adair (Sp)

Junior-Year Courses

101A. Navigation I. A study of principles of piloting, rules of the road, shiphandling, and basic concepts of multiple ship formations in ocean transit. Includes in-depth discussion of problems associated with high seas and inland water, applying to small craft and super tankers alike. Lt. Shaner

101B. Navigation II. Prerequisite: course 101A or consent of instructor. A detailed study of electronic and celestial navigation employed in the determination of a ship's position at sea, including spherical trigonometry, mathematical analysis, sextant sights, and the use of navigational aids. Lt. Shaner

*103. Evolution of Warfare. A study of the evolution of warfare, including historical and comparative consideration of the influence that leadership, political, economic, and sociological and technological development factors have had on warfare and the influence they continue to exert in the age of limited warfare. Capt. Misiewicz

Senior-Year Courses

102B. Naval Leadership and Management I. An examination of current and classical leadership and management theories and their application to the military environment. Interpersonal communication, counseling theory, moral and professional ethics, conflict resolution, and management of change. The leadership problems created by racism, sexism, alcoholism, and drug abuse are also discussed.

Cdr. Adair

102C. Naval Leadership and Management II (2 units). Prerequisite: course 102B. Examines current leadership and management in the U.S. Navy. Areas include human resources management, personnel management, material management, and performance and career evaluation.

Cdr. Adair

*104. Amphibious Operations. A study of the art of amphibious operations, including the historical development of techniques used to project military power from sea to land. The evolution of amphibious doctrine and techniques is examined through study of the U.S. landings during World War II, the Korean Conflict, and the Vietnam War. Capt. Misiewicz

115 Kinsey Hall, 825-2676

Professors

Alekseandr Blihianic, Ph.D. (South Slavic Languages and Literatures)
Henrik Birnbaum, Ph.D. (Slavic Languages and Literatures)
Thomas Eckman, Ph.D. (Slavic Literatures)
Michael S. Flier, Ph.D. (Slavic Languages and Literatures)
Maria Gimbutas, Ph.D. (European Archaeology)
Vladimir Konoplyov, Ph.D. (Russian Literature)
Alan H. Timberlake, Ph.D. (Slavic Languages), Chair
Dean S. Worth, Ph.D. (Slavic Languages)

Associate Professors

Michael Heim, Ph.D. (Czech and Russian Literature)
Petei Horzegnon, Ph.D. (Russian Literature)
Rochelle Stone, Ph.D. (Polish and Russian Literature)

Assistant Professor

Inna Paperno, Ph.D. (Russian Literature)

Lecturers

Edward Denzler, M.A. (Russian)

Scope and Objectives

The undergraduate program, leading to a Bachelor of Arts degree in Slavic Languages and Literatures, is designed to provide students with a basic mastery of the Russian language, a familiarity with the classics of Russian literature, and a general background in the cultural, political, and social history of the Slavic peoples.

The program presents a considerable range of options to students with specialized interests. Besides the traditional major in Slavic languages and literatures, the program also offers B.A. degrees in Russian Civilization (language, literature, history, economics, political science, geography, art, music, film) and Russian Linguistics (language, literature, Russian and Slavic linguistics, general linguistics, psychology).

The graduate program provides advanced training in Slavic linguistics and literature leading to the master's degree and the Ph.D. 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 secondary language teaching, translation, interpreting, librarianship, and government service.

Undergraduate Study

The department offers three majors: (1) Slavic languages and literatures, (2) Russian civilization, and (3) Russian linguistics. The major in Slavic languages and literatures is normally required for admission to the department's graduate program and will be used to determine the number of courses in Russian literature and/or linguistics that students majoring in Russian civilization or Russian linguistics will be expected to make up in order to receive graduate degrees in the department. Students who do not choose the major in Slavic languages and literatures but who intend to pursue graduate study in the department are strongly encouraged to take courses in Russian literature and linguistics during their undergraduate years to reduce the number of makeup courses required. Qualified seniors may also take several graduate courses numbered below 220 by consent of the instructor and the graduate adviser.

Work completed in the University's summer or semester Russian programs at Leningrad State University may be applied toward fulfillment of the Russian 101- and 111-series requirements in any of the following majors.

Bachelor of Arts in Slavic Languages and Literatures

Preparation for the Major

Required: Slavic 99, Russian 1, 2, 3, 4, 5, 6, 99.

The Major


Note: Russian 118, 119, and 120 may be taken in the sophomore year.

Bachelor of Arts in Russian Civilization

Preparation for the Major

Required: Russian 1, 2, 3, 4, 5, 6, 99.

The Major

Required: Russian 101A-101B-101C, 111A-111B-111C, 118, 119, 120, three additional courses in Russian literature, seven courses from Russian M170: Economics 182, Geography 184, History 131A, 131B, 131C, 131D, Political Science 128A, 128B, 156, or special courses in the Departments of Art, Design, and Art History, Music, Theater Arts, and Slavic Languages and Literatures approved by the undergraduate adviser.
Bachelor of Arts in Russian Linguistics

Preparation for the Major

Required: Russian 1, 2, 3, 4, 5, 6.

The Major


Graduate Study

The Department of Slavic Languages and Literatures at UCLA offers M.A. and Ph.D. degrees in Slavic Languages and Literatures.

Admission

In addition to the University minimum requirements, the department requires the equivalent of a UCLA B.A. in Slavic Languages and Literatures, or three years of Russian language and a sufficient number of Russian history, literature, and linguistics courses so that you will not need more than one year (nine courses) to make up deficiencies. For application to the Ph.D. program, the department requires a UCLA M.A. in Slavic Languages and Literatures or its equivalent. If you do not hold a UCLA M.A. in Slavic Languages and Literatures, you are required to take the M.A. comprehensive examination as a screening examination within your first year and to make up any deficiencies in your background compared with that of a UCLA master’s degree recipient. For all applicants, three letters of recommendation are required from persons capable of judging your academic potential. No departmental admission tests are necessary, but the Graduate Record Examination (GRE) is required.

A department brochure describing the curriculum in some detail (graduate and undergraduate) is available from the Graduate Adviser, Slavic Languages and Literatures, 115 Kinsey Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

Candidates for the M.A. and Ph.D. degrees choose a specialization in either literature or linguistics, with Russian as the principal language and literature. On the Ph.D. level, students may specialize in a language or literature other than Russian by special arrangement.

Master of Arts Degree

Foreign Language Requirement

There are two foreign language requirements which must be completed at least one quarter before the M.A. comprehensive examination: (1) you must pass a departmental Russian language proficiency examination which tests your ability to translate from Russian to English and vice versa. This examination may be retaken each quarter until a pass grade is achieved; (2) you must demonstrate an ability to read scholarly literature in either French or German by one of three options: (a) passing the appropriate Educational Testing Service (ETS) reading examination with a score of 500 or better, (b) passing the departmental reading examination, or (c) completing level five at UCLA in one of the languages with a grade of B or better (equivalent university-level coursework in French or German taken within two years before admittance may satisfy this requirement at the discretion of the graduate adviser).

Course Requirements

Slavic 201, Russian 102A-102B-102C, 112A-112B-112C, and 204 are required of all M.A. students.

Literature students must also take Russian 211, 212, 213, and one other literature course in the department.

Linguistics students must also take Slavic 202, Russian 221, 222, 225, and two courses from 211, 212, 213.

Courses in the 500 series may not be applied toward the M.A. course requirements.

Comprehensive Examination Plan

Application for advancement to candidacy must be made no later than the second week of the quarter in which the M.A. examinations are to be taken and will be accepted only if you have satisfied the foreign language requirement in French or German and have passed the Russian Language Proficiency Examination. Examinations are offered at the end of each quarter. After you have declared your intention to take the examination in a given quarter, a committee consisting of three members is appointed by the Chair and the graduate adviser. The comprehensive examination has two parts — written (three hours) and oral (two hours) — and is based on coursework and the departmental reading list. The examination covers either linguistics or literature. If you receive a pass grade on the written examination, you will be admitted to a two-hour oral examination, which is designed to test the fields of major interest and general background. It will be conducted partly in Russian.

Your combined performance in the written and oral examinations is graded high pass, pass, or fail. A grade of high pass or pass is necessary to receive the M.A. degree; the grade of high pass is necessary to enter the Ph.D. program. Examinations may be repeated once, no later than one calendar year after the first attempt.

Ph.D. Degree

Admission

You are formally admitted to the Ph.D. program after (1) passing the UCLA M.A. comprehensive examination with a grade of high pass; (2) passing the reading examination in both French and German (see "Foreign Language Requirement"); (3) taking one year (or the equivalent) of a second Slavic language.

If you are entering UCLA with an M.A. from another institution, the comprehensive examination serves as a screening examination for admission to the doctoral program. You may retake the examination once in order to achieve the necessary high pass grade.

Foreign Language Requirement

You must demonstrate an ability to read scholarly literature in both French and German by completing one of the three options listed under the master’s degree. With departmental consent, students specializing in linguistics may substitute a reading knowledge in another language important to the study of Slavic linguistics (Finnish, Hungarian, Lithuanian, Latvian, Romanian, or a Turkic language relevant to East or South Slavic historical linguistics) and a score of 450 on the Educational Testing Service (ETS) examination in either French or German. Reading knowledge of two such languages may, by the same procedure, be substituted for the entire French or (more rarely) German examination.

Course Requirements

Before the formation of a doctoral committee, you must have been officially admitted to the doctoral program and have taken the following required courses.

Linguistics students must take Slavic 221, 222, 223, and four other advanced linguistics courses or seminars (numbered above 220).

Recommended preparation for linguists includes Linguistics 100, 103, 110, 120A, 120B, M150.

Literature students must take two courses from Slavic 230A-230B-230C; Russian 251A; and three additional seminars.

Candidates specializing in literature are advised to acquire a sound general knowledge of modern Western European literature.

Qualifying Examinations

Candidates in linguistics are required to submit to the examination committee a serious research paper of publishable quality. The paper must be received and approved no later than one quarter preceding the comprehensive written examination.
All students are expected to have a sound general knowledge of both Slavic philology and Russian literary history equivalent to that required for the M.A. at UCLA. For linguistics students, there is one written three-hour qualifying examination given at the end of each quarter. For literature students, there are two written three-hour qualifying examinations given one week apart at the end of each quarter.

If you receive a grade of pass on the written examination(s), you are admitted to a two-hour University Oral Qualifying Examination, which is designed to test the fields of major interest and general background, and which typically includes discussion of the dissertation topic.

After considering your overall performance in both the oral and written examinations, the committee assigns a cumulative grade. A pass grade entitles you to write a dissertation in order to receive the Ph.D. degree. At the committee’s discretion, you may be required to retake any or all portions of the Ph.D. examinations within one calendar year after the first attempt.

Within two quarters (or one quarter and a summer) after passing the qualifying examinations, you must prepare a prospectus of the dissertation.

You are required to deliver a formal lecture in the Slavic colloquium no later than two calendar years after advancement to candidacy.

**Candidate in Philosophy Degree**

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

**Final Oral Examination**

A final oral examination is required except in case of geographically imposed hardship.

**Slavic**

**Lower Division Course**

99. Introduction to Slavic Civilization. Lecture, three hours. An introductory survey of the social and cultural institutions of the Slavic peoples and their historical background.

**Upper Division Courses**

177. Baltic Languages and Cultures (2 units). A general survey of the peoples speaking Old Prussian, Lithuanian, and Latvian; their linguistic, historical, and ethnic affiliations. Mrs. Gimbutas

M179. Baltic and Slavic Folklore and Mythology. (Same as Folklore M126.) Lecture, three hours. A general course for students interested in folklore and mythology and for those interested in Indo-European mythic antiquities. Mrs. Gimbutas

199. Special Studies (2 to 8 units). Prerequisites: senior standing, consent of instructor.

**Graduate Courses**

**Linguistics**

201. Introduction to Old Church Slavic. Lecture, three hours. Required for the M.A. (linguistics, literature). Introduction to phonology and grammar; readings.


223. Introduction to South Slavic Languages. Lecture, three hours. Prerequisite: course 202. Recommended: Serbo-Croatian 103A-103B-103C or Bulgarian 103A-103B-103C. Required for the Ph.D. (linguistics). Introduction to the structure and history of the South Slavic languages.

224. Introduction to Ukrainian and Belorussian. Lecture, three hours. Prerequisite: course 202. Introduction to the history and structure of Ukrainian and Belorussian.

241A-241B. Advanced Old Church Slavic. Lecture, three hours. Prerequisite: course 201. 241A. Advanced Readings in Canonical Texts; 241B. East, West, and South Slavic Runic Inscriptions of Church Slavic.


251. Introduction to Baltic Linguistics. Lecture, three hours. Prerequisite: course 202. Introduction to Baltic linguistics, with special attention to the relationship between Baltic and Slavic.

261. Slavic Paleography. Lecture, three hours. Prerequisite: course 201. Introduction to Slavic paleography: inscriptions, birchbark letters, Glagolitic and Cyrillic texts.

262A-262B. West Slavic Linguistics. Lecture, three hours. Prerequisite: course 222. 262A. Czech; 262B. Czechoslovak; Slovak.

263A-263B. South Slavic Linguistics. Lecture, three hours. Prerequisite: course 223. 263A. Serbo-Croatian, Slovene; 263B. Bulgarian, Macedonian.

280. Seminar in Polish Literature. Seminar, three hours. Prerequisite: consent of instructor and graduate adviser.

**Literature**


290. Seminar in Comparative Slavic Literature. Seminar, three hours. Prerequisites: courses 230A-230B-230C. Recommended: reading knowledge of one Slavic language in addition to Russian. Selected topics involving more than one Slavic literature or Slavic and Western literatures. May be repeated for credit by consent of instructor and graduate adviser.

295. Seminar in Literary Analysis. Seminar, three hours. Recommended prerequisite: reading knowledge of one Slavic language in addition to Russian. Selected topics from various Slavic literatures or Slavic and Western literatures, with emphasis on analytic methods. May be repeated for credit by consent of instructor and graduate adviser.

**Special Studies**

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research (2 to 8 units). Prerequisite: consent of instructor and graduate adviser.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units). Prerequisite: consent of instructor and graduate adviser.

599. Research for Ph.D. Dissertation (2 to 12 units).

**Bulgarian**

**Lower Division Course**

99. Introduction to Bulgarian Civilization. Lecture, three hours. An introductory survey of the social and cultural institutions of the Bulgarian people and their historical background.

**Upper Division Courses**

103A-103B-103C. Elementary Bulgarian. Recitation, five hours. Basic course in the Bulgarian language.

154. Survey of Bulgarian Literature. Lecture, three hours. Prerequisite: upper division standing. Lectures and readings in English. A survey of Bulgarian literature from the Middle Ages to the present.

**Czech**

**Upper Division Courses**

102A-102B-102C. Elementary Czech. Recitation, five hours. Basic course in the Czech language.

102D-102E-102F. Advanced Czech. Recitation, three hours. Prerequisite: course 102C. 155A-155B. Czech Literature. Lecture, three hours. Lectures and readings in English. 155A. Survey of Czech literature from the Middle Ages to the Present; 155B. Selected Topics.

**Polish**

**Upper Division Courses**

102A-102B-102C. Elementary Polish. Recitation, five hours. Basic course in the Polish language.

102D-102E-102F. Advanced Polish. Recitation, three hours. Prerequisite: course 102C. 152A-152B. Survey of Polish Literature. Lecture, three hours. Lectures and readings in English. 152A. From the Middle Ages to Romanticism; 152B. From Realism to the Present.

160. Polish Romanticism. Lecture, three hours. Lectures and readings in English. Comparison of Polish Romanticism with that of other Slavic and Western European countries.

**Graduate Course**

280. Seminar in Polish Literature. Seminar, three hours. Selected topics in Polish prose, poetry, and drama. May be repeated for credit by consent of instructor and graduate adviser.
Russian Language Courses

1. Elementary Russian. Recitation, five hours; laboratory, one hour.
2. Elementary Russian. Recitation, five hours; laboratory, one hour.
3. Elementary Russian. Recitation, five hours; laboratory, one hour.
4. Intermediate Russian. Recitation, five hours; laboratory, one hour.
5. Intermediate Russian. Recitation, five hours; laboratory, one hour.
6. Intermediate Russian. Recitation, five hours; laboratory, one hour.

Intermediate Russian. Recitation, five hours; laboratory, one hour.

6. Russian Conversation (2 units each). Prerequisite: course 3 or consent of instructor. Russian conversation designed to supplement the grammar and readings of courses 4, 5, 6.

11A-11B-12A-12B-13A-13B. Self-Paced Program in Russian (2 to 12 units). Basic course in the Russian language. Each two-unit course in the sequence requires 30 minutes of laboratory session per week and 60 minutes of discussion session per week, plus individual instruction as required by the staff. Courses 11B and higher require the completion or simultaneous enrollment in all courses lower in the sequence.


102A-102B-102C. Advanced Grammar and Reading (3 units each). Prerequisite: course 101C or consent of instructor. Required for the M.A. (linguistics, literature). Advanced grammatical analysis; reading of difficult texts.

107A-107B-108A-108B-109A-109B. Russian for Social Scientists (2 to 12 units). Lecture, one hour (per each two units); discussion, one hour (per each two units). Prerequisite: course 3 or equivalent. Reading, oral practice, and translation of the Russian that is relevant for students of social sciences. May be repeated for credit.

11A-11B-11C. Conversation and Composition (1 unit each). Recitation, two hours. Prerequisites: course 6 and 10C, or consent of instructor. Required of majors. Conversation and composition. Conducted in Russian.

11A-11B-11C. Conversation and Composition (1 unit each). Recitation, two hours. Prerequisite: course 111C or consent of instructor. Required for the M.A. (linguistics, literature). Advanced conversation and composition. Conducted in Russian.

Russian Syntax. Lecture, three hours. Prerequisites: courses 102A-102B-102C. (May be repeated concurrently). Required for the M.A. (linguistics). Advanced study and analysis of problems in Russian inflection and derivation.


118. Survey of Russian Literature to Pushkin. (Formerly numbered 102B.) Lecture, three hours. Prerequisite: upper division standing. Slavic majors should take this course during their sophomore year. Lectures and readings in English.

119. Survey of 19th Century Russian Literature. (Formerly numbered 120A.) Lecture, three hours. Prerequisite: upper division standing. Slavic majors should take this course during their sophomore year. Lectures and readings in English.

120. Survey of 20th Century Russian Literature. (Formerly numbered 120B.) Lecture, three hours. Prerequisite: upper division standing. Slavic majors should take this course during their sophomore year. Lectures and readings in English.

121. Advanced Russian Syntax. Lecture, three hours. Prerequisite: course 121. Slavic 221. Selected topics in Russian syntax and derivation.

241. Topics in Historical Russian Grammar. Lecture, three hours. Prerequisites: courses 121, 242. Selected topics in Russian historical grammar, morphology, and syntax.

243. Russian Dialectology. Lecture, three hours. Prerequisite: Slavic 221. Phonology and grammar of modern Great Russian dialects.

244. The History of the Russian Literary Language. Lecture, three hours. Prerequisites: courses 102A-102B-102C. Survey of Russian literature from the 11th to 20th century. Lectures and analysis of texts.

245. Russian Literary Language. Lecture, three hours. Prerequisites: course 244, Slavic 221. The evolution of literary Russian from the 11th to 20th century. Lectures and analysis of texts.

246. Russian Lexicology. Lecture, three hours. Examination of the formal and semantic structure of the Russian lexicon.

Literature and Civilization Courses

121. 18th Century Russian Literature. Lecture, three hours. Required for the M.A. (literature). Lectures and readings in major and secondary writers. Analysis of selected literary works.


123. 20th Century Russian Literature. Lecture, three hours. Required for the M.A. (literature). Lectures and readings in major and secondary writers.

251A. Selected Topics in Russian Literature. Lecture, three hours. Prerequisite: course 251A. Recommended for the Ph.D. (literature). Survey of Old Russian literature from the beginnings through the Kievan and the Muscovite periods up to the end of the 17th century. 251B. Detailed discussion of specific writer, periods, or genres.

270. Russian Poetics. Lecture, three hours. Prerequisites: courses 130A-130B-130C. Introduction to the technical study of Russian poetics and versification, with attention to metrics, stanza forms, rhyme, and the development of various verse types from the 18th into the 20th century.

290. Seminar in Russian Poetry. Seminar, three hours. Prerequisites: courses 130A-130B-130C. Recommended: course 270. Detailed study of a single author, period, or work. May be repeated for credit by consent of instructor and graduate adviser.

291A. Seminar in Old Russian Literature. Seminar, three hours. Prerequisite: course 251A. Selected topics from the 11th through the 17th century. May be repeated for credit by consent of instructor and graduate adviser.

291B. Seminar in 18th Century Russian Literature. Seminar, three hours. Prerequisite: course 211. Selected authors and works from 18th-century poetry, prose, and drama. May be repeated for credit by consent of instructor and graduate adviser.

292. Seminar in 19th-Century Russian Literature. Seminar, three hours. Prerequisite: course 212. Selected authors and works from 19th-century poetry, prose, and drama. May be repeated for credit by consent of instructor and graduate adviser.

Graduate Courses

Linguistics

203. Higher Course in Russian (2 units). Prerequisite: course 102C. Two quarters per year are required of Ph.D. students. Reading of advanced texts; advanced composition, conversation, stylistics. May be repeated for credit. S/U grading.


210. Readings in Russian Historical Texts. Lecture, three hours. Prerequisite: Slavic 201 or consent of instructor. Readings in early Russian chronicles and other documents of historical interest.

Serbo-Croatian

Upper Division Courses

103A-103B-103C. Elementary Serbo-Croatian. Recitation, five hours. Basic course in the Serbo-Croatian language.

103D. Intermediate Serbo-Croatian. Recitation, three hours. Prerequisites: courses 101B, 101C. Mothers and heritage.

113A-113B-113C. Advanced Reading and Composition. Recitation, three hours. Prerequisite: course 103C. For consent of instructor. Reading and translation of difficult texts; advanced composition.

154A-154B. Yugoslav Literature. Lecture, three hours. Surveys of Yugoslav literature from the Middle Ages to the present. 154B. Selected Topics.

Slovak

Graduate Course

222. The Structure of Slovak. Lecture, three hours. Introduction to the phonological and morphological structure of the Slovak language, especially as contrasted with Czech.

Ukrainian

Upper Division Courses


152. Ukrainian Literature. Lecture, three hours. A survey of writers, literary trends, and issues in Ukrainian literature from the late 18th century to the present. Special attention to the works of such major figures as I. Kotlyarevsky, T. Shevchenko, I. Franko, and P. Tychyna. Lectures and readings in English.

Non-Slavic Languages of Eastern Europe

Lithuanian

Upper Division Courses


Romanian

Lower Division Course

99. Introduction to Romanian Civilization. Lecture, three hours. An introductory survey of the social and cultural institutions of the Romanian people and their historical background.

Upper Division Courses


152. Survey of Romanian Literature. Lecture, three hours. Lectures and readings in English. A survey of Romanian literature from the Middle Ages to the present.

Graduate Course

201. Romanian as a Romance Language. Lecture, three hours. A survey of the structure and development of the Romanian language, with special emphasis on the relationship of Romanian to other members of the Romance group.

Related Courses in Other Departments

Dance 74B, 184B; Economics 182; Geography 184; Linguistics 100, 103, 110, 120A, 120B, 1 M150, as well as several of the graduate courses in linguistics: Music 81C, 145A-145B; Political Science 128A-128B, 156, 157.

Sociology

264 Haines Hall, 825-1313

Professors

Jeffrey Alexander, Ph.D.
Rodolfo Alvarez, Ph.D.
Judith Blake, Ph.D.
Philip Bonacich, Ph.D., Chair
Lucie Croke, Ph.D.
Burton R. Clark, Ph.D.
Robert A. Emerson, Ph.D.
Howard E. Freeman, Ph.D.
Harold Garfinkel, Ph.D.
C. Wayne Gordon, Ph.D.
Carlos Guzsky, Ph.D.
Harry D. H. Kline, Ph.D.
Gene N. Levine, Ph.D.
Ivan H. Light, Ph.D.
Valerie C. Oppenheimer, Ph.D.
Georges Sabagh, Ph.D.
Emanuel A. Schegloff, Ph.D.
Melvin Seeman, Ph.D.
Edwin S. Shneidman, Ph.D.
Gerald H. Shreeve, Ph.D.
Warren D. TenHouten, Ph.D.
Donald J. Treiman, Ph.D.
Ralph L. Turner, Ph.D.
Maurice Zeilin, Ph.D.
Leo J. Kuper, Ph.D., Emeritus

Associate Professors

Kenneth D. Bailey, Ph.D.
Michael S. Goldstein, Ph.D.
John E. Horton, Ph.D.
Jack Katz, Ph.D.
David E. Lopez, Ph.D.
David D. McFarland, Ph.D.

David O'Shea, Ph.D.
Melvin Polliner, Ph.D.
Jeffrey Prager, Ph.D.
Jerome Rabow, Ph.D.
William G. Roy, Ph.D.
Samuel J. Surace, Ph.D.
Julia C. Wriley, Ph.D.
Lynne G. Zucker, Ph.D.

Assistant Professors

Duane Champagne, Ph.D.
Clarence Lo, Ph.D.
Melvin Oliver, Ph.D.
Kazuo Yamaguchi, Ph.D.

Adjunct Assistant Professors

Harris Allen, Ph.D.
Carol Gardner, Ph.D.
Matthew Lynes, Ph.D.
Keiko Nakao, Ph.D.

Scope and Objectives

Variety is the special characteristic both of the field of sociology and of the UCLA Department of Sociology, which was judged among the ten best in the nation in a 1982 survey conducted by the Conference Board of the Associated Research Councils.

Sociology will have a particular appeal to those students whose interests are broad and unspecialized. At both undergraduate and graduate levels, students study history, politics, statistics and mathematics, race relations, demography, psychology, language, and many other topics. A sociology student becomes a member of an intellectual community in which all these interests are represented.

The primary purpose of the major in sociology is to enhance the student's capacity for critical analysis and understanding of social phenomena. It is intended, at the same time, to serve as preparation for careers in high school or junior college teaching, social work, architecture and urban planning, law, public health, and government service, among others. It also provides training for advanced graduate work in sociology and social psychology.

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.

Bachelor of Arts Degree

Preparation for the Major

Required: Sociology 1, 18 (or Mathematics 50, Psychology 41, Economics 40, or Public Health 100A), one course from Group A (Mathematics 2, 3A), one course from Group B (Philosophy 8, 9, 31), one course from Group C (Anthropology 5, 6, 22, Economics 1, 2, Geography 3, History 1A, 1B, 1C, Political Science 1, Psychology 10).
All courses required for the major in sociology, including lower division and allied field courses, must be taken for a letter grade. A 2.0 grade-point average is required for the preparation and for the major.

The Major

Required: Ten upper division sociology courses, not including former course 101. The ten courses (40 units) must include the following:

(1) Sociology 109 and 112 or 113. These courses, devoted to the systematic exploration of sociological methods and theories, should be completed as early as possible in your junior year.

(2) Four upper division courses as required by one of the specialized “Concentrations for the Major” listed below.

(3) Any four additional upper division sociology courses.

(4) Four upper division allied field courses (16 units) in other departments to complete the major. The allied fields are anthropology, economics, geography, history, political science, and psychology.

(5) English 100W.

Concentrations for the Major

By the end of the junior year and no later than the beginning of the senior year, you are required to declare your specific concentration by filing a statement with the undergraduate counselor. The purpose of the concentration requirement is to expose you to systematic, in-depth work within a specific area of sociology. Completion of a concentration requires four upper division sociology courses. You must take a concentration’s required course (if any) before declaring that concentration. You must select one of the following concentrations and meet its course requirements:

(1) Comparative and Historical Sociology

Required: 138
Two of the following: 120, 125, 126, 140, 141
One of the following: 130, 131, 132, 133, 134, 136, 137

(2) Organizations

Required: 121
Three of the following: 120, 123, 128, 140, 141, 147, 152

(3) Political Sociology

Required: 140
Three of the following: 114, 120, 124, 136, M143, 147, 150

(4) Quantitative Sociology

Consult the faculty adviser for premajor requirements for this concentration.

Required: 116
Three of the following: 123, 126, 152, 154
Recommended: Mathematics 152A-152B instead of Sociology 18 on the preparation

(5) Race and Ethnicity

Required: 124
Two of the following: 120, 123, 125, 151, 155
One of the following: 130, 131, 132, 133, 134, 136, 137

(6) Social Change and Modern Society

Required: 120
Two of the following: 123, 140, 150
One of the following: 124, 125, 136, 141

(7) Social Demography

Required: 126
Three of the following: 116, 123, 127, 132, 160

(8) Social Organization and Language, Thought, and Experience

Four of the following: 117, C144A, C144B, 146, 148, 149, 153, 157, 159

(9) Social Psychology

Required: 154
Three of the following: 115, 150, 151, 152, 153, 155, 156

(10) Social Stratification

Required: 123
Three of the following: 114, 116, 124, 128, 136, 140, 155, 160

(11) Social Policies and Social Programs

Required: 110, 129
One of the following: 120, 121, 124, 136
One of the following: M143, 146, 147, 157, 161, 162

A psychology course taken to fulfill the breadth requirement cannot also be used for the allied field requirement. Only eight 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.

Courses 109, 210A, and 210B are recommended for students who intend to pursue graduate work in sociology.

Honors Program

The honors program in sociology provides an opportunity for outstanding students to undertake an independent year-long research project under the guidance of a faculty member. The project culminates with an honors thesis or master’s paper. You must have a 3.5 overall grade-point average for the last quarter of your junior year.

M.A. and Ph.D. Degrees

The graduate program of the department takes as its primary aim the training of scholars who will conduct original research contributing to the advancement of sociological knowledge. For this reason, the department will ordinarily accept only students who are seeking the Ph.D. degree. A master’s degree may be earned as part of the process of completing the requirements for the Ph.D.

Admission

In addition to the minimum University requirements, the department requires (1) three letters of recommendation, preferably from professors of sociology who are familiar with your written work and research experiences; (2) transcripts from all colleges where you have studied; (3) a statement of purpose, outlining reasons for pursuing graduate work, interests within sociology, career objectives, and any personal experiences bearing on these; (4) copies of one or two term papers or research reports you have written; (5) an official statement of scores on the Graduate Record Examination (GRE); and (6) for applicants whose native tongue is not English, the Test of English as a Foreign Language (TOEFL).

Although background preparation in sociology is highly desirable, it is not mandatory for admission to the department.

In addition to relatively formal criteria (such as analytic proficiency and articulateness), the department pays particular attention to applicants who seem likely to contribute considerable intellectual, social, or cultural diversity to its student body. Women and minorities are therefore encouraged to apply. The deadline for receipt of applications is January 15. Application forms and more detailed information are available from the Graduate Affairs Assistant, Department of Sociology, 254C Haines Hall, UCLA, Los Angeles, CA 90024.
(1) Ethnomethodological, Phenomenological, and Observational Sociologies: Studies of work especially in the sciences and professions, sociology of knowledge, sociology of law, deviance, social control, conversational and other forms of ordinary interaction, and historical studies of everyday interaction and consciousness.

(2) Macrosociology: Political sociology, economy and society, historical and comparative sociology, macrosociological theory, and comparative stratification.

(3) Methods and Models: Survey research methods, methods of applied and evaluation research, formal demography, advanced social statistics, and mathematical sociology.

(4) Social Organization and Institutions: Social demography, stratification, and mobility, work and occupations; social change and class analysis; complex/formal organizations; crime, deviance, and social control; sociologies of education and cognitive development; sociologies of knowledge, science, and technology; mass media and mass communication; medical sociology; biosociology; social and ethnic communities; intergroup relations; urban studies.

(5) Social Psychology: Attitudes and social structure, collective behavior, socialization, social interaction and small group behavior, and organizational social psychology.

Foreign Language Requirement

Master’s Degree: There is no foreign language requirement for the master's degree.

Ph.D. Degree: The foreign language requirement for the Ph.D. is one language or a substitute program approved by the executive committee. Students who plan to study toward the Ph.D. degree should complete the foreign language requirement as early as possible, so as to make use of foreign language sociological publications throughout graduate study. In any case, the foreign language requirement must be fulfilled before the doctoral committee is nominated and the oral examination is taken. Reading knowledge of one language, as demonstrated either by acceptable performance on a standardized test or by completing level five of that language (or the equivalent), with at least a grade of C, is required. You must submit your selected language to your area governing committee for approval.

With the approval of the department, a foreign student may offer English as a foreign language if the native language is other than English. Proficiency in English will be evaluated by the level of performance on the UCLA entrance examination in English for foreign students, together with achievement in graduate work.

A second alternative is to study sources in an allied field such as history, political science, linguistics, psychology, economics, philosophy, or mathematics. You would be permitted to substitute for the language requirement a set of three upper division or graduate courses offered at UCLA and passed with a grade of at least B. Contact the department for further information and guidelines for language substitutions.

Course Requirements

In addition to the departmental requirements, area programs and some subareas have their own course requirements for affiliated students.

Before the Master’s Paper Review: Nine courses (36 units) are required.

2. A two-quarter graduate-level methodology sequence of which there are several alternatives (e.g., the survey methods course, the demographic methods course, etc.). The methodology series is presently numbered 211A through 218B.

In choosing a methodology sequence, you should note that some of the Ph.D. area programs and subprograms require particular methodology sequences.


Because four of the five area programs require successful completion of Sociology 210A-210B, you would ordinarily take these courses in your first two years and are strongly urged to do so in your first year. Students intending to affiliate with an area would do well to satisfy some of its requirements in the first two years. Contact the department for information about entering the area programs.

After the Master’s Paper Review: Two courses (eight units) are required. An additional methodology sequence (from courses 211A through 218B) must be completed before the awarding of the Ph.D. degree.

Course requirements for the five area programs are listed below. Contact the graduate affairs assistant or area directors for more specific details and for other requirements such as special papers.

(1) Ethnomethodological, Phenomenological, and Observational Sociologies: Sociology 222; at least three courses from 223, 229, 251, 252, 266, 267, 284; an additional methods sequence selected from courses 217A-217B, 218A-218B, or C244A, C244B (two of these sequences must be completed before the oral qualifying examination); courses 293A-293B-293C. If you plan to take one field examination in this area, you should take at least three additional courses significantly related to this field; if you plan to take two field examinations in this area, you should take six additional courses (courses 223, 229, 251, 252, 266, 267, and 284 may be applied toward this requirement).

(2) Macrosociology: Sociology 211A-211B, 228A-228B, 294A-294B-294C, and three relevant graduate courses in any department approved by the director and your adviser.

(3) Methods and Models: Sociology 232 and 295A-295B-295C.

Advanced Statistics Specialty: Courses in calculus, linear algebra, and mathematical statistics (preferably taken as an undergraduate) and a program of coursework and supervised individual study, selected in consultation with the area faculty, designed to provide suitable depth of coverage of an appropriate range of statistical techniques.

Applied Sociology and Evaluation Research Specialty: Sociology 210C, 280, and courses in calculus and linear algebra (preferably taken as an undergraduate).


Mathematical Sociology Specialty: Sociology 281, courses equivalent to Mathematics 115A, and other mathematics courses that may be required for particular specialties.

Survey Research Method Specialty: Sociology 216A-216B and a graduate-level course in sampling, such as Public Health 201H or Management 215E.


(5) Social Psychology: Completion of an undergraduate program equivalent to at least two courses from Sociology 150 through 157 and at least two courses in psychology, selected from the fields of learning, language and communication, personality, social psychology, and abnormal psychology; Sociology 224A-224B, 289A-289B-289C; a second methods sequence. In addition to the one required for the M.A., selected from courses 214A-214B, 215A-215B, 216A-216B, or 217A-217B.

Courses in the 500 series (596, 597, 599) are normally taken in preparation for the master’s paper review, the field examinations, and for dissertation research. They may not be applied toward the course requirements for the degree.

Master’s Paper Review

By the end of your second year of study, you must submit an acceptable master’s paper for approval by the general faculty. The paper must demonstrate a general competence in sociological theory, methodology, and selected substantive areas and in intellectual attainment.

The paper should demonstrate that you (1) have an accurate grasp of the intellectual traditions of sociology, (2) can bring evidence to
bear on theoretical problems, (3) can describe how some aspect of the social order works, and (4) can adequately handle research and methodological issues. The main concern is with your capacity to do Ph.D.-level work.

After review of the paper, any of the following options may be recommended:

1. The paper is passed. You are granted the M.A. and permitted to proceed to the Ph.D.
2. The paper is passed conditionally. You are granted the M.A. and permitted to proceed to the Ph.D., after completion of specified revisions of the paper.
3. You are granted a terminal M.A.
4. The paper is not acceptable (you may resubmit at a later time or be asked to withdraw).

If you enter UCLA with an M.A. degree in Sociology from another institution, you will normally come up for a master’s paper review in your first quarter of residence at UCLA, and under no circumstances later than the third quarter of residence. In this review, the department will determine whether you may proceed directly to preparation for the field examinations or whether additional work must be done, and if the methodology sequence requirement has been adequately satisfied. In addition to a paper, which can be an M.A. thesis written at another university, you should submit for the master’s paper review a transcript from the university at which the M.A. degree was earned.

Contact the department for further details on master’s paper review.

Field and Qualifying Examinations

The department requires you to pass two field examinations before taking the University Oral Qualifying Examination for the Ph.D. The emphasis here is on mastery and depth of understanding in two areas of specialized study. Field examinations are administered and evaluated under guidelines established by area programs. You may take both or just one of your field examinations in the area with which you are affiliated. Each area program also has procedures enabling unaffiliated students to take field examinations in that area. Details are available from area directors and from the graduate affairs assistant.

If the performance on the field examination is satisfactory and the foreign language requirement has been fulfilled, you may nominate a doctoral committee and take the University Oral Qualifying Examination. You must prepare a two-page abstract of the dissertation proposal for distribution to the entire departmental faculty no later than one week before the examination.

Candidate in Philosophy Degree

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination

The optional final oral examination for the Ph.D. degree is given by the doctoral committee no later than six months after the completion of the dissertation. A decision to waive the final examination is optional on the part of the Ph.D. committee.

Lower Division Courses

1. Introductory Sociology. Students with credit for former course 101 will not receive credit for this course. Survey of the characteristics of social life, the processes of social interaction, and the tools of sociology.

2. Computers and Social Change. Lecture, two hours; laboratory, three hours. The impact of technological change from computers and computing on people, jobs, business firms, industries, and education. Introduction to social change and to the methodology sequence requirement has been adequately satisfied. In addition to a paper, which can be an M.A. thesis written at another university, you should submit for the master’s paper review a transcript from the university at which the M.A. degree was earned.

Upper Division Courses

102A-102Z. Special Topics in Sociology. Prerequisite: upper division standing (some sections may require prior coursework or consent of instructor). A study of selected contemporary sociological interests and topics.

M102A. Sex Roles and Society. Formerly numbered 100A. Lecture, three hours; discussion, one hour. Prerequisites: courses 110, 120, or 125. The instructor. Considers sociological literature pertaining to the development and functions of sex roles in society from a critical perspective. Topics include socialization and gender norms, contemporary sex role strain, and the challenge to traditional notions of sex roles posed by feminist critique.

109. Introduction to Sociological Research Methods. A systematic treatment and semiquantitative skills of use in sociological research (e.g., classification, questionnaires, and schedule design, content analysis, critical analysis of studies, conceptual analysis, and design of research). Fieldwork may be required.

110. Research Methods in Policy Analysis and Evaluation. Lecture, three hours; laboratory, two hours. Prerequisites: courses 102, 103, 104, 105, or consent of instructor. Recommended: course 109. Provides a basic knowledge of approaches for identifying and analyzing social problems and for the assessment of policy and interventions (e.g., policy content, policy evaluation, and policy analysis).

112. Development of Sociological Theory. A comparative survey of basic concepts and theories in sociology from 1850 to 1920; the codification of analytic schemes; and the critical analysis of trends in theory construction.

113. Contemporary Sociological Theory. An advanced examination of significant methodological formulations from 1920 to the present; an analysis of the relation between theoretical development and current research emphasis.

114. Marxist Sociology. The course stresses the fundamentals of Marxist theory and method and their historical development. Attention to continued debates within Marxism and to differences between Marxism and other schools of sociological thought. May not be applied toward the theory requirement for the major.

115. Experimental and Laboratory Methodology in Sociology. Prerequisites: courses 18 or equivalent introductory statistical and introductory social psychology. The course provides opportunities for students to participate as observers, subjects, and experimenters in a variety of laboratory simulations of social and political settings and to use a number of computer-supported techniques as aids in conducting, analyzing, and interpreting their experiences in these settings.

116. Introduction to Mathematical Sociology. Prerequisites: courses 18, 2A, 3A (a course whose content includes introductions to probability, matrix algebra, and differential and integral calculus), or equivalent. Mathematical treatments of several sociological phenomena, such as occupational mobility, population growth, organizational structure, and friendship patterns, each covered in some detail, including judgment and subsequent evaluation and modification (emphasizing both the deductive and computational aspects of mathematics).

117. Field Research Methods. Lecture, two hours; discussion, one hour. Prerequisites: upper division standing (some sections may require prior coursework or consent of instructor). Fieldwork and intensive field notes are required. Theory and practice of field research, with particular emphasis on the interrelations between fieldwork role and substantive findings from fieldwork.

118. Statistical and Computer Methods for Social Research. Lecture, three hours; laboratory, one hour. Prerequisite: course 18. A continuation of course 18. The course covers more advanced statistical techniques, such as multiple regression, analysis of variance, and factor analysis. Content varies. Students learn how to use the computer and write papers analyzing prepared data sets.

120. Social Change. A study of patterns of social change, resistance to change, and change-producing agencies and processes.

121. Organizations and Society. Sociological analysis of organizations and their social environment. An introduction to basic theories, concepts, and methods of research on the behavior of organizations in society.

122. Mass Communications. Lecture, three hours. Fieldwork may be required. Development, functions, and organization of the mass media in industrialized societies; social theory and social research in mass communications; short-term effects of the media; the media and socialization; the mass media and the shaping of public opinion; prospects for media in the Third World. Sociological innovations and their effects on future social systems are discussed.

123. Social Stratification. An analysis of American social structure in terms of evaluative differentiation. Topics include criteria for differentiation, bases for evaluation, types of stratification, the composition of status and status systems, mobility, consequences of stratification, and problems of methodology.

124. Ethnic and Status Groups. The characteristics of the "visible" ethnic groups (e.g., Japanese, Mexican, and black); their organization, acculturation, and differentiation. The development, operation, and effects of selective immigration and population mobility. The status of the chief minorities in the continental United States, with comparative materials drawn from Jamaica, Hawaii, and other areas.

125. Urban Sociology. Lecture, three hours. Description and analysis of urbanization and urbanism in the United States and the world.

127. Sociology of Family Demographic and Economic Behavior. An examination of demographic behavior associated with the social organization of the family and its relationship to the society's economic system. The first half of the course deals with American and European historical studies of family socioeconomic and demographic characteristics and behavior. The second half focuses on the U.S. experience since the 1930s. Ms. Oppenheimer

128. Occupations and Professions. Description and analysis of representative occupations and professions, with emphasis on the contemporary United States.

129. Social Policies and Social Programs. Lecture, three hours; discussion, one hour. Prerequisites: junior standing and course 1, or consent of instructor. Analysis of problems of social disorganization, with emphasis on social structural explanations. Provides comparison of social policies and intervention strategies related to control and management of social problems. Mr. Freeman, Ms. Zucker


131. Latin American Societies. A descriptive survey of the major Latin American societies, emphasizing their historical backgrounds and their emergent characteristics, with special attention to the relations between rural and urban life. Mr. López, Mr. Zeitlin

132. Population and Society in the Middle East. Prerequisites: upper division standing, consent of instructor. A survey of the Middle Eastern societies: their historic and environmental bases; the contemporary demographic and cultural situation. Mr. Sabagh

133. Comparative Sociology of the Middle East. Prerequisites: upper division standing, consent of instructor. A review of the unity of Middle Eastern societies in Islam and their diversity exemplified by such nomadic peoples considered throughout.


135. Comparative American Indian Societies. Lecture, three hours. Prerequisite: course 1. The comparative and historical study of political, economic, and cultural change in indigenous North American societies. Several theories of social change are discussed and applied to selected case studies.

136. American Society. Analysis of major institutions in the U.S. in historical and international perspective. The course focuses on topics such as industrialization, work, the state, politics, community, the family, religion, and American culture. Theories of social change, conflict, and order are applied to the case of the U.S.

137. Comparative Studies of Jewish Communities in the U.S. and Abroad. The history, distribution, structure, and functioning of major Jewish communities are covered, with particular focus on North America and Israel. Emphasis on the relationship between Israel and Diaspora Jewish communities. Mr. Lo, Mr. Roy, Mr. Zeitlin

138. Comparative and Historical Sociology. Prerequisite: course 1. A survey of the central themes of comparative and historical studies in sociology. The various aspects of the development of modern society, including the development of nation-state, the emergence of capitalism, industrialization, and population growth. Variation in contemporary society is viewed from a variety of theoretical perspectives. Mr. Champage, Mr. Li. Fieldwork is required.

140. Political Sociology. The contributions of sociology to the study of politics, including the analysis of political aspects of social systems, the social context of action, and the social bases of power.

141. Economy and Society. The sociology of economic life, with emphasis on principal economic institutions of the United States. Mr. Light, Mr. Lo, Mr. Zeitlin

142. Sociology of the Family. Theory and research dealing with the modern family, its structure, and functions, including historical changes, variant family patterns, family as an institution, and the influence of the contemporary society on the family.

143. Sociology of Education. (Same as Education M108). Prerequisite: course 1. Study of social processes and interaction in educational organizations; the relationship of such organizations to aspects of society, social class, and power; social relations within the school, college, and university; formal and informal groups, subcultures in educational systems, the role of teachers, students, and administrators.

144A. Conversational Structures I. (Formerly numbered 144A.) Lecture, three hours. An introduction to the study of conversational interaction, including the organization of conversational interaction, including the organization of repair, and some basic sequence structures with limited exceptions. May be concurrently scheduled with course C244A.

144B. Conversational Structures II. (Formerly numbered 144B.) Lecture, three hours. Prerequisite: course C144A. A consideration of some of the more expanded sequence structures, story structures, topological sequences, and the overall structural organization of single conversations. May be concurrently scheduled with course C244B.

145. Sociology of Deviant Behavior. An examination of the leading sociological approaches to the study of deviance, including the development of the sociological school of deviance, with special attention to the major types of deviation in American society.

146. Criminality. Theories of the genesis of crime; factors in the organization of criminal behavior from the points of view of the person and group; criminal behavior systems. Mr. Katz, Mr. Rabow

147. Control of Crime. Theories of punishment; methods of dealing with convicts; social organization of police, courts, prisons, probation, and parole. Fieldwork is required.

148. Normal Environments. Structural interpretation of the concerted production, management, and alteration of perceivedly normal interpersonal environments. Fieldwork is required.

149. A Study of Norms. Properties of norms, of norm-governed conduct. Introduction of professional methods for describing, producing, using, and validating norms in contrasting settings of socially organized activities; relevance of these properties for the processes and problems of analytic sociology. Fieldwork is required.

150. Collective Behavior. Prerequisites: courses 1, 18, or equivalent, upper division standing. Characteristics of crowds, mobs, publics, social movements, and social protest; their relationship to social structure and their role in developing and changing social organization.

151. Culture and Personality. Prerequisites: courses 1, 18, or equivalent, upper division standing. Theories of the relation of variations in personality and culture to group life, in primitive and modern societies, and the influence of social role on personality development.

152. Group Processes. Systematic study of the formation, structure, and functioning of groups; analysis of group processes and group products from a variety of theoretical viewpoints; implications of variational research techniques.

153. Process and Socialization in the Family. Prerequisites: courses 1, 18, or equivalent, upper division standing. Examination of the processes of interaction, decision making, role differentiation, conflict, integration, and socialization within the family and their interrelations with society.

154. Social Psychology: Sociological Approaches. A survey of the contributions of sociologists to theory and research in social psychology, including theories of social control; conformity and deviance; reference groups; and interaction process.

155. Intergroup Conflict and Prejudice. A study of the causes and consequences of group conflict, with emphasis on majority-minority relations, prejudice, and discrimination. Special attention to alternative sociological and psychological theories of prejudice, the effects of minority status on the individual, and the possibilities for attitude and behavior change.

156. Psychoanalytic Sociology. Prerequisites: courses 1, 18. Recommended: a course in theory (course 112 or 113) and in social psychology. Designed to review the models of integration between psychoanalysis and sociology. This analytical perspective is applied to selected substantive areas and social processes. The areas include, but are not limited to, group development, delinquency, and deviance. The processes include socialization, identity and self formation, role-taking and role making.

157. Sociology of Mental Illness. Analysis of the major sociological and social psychological models of madness. Study of the social processes involved in the production, recognition, labeling, and treatment of "mental illness."

158. Death and Suicide. Psychological and Sociological Aspects. (Same as Psychology M163.) Lectures, three hours. Fieldwork research. The definition and taxonomy of death; the new permissiveness and taboo relating to death; the romanticization of death; the role of the individual in his own demise; the modes of death, development of understanding of death through the life span; ways in which ideas of death influence the conduct of lives; the impact of dying on the social structure surrounding the individual; preventive, interventive, and postventive practices in relation to death and suicide; partial death, megadeath; lethality; the psychological autopsy; the death of institutions and cultures. P/NP grading recommended (letter grading is required if course is to be applied toward the psychology or sociology major).

159. The Sociology of Knowledge. Prerequisite: course 1 or equivalent. A study of the social production of modes of thought and forms of knowledge. The course includes the study of ways in which bodies of knowledge and cognitive styles are produced, used, and transformed in every day, organizational, and extraordinary contexts.

Mr. Poliner, Mr. TenHouten
160. The Demography and Sociology of Women's Economic Roles. Prerequisites: courses 1 and 16 or Mathematics 50 or Psychology 41 or Economics 40 or Public Health 100A, or consent of instructor. A demographic and sociological analysis of the factors affecting women's economic roles in the world of work and the family. Topics include demographic implications of women's economic roles, women's changing place in the occupational structure, men's and women's contribution to the socioeconomic status of the family, the socioeconomic position of women with and without men to support them, future trends, and social policy affecting women's status.

Ms. Oppenheimer, Mr. Treiman

161. The Social Organization of Psychiatric Treatment. Strongly recommended prerequisite: course 157. Review of current research and theory on psychiatric treatment processes and treatment organizations, including mental hospitals and community mental health organizations.

Mr. Emerson, Mr. Grusky

162 Sociology of Law. The political impact of court decisions; legalization of social relations in modern institutions; social movements toward equal justice; the judicial role; experience of participants in legal processes; common sense conceptions of justice.

Mr. Katz

163. Medical Sociology. Prerequisite: course 1 or consent of instructor. The course provides major points in sociology and other social sciences, as well as students preparing for health science careers, with an understanding of health-seeking behavior and the interpersonal and organizational relations that are involved in the receipt and delivery of health services.

Mr. Goldstein

164. White-Collar Criminality. Lecture, three hours. Prerequisite: course 146 or consent of instructor. Theories of the genesis of crime applied to criminal behavior by business and political elites. Includes a history and evaluation of criminal law enforcement against white-collar illegality.

Mr. Katz

165. Entrepreneurship. Lecture, three hours; discussion, one hour. Prerequisite: course 1. Description and analysis of entrepreneurship, with special reference to historical origins, ideology, international comparisons, women and ethnic minority participation, legal and illegal forms, public and private auspices.

Mr. Light

197. Undergraduate Seminar. Prerequisites: upper division standing, major in sociology, consent of instructor.

199. Special Studies (2 to 8 units). Prerequisites: senior standing, 3.0 GPA in major, courses 1 and 18 or equivalent, consent of instructor and department Chair. A course of independent study designed for graduate or senior undergraduate students who (1) desire a more advanced or specialized treatment of an area covered in the regular course list and who present that course as a prerequisite or (2) desire work in an area of sociological analysis currently not covered by an upper division course. Only eight units are allowed. See undergraduate counselor for course contract.

199HA-199HB-199HC. Special Study for Honors. Prerequisite: honors program standing.

199A. Design of a research project to serve as the student's honors thesis. A research proposal, detailed bibliography, and regular meetings with the sponsoring faculty member are required.

199B. Continuation of work initiated in course 199A. A series of progress reports are prepared in consultation with instructor.

199C. Completion of the written report or honors thesis.

Graduate Courses

201A-201B. Proseminar in Sociology. Prerequisite: graduate standing. Designed primarily for graduate students in the first year of residence. A comprehensive survey of basic concepts and theories in the major fields of sociology. MR. Alexander, MR. Lopez 202A-202B. Sociology of Deviance. Lecture, two; discussion, one hour. Prerequisite: graduate standing. Required of first-year sociology graduate students. Considers a number of exemplary works in contemporary sociology in terms of the interplay of theory and method, and instance. The course is to familiarize entering students with a broad range of sociological practice and to illuminate through critical reading and analysis how various kinds of sociological inquiry work. The course team takes turns at monos lectures and discussion. In Progress grading.

Mr. Alexander, Mr. Schegloff

210A-210B. Intermediate Quantitative Methods I, II. Prerequisite: course 18 or equivalent. An intermediate-level treatment of fundamentals of statistical theory and procedures: probability theory, basic distributions (normal, binomial, t, chi-square, F, etc.); their interrelations, and statistical procedures based on them; analysis of contingency tables; multiple and partial correlation; regression and analysis of variance and experimental designs; the general linear model; systems of equations. Additional special topics include use of computers; log-linear models; factor analysis, discriminant function analysis; scaling and measurement; sampling design; nonparametric techniques and measures; matrix algebra if used in coverage of listed topics. In Progress grading.

Mr. Bonacich, Mr. McFarland, Mr. TenHouten

210C. Intermediate Quantitative Methods III. Prerequisite: course 210B. Not required for the M.A. or Ph.D. degree. The course covers additional and more advanced multivariate techniques of particular value to sociologists.

Mr. Bonacich

211A-211B. Comparative and Historical Methods I, II. Prerequisite: course 210B. Required for the M.A. and Ph.D. degrees. The course considers central themes such as the logic of comparative and historical analysis, and substantive paradigms of comparative and historical analysis. Reading involves methodological examination of the various works in representative problem areas. In Progress grading.

211B. Research Techniques. Prerequisite: course 211A. Topics include the problem of evidence, quantitative and qualitative data. Techniques of data analysis, including use of manuscript research, content analysis, collective biography, and secondary analysis, are discussed.

Mr. Light, Mr. Ro, Mr. Prager, Mr. Roy

212A-212B. Marxist Methodology. Prerequisite: course 210B or consent of instructor. Practice in the dialectical method of attaining scientific knowledge about society as a process and mode of production. A critical examination of methodological issues and techniques and practical field research.

Mr. Horton

213A-213B. Techniques of Demographic and Ecological Analysis. Prerequisite: course 210A or equivalent. Procedures and techniques for the collection, evaluation, and analysis of demographic and ecological data; models of population and ecological structure and change; applications to the study of social structure and social change.

Mr. Sabagh


Mr. TenHouten

215A-215B. Experimental Sociology. Prerequisites: course 210A or equivalent, consent of instructor. A course designed to provide students with the basic fundamentals of the experimental method, particularly as it is used in social psychology. In Progress grading.

Mr. Grusky, Mr. Rabow, Mr. Shure

216A-216B. Survey Research Methods. Course in methodology and techniques: formulation of research problem; design of sample; data collection: interview process, questionnaire and schedule construction; interviewing and data collection; processing and tabulation; analysis and interpretation; presentation of findings. Students designed panel, complex survey designs. Students participate in survey research project. In Progress grading.

Mr. Levine, Mr. Treiman

217A-217B. Ethnographic Fieldwork. Prerequisite: consent of instructor. Theories and techniques of ethnographic fieldwork. The course considers the kinds of problems amenable to ethnographic approaches, methods, and techniques for doing fieldwork, and ethical problems involved in such research. In Progress grading.

Mr. Emerson, Mr. Pollner

218A-218B. Ethnomethodological Methods. Prerequisite: consent of instructor. Examination of techniques used in ethnomethodological research, practice in the critical evaluation of research, and directed experience in the conduct of an extended investigation employing ethnomethodological procedures. In Progress grading.

Mr. Garfinkel

220. Role Theory. Prerequisites: graduate standing, consent of instructor. Theories and techniques of role analysis and role-taking dealing with social roles, with special emphasis on roles in social interaction and in formation of the social self.

Mr. Turner

221. Social Ecology. Prerequisites: courses 18, 126, or equivalent, and graduate standing, or consent of instructor. An examination of the various approaches to both microecology and macroecology, including classical and neoclassical ecology, social area analysis, sociocultural ecology, city-size distributions, effects of population density on animals and humans, proxemics, territoriality, and the effects of the physical environment on humans.

Mr. Bailey

222. Foundations of Ethnomethodological, Phenomenological, and Analytic Sociologies. Lecture, three hours. Prerequisite: graduate standing or consent of instructor. The course is designed to acquaint students with basic issues, methods, and topics of ethnomethodological, phenomenological, conversation-analytic, and related varieties of inquiry. The first part considers central themes such as the world of everyday life, the problem of rationality, rules-norms and tacit knowledge, the problem of social order, speaking and discourse, constitutive practices, and the production of ordinary interaction. The second part features guest presentations by affiliated faculty.

223. Phenomenological and Interactionist Perspectives on Selected Topics. Lecture, three hours. Phenomenological and symbolic interactionist perspectives are compared by examining a particular body of life or currently unresolved substantive issues. Topics vary; attention focuses on development of phenomenological and interactionist thought on the topic of concern, with special concern for ambiguities and divergences both within and between the two approaches. When relevant, attention is given to the logical and historical relations of phenomenology and interactionism of pragmatist, existentialist, and ordinary language viewpoints.

Mr. Katz

224A-224B. Problems in Social Psychology. Prerequisites: course 210A, consent of instructor. The basic course for graduate students intending to specialize in social psychology. 224A examines systematically social psychological contributions to the field. 224B introduces the student to current work being done in the department in several subfields.
225A-225B. Demographic Perspectives on the Relationship of Family and Economic Systems. Prerequisites: courses 210A-210B or consent of instructor. An examination of the interrelationship of family and economic systems in societies at different levels of economic development, focusing particularly on the U.S. experience. Central to the course is (1) an analysis of how demographic factors affect economic and family systems; (2) how these systems, and those of other cultures, affect demographic variables; and (3) how this two-way process influences the relationship of family and economic systems over time. 225A is primarily devoted to lectures and readings. 225B carries students into individual research projects involving a term paper and classroom reports of results. Ms. Oppenheimer

227. The Sociology of Knowledge. Prerequisite: graduate standing or consent of instructor. A survey of theories and research concerning social determinants of systems of knowledge and the role of intellectual and artistic elites in Western societies. Mr. Horton

228A-228B. Critical Issues in Macrosociology. Seminar, three hours. Prerequisite: graduate standing. A conceptual introduction to the study of macrosociology in which exemplary works are read, studied for substance and methods, and critiqued in seminar and in written papers. It usually is taught by faculty of varying orientations.

229. Processes of Social Control. Prerequisite: graduate standing or consent of instructor. Current theory and research on social control processes. Specific topics include conceptual issues, informal social control mechanisms, the relation between informal and formal control systems, and the role of the latter in influencing the behavior of individuals and social groups. Mr. Emerson, Mr. Rabow, Mr. Surace

231. The Structure of Occupations. (Same as Education M231.) Lecture, two hours; discussion, two hours. Explores shifts in the occupational structure of the United States, changing skill requirements for jobs, and the role of education, unions, and the role of formal and informal education in preparing people for occupations.

Mr. O'Shea, Ms. Wrigley

232. Survey Data Acquisition. Lecture, three hours. Prerequisite: courses 210A-210B or consent of instructor. Focuses on survey research practice in study design, instrument design, sampling methods, and data management. Parallel coverage of research literature on various sources of nonresponse bias and that influence survey results. An ongoing survey that employs Computer-Assisted Telephone Interviewing is available as a resource for the course.

Mr. Shure

233. Foundations of Political Sociology. Lecture, three hours. Prerequisite: graduate standing. An introduction to political sociology, oriented around critical themes in the major theoretical traditions and contemporary exemplars. Special attention to competing perspectives on power, the theory of the state, and the relationship of class structure to politics.

Mr. Lo, Mr. Prager, Mr. Roy

234. Sociology of Community Organization. Prerequisite: graduate standing. Consent of instructor. A study of community organizations in a variety of contexts in the United States and other parts of the world. The seminar will examine the relationship of community organizations to political and economic systems, and the problem of order, and the organization of communal life in the village and the metropolis.

Mr. Meeker

236. Social Change in the Middle East. An analysis of the sources, extent, and types of social change in the Middle East, with emphasis on the origin and consequences of industrialization and urbanization. Mr. Sabagh

237. Social Stratification in the Middle East. Modes of social differentiation in traditional Middle Eastern societies, localism and tribalism, the counter influence of processes leading to the recurrent emergence of large scale and their economic structural characteristics. Mr. Sabagh

238A-238B. Fieldwork in Minority Communities. Seminar, two hours. Prerequisites: graduate standing, consent of instructor. Designed to supply graduate students with conceptual and methodological skills for studying minority communities. Water Los Angeles is the laboratory. Both ethnographic and survey research techniques are emphasized. In Progress grading.

Mr. Levine

240. Mathematics of Population. Prerequisite: prior knowledge of elementary notions of set theory and probability. Discrete and continuous deterministic and probabilistic models of the growth and composition of a single-sexed population classified by age, plus selected topics on more complicated population models.

Mr. McFarland

244A. Conversational Structures I. Lecture, three hours; discussion, one hour. An introduction to some of the structures which are employed in the organization of conversational interaction, such as turn-taking organization of repair and repair implementation. Emphasis on the basic sequence structures with limited expansions. May be concurrently scheduled with course C144A. Graduate students have additional assignments and/or meet as a group one additional hour each week.

Mr. Schegloff

244B. Conversational Structures II. Lecture, three hours; discussion, one hour. Prerequisite: course C244A. A consideration of some of the more expanded sequence structures, story structures, topical sequences, and the overall structural organization of single conversations. May be concurrently scheduled with course C144B. Graduate students have additional assignments and/or meet as a group one additional hour each week.

Mr. Schegloff

245. Cultural Studies. Discussion, three hours. Prerequisite: consent of instructor. The course allows graduate students to become familiar with the range of contemporary studies of culture. Taking as its assumption that symbolic patterns have relative autonomy vis-a-vis social structure and personality, it examines hermeneutical, structuralist, and functionalist versions of this general argument. It proceeds subsequently to contemporary versions of "interpretive" theories of social structure. Topics include hermeneutics, Durkheimian, and semiotic. Theory, method, and substantive empirical issues are simultaneously addressed.

Mr. Alexander

247. Neurosociology. Prerequisites: graduate standing, consent of instructor. The course examines the relationship of social structure and higher cortical functions.

Mr. Tenhouten

248. The Sociology of Cognitive Development. Prerequisite: graduate standing or consent of instructor. Analysis of ways in which mental processes are structured and organized by positions and practices in the social world, and by change and development in society.

Mr. Tenhouten

249A. Sociocultural Aspects of Health and Illness: Health Professions. (Formerly numbered M249B.) (Same as Public Health M263B.) Lecture, three hours. Prerequisites: Public Health 182, three courses in psychology, sociology, or anthropology, or equivalent, consent of instructor. Sociocultural examination of the concepts of "health" and "illness" and role of various health professions, especially physicians. Attention to the meaning of professionalization and professional-client relationships within a range of organization settings.

Mr. Seeman

249B. Sociocultural Aspects of Health and Illness: Health Behavior. (Formerly numbered M249C.) (Same as Public Health M263G.) Seminar, three hours. Prerequisites: Public Health 182, three courses in psychology, sociology, or anthropology, or equivalent, consent of instructor. Sociocultural factors affecting differential patterns of health behavior, illness behavior, and sick role behavior.

Mr. Berkmanov

250. Methodological Problems. Mr. Bailey, Mr. Tenhouten

251. Topics in the Problem of Social Order. Mr. Garfinkel

252. Criminology. Mr. Katz, Mr. Rabow

253. Quantitative Methods in Sociology. Mr. Bailey, Mr. Bonaitich, Mr. Freeman

254. Sociology of Law. (Formerly numbered 254B.) Social control functions of law and legal institutions with particular attention to the contrast between law ways of stateless and tribal societies and contemporary American legal processes and institutions, primarily those of civil and criminal cases.

Mr. Emerson, Mr. Katz, Mr. Prager

255A-255B. Selected Issues in Sociological Theory. Seminar. Prerequisite: consent of instructor. Course 255A is not ordinarily prerequisite to 255B. Examination of selected issues and problems in classical or contemporary sociological theory and in the history of the development of sociological theory.

Mr. Champagne

256. Demography. Mr. Bailey, Mr. Sabagh

258. Sociology of Religion.

259. Social Structure and Economic Change: Historical and Comparative Perspectives. Ms. Cheng, Ms. Surace, Mr. Zeitlin

260. Economy and Society. Discussion, two hours. Prerequisite: graduate standing or consent of instructor. Review and critique of major analytical traditions in economy and society.

Mr. Light, Mr. Zeitlin

281. Ethnic Minorities. Mr. Levine, Mr. Seeman

262. M262. Selected Problems in Urban Sociology. (Same as Sociology M200C.) Seminar. Prerequisite: consent of instructor.

Mr. Light, Mr. Oliver

263. Social Stratification. Mr. Treiman

264. Professions in the American Health Professions. Ms. Oppenheimer

265. Problems in Organization Theory. Mr. Grusky, Ms. Zucker

266. Selected Problems in the Analysis of Conversation. Prerequisite: course C144A or consent of instructor.

Mr. Schegloff

267. Selected Problems in Communication. Mr. Poliner, Mr. Schegloff

268. Selected Problems in Psychoanalytic Sociology. Discussion, three hours. Prerequisites: consent of instructor. Prerequisite: at least one year of methods courses. The course focuses on selected problems in the interpretation of sociology and psychoanalysis. These problems may be substantive (group development, socialization, culture, deviance, collective behavior) or methodological; the latter focuses on clinical fieldwork and experimental use of psychoanalytic and sociological techniques.

Mr. Rabow

269. Collective Behavior. Mr. Turner

270. Selected Problems in Socialization. Mr. Turner

271. Ethnomethodology. Mr. Garfinkel

272. Topics in Political Sociology. Mr. Roy, Mr. Surace, Mr. Zeitlin

273. Attitudes and Social Structure. Mr. Seeman

274. Selected Problems in the Sociology of Africa. Mr. Seeman

275. Selected Topics in the Sociology of East Asia. Prerequisites: graduate standing, consent of instructor. The seminar analyzes selected problems in China, or in China and Japan comparatively. Possible topics include: (1) China's Great Proletarian Cultural Revolution; (2) internal contradictions in modern Chinese society; male-female relations, the city and the countryside, minority nationalities, class struggle under socialism, etc.; (3) China and Japan: two models of development.

Ms. Cheng
278. Selected Problems and Issues in Mass Media Research. Seminar, two hours. Prerequisites: graduate standing, consent of instructor. Focus includes methodological problems (surveys, panel studies, content analysis); research on audiences; problems of comparative, international media research; exposure and socialization; social, psychological, and political effects of technological innovation. Mr. Levine.

280. Seminar in Evaluation Research. Prerequisite: graduate standing. The seminar covers both the technical and political aspects of implementing evaluation research studies. The role of evaluation research in social policy development is considered, as well as procedures for undertaking process and impact evaluations. S/U or letter grading. Mr. Freeman.

281. Selected Problems in Mathematical Sociology. Prerequisite: consent of instructor. An exploration of some mathematical models of sociological processes. Possible topics include models of small groups, social mobility, kinship relations, organizations, social interaction. Mr. Bonachich, Mr. McFarland.

282. Organizations and the Professions. 283. Topics in Mental Health and Illness. Prerequisites: course 157 or equivalent, graduate standing. Mr. Emerson, Mr. Grusky, Mr. Pollner.

285A-285Z. Special Topics in Sociology. Seminar, three hours. Prerequisite: graduate standing. A seminar on selected current topics of sociological interest. See Schedule of Classes for topics and instructors. May be repeated for credit.

M287A-M287B. Population Policy and Fertility. (Same as Public Health M274A-M274B) Lecture, three hours; discussion, one hour. Prerequisites: Public Health 100A, 112, 171A, 171B, or equivalent, graduate standing, consent of instructor. Course M287A is prerequisite to M287B. Analysis of research concerning major issues in population policy, with special emphasis on human fertility. Ms. Blake.

M287C. Seminar in Population Policy and Fertility. (Same as Public Health M274C.) Seminar, three hours; discussion, one hour. Prerequisites: courses M287A-M287B or equivalent, graduate standing, consent of instructor. Review of current literature in population policy and fertility in conjunction with student research reports. May not be repeated for credit. Ms. Blake.

289A-289B-289C. Social Psychology Seminar (2 units each). Lecture, one hour; discussion, one hour. Prerequisite: graduate standing. Required of students in the social psychology area program, but open to all graduate students in good standing. A forum for the presentation of advanced work in social psychology designed to develop an ability to understand, critically evaluate, and present research in fields relevant to the study of social psychology. May be repeated for credit. S/U grading.

290A-290B-290C. Social Organization and Institutions Seminar (2 units each). Lecture: one hour; discussion, one hour. Prerequisite: graduate standing. Required of students in the social organization and institutions area program, but open to all graduate students in good standing in the department. A seminar for the presentation of advanced work in social organization and institutions designed to contribute to the theoretical and methodological comprehension of work in this area program and to critically evaluate avenues for further research advances. May be repeated for credit. In Progress and S/U grading. Mr. Oliver.

291. Moral Solidarity in Communities. Comparative analysis of social solidarity and the collapse of social solidarity in voluntary and institutional communities. Contrasts more and less solidarity types, with special reference to utopian communities and developmental processes. Mr. Light.

Bachelor of Arts in Spanish and in Spanish and Linguistics

Students who have taken Spanish elsewhere and wish to enroll in UCLA Spanish classes for the first time must take the placement test given each quarter during the week before classes begin. Consult the Schedule of Classes.

Preparation for the Majors
Required: Spanish 25 or equivalent as determined by the placement test; courses M35, M42, M44, or equivalent.

The Major, Plan A (Spanish Language and Literature)

The Major, Plan B (Spanish and Linguistics)
Required: Completion of six quarters of study in one other foreign language or three quarters in each of two other foreign languages, in addition to the “Preparation for the Major” courses. Portuguese is recommended.

The major consists of 15 upper division courses, including Spanish 100A, 100B, 105A, 105B, 115, 118A, 118B, Linguistics 100, 103, 110, 120A, 120B, and three electives in Spanish, at least one of which must be in literature.

Honors Program
To qualify for graduation with departmental honors, you must achieve a 3.0 overall grade-point average and a 3.5 grade-point average in the major and have completed two of the three senior honors seminars (Spanish 170A, 170B, 170C) with appropriate grades.

Bachelor of Arts in Portuguese

Preparation for the Major
Required: Portuguese 3, 25, M42, M44, or equivalent.

The Major
Required: Thirteen upper division courses, including Portuguese 100A, 100B, 118, 120A-120B, 130A-130B. The remaining six courses may consist of six electives in Portuguese, or four electives in Portuguese plus two courses supportive of your program and approved by the department in history, philosophy, linguistics, or another language or literature.
Course Requirements
Portuguese M200, M201, and eight elective graduate courses in Portuguese are required, at least one of which must be a seminar. You must select four courses in your major field and two courses in each of your two minor fields. Course 596 may be included once; courses 597 and 598 may not be applied toward the degree.

Comprehensive Examination Plan
The examination consists of (1) a three-hour written test in your major field and (2) a 90-minute written test in each of your two minor fields. One quarter before you propose to take the comprehensive examination, you must present for approval to your guidance committee one reading list for your major field in literature (approximately 15 authors and 30 works) and one reading list for your minor field in literature (approximately six authors and 15 works). The reading lists form the basis of the literature section of the examination (the reading list for linguistics will be established by the guidance committee).

Thesis Plan
You may petition to present a thesis in lieu of taking the comprehensive examination only after you complete five graduate courses, one of which must be a seminar. The graduate advisor and your committee will approve your petition only if they find evidence of exceptional ability and promise in your term papers and coursework.

Ph.D. in Hispanic Languages and Literatures
Admission
The UCLA Master of Arts in Spanish or in Portuguese, or the equivalent, is required. Three letters of recommendation are also required from professors familiar with your work as a graduate student, to be addressed to your capacity for research-oriented doctoral studies and possible entry into the profession. The Graduate Record Examination (GRE) Aptitude Test is also required. A combined score of 1000 is preferred; the verbal score is considered more important than the quantitative.

Foreign Language Requirement
Reading knowledge of two foreign languages in addition to both Spanish and Portuguese is required. The languages are selected in consultation with your guidance committee. The requirement may be fulfilled by (1) passing the Educational Testing Service (ETS) language examination with a score of 500 or better, (2) passing the University reading examination in the language when no ETS examination is available, or (3) passing at least a level three course at UCLA. You must fulfill the requirement in one of the languages no later than the sixth quarter of graduate study.

Course Requirements
After the B.A., a minimum of 20 graduate courses is required. You will normally take a minimum of six graduate courses in your major field, of which at least two must be seminars. In each of the minor fields, you will normally take a minimum of four graduate courses, of which at least one must be a seminar.

Qualifying Examinations
The qualifying examinations, given during the fifth and sixth weeks of the Fall, Winter, and Spring Quarters, consist of (1) a four-hour written examination in the major field; (2) a two-hour written examination in each minor field; (3) a two-hour University Oral Qualifying Examination on the three fields and at which your prospects for the dissertation is discussed and approved. The written examinations are normally taken no later than nine quarters after receiving the B.A. and six quarters after receiving the M.A. Only students who pass the qualifying examinations will be advanced to candidacy for the Ph.D.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
The final oral examination is optional at the committee's discretion.

Spanish
Lower Division Courses
Spanish 1 through 3 use Shumway and Forbes' Esparhol en esparhol. 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.

No credit will be allowed for completing a less advanced course after successful completion of a more advanced course in grammar and/or composition.

1. Elementary Spanish. Discussion, five hours; laboratory, one hour. Not open for credit to students who have completed two years of high school Spanish or equivalent with grades of C or better. Students are, however, credited with four units toward the minimum progress requirement. The course is equivalent to the first year of high school Spanish.
2. Elementary Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 1 or equivalent as determined by the placement test. Not open for credit to students who have completed two years of high school Spanish or equivalent. Students are, however, credited with four units toward the minimum progress requirement.
3. Elementary Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 2 or equivalent as determined by the placement test. The main grammatical topics include relative clauses; direct vs. indirect speech; imperatives; imperative constructions; subjunctive: present, imperfect, idioms. Vocabulary of about 400 items and idioms dealing with everyday experience and some selected readings of good authors.
4. Intermediate Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 3 or equivalent as determined by the placement test. Grammar review. Also, conditional; imperative and conditional; indicative vs. subjunctive; past perfect of subjunctive; infinitive. Vocabulary of about 400 items and idioms dealing with everyday experience and some literary pieces.
5. Intermediate Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 4 or equivalent as determined by the placement test.
6. Intermediate Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 5 or equivalent as determined by the placement test.
7. Advanced Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 6 or equivalent as determined by the placement test.
8. Spanish Conversation (2 units each). Discussion, three hours. Course 8A is open to students with credit for course 4 or equivalent. Students who have completed course 3 with a grade of B or better may be admitted. (F,W,Sp)
9. Advanced Conversation (2 units each). Discussion, three hours. Prerequisite: course 8B or equivalent. (F,W,Sp)
10. Composition for Spanish Speakers. Lecture, three hours. Prerequisites: course 5 or equivalent, consent of instructor. Practice in the reading and writing of Spanish for students with oral proficiency in Spanish (in lieu of Spanish 25).

Lower Division Courses

1. Elementary Spanish. Discussion, five hours; laboratory, one hour. Not open for credit to students who have completed two years of high school Spanish or equivalent with grades of C or better. Students are, however, credited with four units toward the minimum progress requirement. The course is equivalent to the first year of high school Spanish.
2. Elementary Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 1 or equivalent as determined by the placement test. Not open for credit to students who have completed two years of high school Spanish or equivalent. Students are, however, credited with four units toward the minimum progress requirement.
3. Elementary Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 2 or equivalent as determined by the placement test. The main grammatical topics include relative clauses; direct vs. indirect speech; imperatives; imperative constructions; subjunctive: present, imperfect, idioms. Vocabulary of about 400 items and idioms dealing with everyday experience and some selected readings of good authors.
4. Intermediate Spanish. Discussion, five hours; laboratory, one hour. Prerequisite: course 3 or equivalent as determined by the placement test. Grammar review. Also, conditional; imperative and conditional; indicative vs. subjunctive; past perfect of subjunctive; infinitive. Vocabulary of about 400 items and idioms dealing with everyday experience and some literary pieces.
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9. Advanced Conversation (2 units each). Discussion, three hours. Prerequisite: course 8B or equivalent. (F,W,Sp)
10. Composition for Spanish Speakers. Lecture, three hours. Prerequisites: course 5 or equivalent, consent of instructor. Practice in the reading and writing of Spanish for students with oral proficiency in Spanish (in lieu of Spanish 25).
M35. Spanish, Portuguese, and the Nature of Language. (Same as Portuguese M35.) Lecture, three hours. An introduction to language study within the context of Romance languages, focusing on Spanish and Portuguese. The nature of language: its structure, its diversity, its evolution, its social and cultural settings, its literary uses. The study of language and its relation to other areas of human knowledge.

M42. Civilization of Spain and Portugal. (Same as Portuguese M42.) Required of majors. Highlights of the civilization of Spain and Portugal, with emphasis on their artistic, economic, social, and historical development as background for upper division courses. Conducted in English. Mr. Cruz-Salvadores

M44. Civilization of Spanish America and Brazil. (Same as Portuguese M44.) Required of majors. Highlights of the civilization of Spanish America and Brazil, with emphasis on their artistic, economic, social, and historical development as background for upper division courses. Conducted in English. Mr. Reeve, Mr. Skirius

Upper Division Courses

Prerequisite to all upper division courses except Spanish 160A-160B-160C is Spanish 25 or equivalent as determined by the placement test.

100A. Introduction to the Study of Spanish Grammar: Phonology and Morphology. (Formerly numbered 100.) Lecture, three hours. Prerequisite: course M35. Analysis of the phonemic and morphological systems of Spanish. Ms. Plann, Mr. Robe

100B. Introduction to the Study of Spanish Grammar: Syntax. (Formerly numbered 103.) Lecture, three hours. Prerequisite: course M35. A study of the syntactical systems of Spanish. Mr. Otero, Ms. Plann

105A. Intermediate Composition. (Formerly numbered 105.) Lecture, three hours. Practice in writing Spanish with appropriate vocabulary, syntactical structures, and stylistic patterns.

105B. Advanced Composition. (Formerly numbered 109.) Lecture, three hours. Practice in writing Spanish with appropriate vocabulary, syntactical structures, and stylistic patterns.

107. The Spanish of Southern California. (Formerly numbered 117.) Lecture, three hours. Prerequisites: courses M35, 100A, and 100B, or consent of instructor. Analysis of pronunciation, word formation, syntax, and lexicon of the Spanish of Southern California, with attention to regional features, social and age levels of speech, and interference from English. Mr. Robe

115. Applied Linguistics. Lecture, three hours. Prerequisites: courses M35, 100B. Survey of the major linguistic problems faced by the teacher of Spanish. Ms. Plann, Mr. Robe

M118A. The History of Portuguese and Spanish: Phonology. (Formerly numbered 118A.) (Same as Portuguese M118A.) Lecture, three hours. Prerequisites: courses M35, 100A. Major features of the development of the Portuguese and Spanish languages from their origins in Vulgar Latin to modern times. Ms. Plann, Mr. Quicoli, Mr. Smith

M118B. The History of Portuguese and Spanish: Morphology and Syntax. (Formerly numbered 118B.) (Same as Portuguese M118B.) Lecture, three hours. Prerequisites: courses M35, 100B. Major features of the development of the Portuguese and Spanish languages from their origins in Vulgar Latin to modern times. Mr. Otero, Ms. Plann, Mr. Quicoli

119A. Introduction to the Study of Literature: Prose. (Formerly numbered 119A.) Lecture, three hours. Prerequisite to all upper division courses except Spanish 160A-160B-160C. An introduction to the study of literary devices, figures of speech, and distinctive stylistic features in the prose literature of Spain and Spanish America, particularly in the novel and essay.

119B. Introduction to the Study of Literature: Poetry and Drama. (Formerly numbered 119B.) Lecture, three hours. Prerequisite to all upper division courses except Spanish 160A-160B-160C. An introduction to the study of literary devices, figures of speech, and distinctive stylistic features in the poetry and drama of Spain and Spanish America.

120A-120B. Survey of Spanish Literature. Lecture, three hours. An introduction to the principle periods, currents, and authors of Spanish literature. Mr. Gimeno, Mr. Johnson, Mr. Rodriguez-Cepeda

122. Medieval Literature: Prose. Lecture, three hours. Recommended prerequisite: course 120A. A study of the main genres through representative works. Mr. Gimeno

123. Medieval Literature: Poetry. (Formerly numbered 123.) Lecture, three hours. Recommended prerequisite: course 120A. A study of the main genres through representative works. Mr. Gimeno

124. The Golden Age: Poetry and Drama. Lecture, three hours. Recommended prerequisite: course 120A. A study through representative works of the Golden Age poetry and drama. Mr. Johnson, Mr. Rodríguez-Cepeda
127. The Golden Age: Don Quijote. Lecture, three hours. Recommended prerequisite: course 120A. The development of the novel in the Golden Age, with particular reference to Don Quijote.

Mr. Johnson, Mr. Rodriguez-Cepeda

128. The Enlightenment and Romanticism in Spain. Lecture, three hours. Recommended prerequisite: course 120B. A study, through representative works, of the main manifestations of thought and literature from 1700 to 1850.

Mr. Benitez, Mr. Rodriguez-Cepeda

130. Post-Romanticism, Realism, and Naturalism in Spain. Lecture, three hours. Recommended prerequisite: course 120B. The development of the main trends of Spanish literature from 1850 to 1898.

Mr. Benitez, Mr. Smith

132. 20th-Century Spanish Prose. (Formerly numbered 132B.) Lecture, three hours. Recommended prerequisite: course 120B. A study of several representative works of Spanish prose literature since 1898.

Mr. Morris

133. 20th-Century Spanish Poetry and Drama. (Formally numbered 133A.) Lecture, three hours. Recommended prerequisite: course 120B. A study of several representative works of Spanish poetry and drama from 1898.

Mr. Morris

136A-136B. Survey of Spanish-American Literature. (Formerly numbered 121A-121B.) Lecture, three hours. An introduction to the principal periods, currents, and authors of Spanish-American literature.

Ms. Arora, Mr. Luzuriaga, Mr. Oviedo, Mr. Reeve, Mr. Skirius

137. The Literature of Colonial Spanish America. Lecture, three hours. Recommended prerequisite: course 136A. A study of the most important genres and authors from the Conquest to 1810.

Ms. Arora, Mr. Oviedo

139. Romanticism and Realism in Spanish-American Literature. Lecture, three hours. Recommended prerequisite: course 136A. A study through representative literary works of the most important currents of thought and literary trends from 1810 to 1880.

Mr. Luzuriaga, Mr. Oviedo, Mr. Reeve, Mr. Skirius


Mr. Luzuriaga, Mr. Reeve, Mr. Skirius

143. 20th-Century Spanish-American Literature: Poetry and Drama. (Formerly numbered 142A.) Lecture, three hours. Recommended prerequisite: course 136B. A study of the principal periods, currents, and authors of Spanish-American literature since 1910.

Mr. Reeve, Mr. Skirius

144. Mexican Literature. (Formerly numbered 141.) Lecture, three hours. Recommended prerequisite: course 136B. A study of the major movements and authors of Mexican literature.

Mr. Reeve, Mr. Skirius

145. Introduction to Chicano Literature. (Same as Chicano Studies M145.) Lecture, three hours. Recommended prerequisite: course 25 or 26. Recommended prerequisite: course 136B. Introduction to texts representative of the Chicano literary heritage. The course seeks to provide a 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 of the required reading is in Spanish. Bilingual and English works are included and discussed. A number of important scholarly and critical statements pertaining to the characteristics and development of the Chicano literary corpus are analyzed and analyzed.

Mr. Hernández

149. Folk Literature of the Hispanic World. (Same as Folklore M149.) Lecture, three hours. A study of the history and present dissemination of the principal forms of folk literature throughout the Hispanic countries.

Ms. Arora, Mr. Robe

160A-160B-160C. Hispanic Literatures in Translation. Lecture, three hours. Class readings and analysis of selected works in translation. Classroom discussion, papers, and examinations are in English:

160A. Spain and Portugal.

160B. Spanish America and Brazil.

160C. Don Quijote in English Translation. Class reading and analysis of Cervantes' Don Quijote.

Mr. Johnson

170A. Senior Honors Seminar: Topics in Spanish Literature. Lecture, three hours. Prerequisite: senior Spanish major with a 3.5 GPA in the major. Directed research on topics within the general area of Spanish literature. Two senior seminars are required for departmental honors.

170B. Senior Honors Seminar: Topics in Spanish-American Literature. Lecture, three hours. Prerequisite: senior Spanish major with a 3.5 GPA in the major. Directed research on topics within the general area of Spanish-American literature. Two senior seminars are required for departmental honors.

Mr. Johnson

Graduate Courses

M200. Research Resources. (Same as Portuguese M200.) Lecture, three hours. Identification and use of research resources for graduate students.

Mr. Benitez, Mr. Smith

M201. Literary Theory and Criticism. (Same as Portuguese M201.) Lecture, three hours. Definition, discussion, and application of the main currents of contemporary literary theory and criticism.

Mr. Benitez, Mr. Otero

202. Phonology and Morphology. (Formerly numbered 206.) Lecture, three hours. The phonological and morphological systems of Spanish and their interaction.

Mr. Otero, Ms. Flann

M203A-M203B. The Development of the Portuguese and Spanish Languages. (Same as Portuguese M203A-M203B.) Intensive study of the historical development of the Portuguese and Spanish languages from their origin in spoken Latin.

Mr. Otero, Mr. Smith

204A-204B. Generative Grammar. Lecture, three hours. Prerequisite: consent of instructor. Course 204A or completion of a graduate seminar in linguistics or consent of instructor is prerequisite to 204B. A generative approach to the Spanish language, with some consideration of the bearing of syntax, semantics, and phonology on style, metaphor, and meter.

Mr. Otero

209. Dialectology. Lecture, three hours. The major dialect areas of peninsular and American Spanish, with the distinguishing features of each. Influence and contribution of cultural and historical features, including indigenous languages, to their formation.

Mr. Robe

221. Medieval Lyric Poetry. (Formerly numbered 222.) Lecture, three hours. Readings of and lectures on Spanish lyric poetry from the beginning to 1500.

Mr. Gimeno

222. Medieval Epic and Narrative Poetry. (Not the same as course 222 prior to Fall Quarter 1984.) Lecture, three hours. Readings of and lectures on Spanish epic and narrative poetry from the beginning to 1500.

Mr. Gimeno

233. Medieval Prose. Lecture, three hours. Readings of and lectures on Spanish prose from the beginning to 1500.

Mr. Gimeno

244. Poetry of the Golden Age. Lecture, three hours. Readings of and lectures on Spanish poetry from 1500 to 1700.

Mr. Morris, Mr. Rodriguez-Cepeda

245. Drama of the Golden Age. Lecture, three hours. Readings of and lectures on the comedias.

Mr. Rodriguez-Cepeda

246. Prose of the Golden Age. Lecture, three hours. Readings of and lectures on fictional, didactic, religious, and historical writings.

Mr. Johnson

247. Cervantes. Lecture, three hours. Readings of and lectures on the works of Cervantes.

Mr. Johnson

248. The Enlightenment. Lecture, three hours. Readings of and lectures on representative works of the period.

Mr. Otero

249. Romanticism. (Formerly numbered 230.) Lecture, three hours. Readings of and lectures on representative works of the period.

Mr. Benitez

250. Realism and Naturalism. (Formerly numbered 231.) Lecture, three hours. Readings of and lectures on literary works, principally novels, from 1850 to 1898.

Mr. Benitez

251. Major Currents in Modern Spanish Literature. Lecture, three hours. An introduction to major literary currents, including symbolism, Parnassianism, and the Generation of 1898.

Mr. Morris

252. Spanish Prose Literature from 1898 to the Civil War. Lecture, three hours. Readings of and lectures on representative essays, novels, and short stories of the period.

Mr. Morris

253. Spanish Prose Literature after the Civil War. (Formerly numbered 233 and 234.) Lecture, three hours. Readings of and lectures on representative plays and poems of the period.

Mr. Morris

257. Literature of the Spanish Conquest. Lecture, three hours. Readings of and lectures on chronicles, chronicles, and indigenous accounts of the Spanish Conquest.

Ms. Arora, Mr. Robe

258. Baroque, Enlightenment, and Neoclassicism in Colonial Literature. Lecture, three hours. Readings and lectures on representative texts.

Ms. Arora, Mr. Oviedo


Mr. Oviedo, Mr. Skirius


Mr. Luzuriaga

241A-241B. Contemporary Spanish-American Short Story. (Formerly numbered 243.) Lecture, three hours. A study of the important short story writers from modernism to the present.

Mr. Oviedo, Mr. Reeve

243A-243B. Contemporary Spanish-American Poems. (Formerly numbered 243.) Lecture, three hours. Intensive study of the important poets of Spanish America from modernism to the present.

Mr. Oviedo
### Upper Division Courses

**100A. Phonology and Morphology.** (Formerly numbered 100.) Lecture, three hours. Analysis of the phonemic and morphological systems of Spanish and Portuguese. Mr. Quicoli.

**100B. Syntax.** (Formerly numbered 103.) Lecture, three hours. A review of the patterns of the Portuguese language. Mr. Quicoli.

**101A. Advanced Reading and Conversation.** Lecture, three hours. Reading and discussion of writings by modern Brazilian and Portuguese authors. Mr. Quicoli.

**102A-102B. Intensive Portuguese.** Prerequisite: foreign language experience (other than Portuguese) or consent of instructor. Develops speaking and reading skills equivalent to those covered in the three quarters of the traditional pattern and to meet the special needs of advanced undergraduate and graduate students.

**105. Advanced Composition and Style.** (Formerly numbered 101B.) Practice in writing Portuguese with appropriate vocabulary, syntactical structures, and stylistic patterns. Ms. Plann, Mr. Quicoli, Mr. Smith.

**M118A. The History of Portuguese and Spanish: Phonology.** (Formerly numbered 118.) Same as Spanish M118A. Lecture, three hours. Prerequisites: courses M35, 100A. Major features of the development of the Portuguese and Spanish languages from their origins in Vulgar Latin to modern times. Ms. Plann, Mr. Quicoli, Mr. Smith.

**M118B. The History of Portuguese and Spanish: Morphology and Syntax.** (Formerly numbered 118.) Same as Spanish M118B. Lecture, three hours. Prerequisites: courses M35, 100B. Major features of the development of the Portuguese and Spanish languages from their origins in Vulgar Latin to modern times. Ms. Plann, Mr. Quicoli, Mr. Smith.

**120A-120B. Survey of Portuguese Literature.** Lecture, three hours. An introduction to the principal periods, currents, and authors of Portuguese literature. Mr. Dias.

**C124. Medieval Portuguese Literature.** Lecture, three hours. A study of the main genres of medieval Portuguese and Galician literature through representative works. May be concurrently scheduled with course C224. Mr. Dias.

**C125. Renaissance Portuguese Literature.** (Formerly numbered C225.) Lecture, three hours. A study of the main genres of Renaissance Portuguese literature, with particular emphasis on the works of Luis de Camoes. May be concurrently scheduled with course C225. Mr. Dias.

**C126. Baroque and Neoclassical Portuguese Literature.** (Not the same as course C126 prior to Fall Quarter 1985.) Lecture, three hours. A study of the main genres of baroque and neoclassical Portuguese literature through representative works. May be concurrently scheduled with course C226. Mr. Dias.

**C127. Romanticism and Realism in Portuguese Literature.** (Formerly numbered C126.) Lecture, three hours. A study of the principal features through representative works. May be concurrently scheduled with course C227. Mr. Dias.

**C128. Post-Romanticism and Naturalism in Portuguese Literature.** (Not the same as course C128 prior to Fall Quarter 1985.) Lecture, three hours. A study of the principal features through representative works. May be concurrently scheduled with course C228. Mr. Dias.

**C129. 20th-Century Portuguese Literature.** (Formerly numbered C136.) Lecture, three hours. A study of representative trends and authors. May be concurrently scheduled with course C229. Mr. Dias.

### Portuguese Lower Division Courses

No credit will be allowed for completing a less advanced course after completion of a more advanced course in grammar and/or composition.

1. **Elementary Portuguese.** Discussion, five hours; laboratory, one hour.
2. **Elementary Portuguese.** Discussion, five hours; laboratory, one hour. Prerequisite: course 1 or equivalent.
3. **Intermediate Portuguese.** Discussion, five hours; laboratory, one hour. Prerequisite: course 2 or equivalent.
4. **Portuguese Conversation (2 units each).** Discussion, three hours. Prerequisite: course 3 with a grade of B or better.
5. **Advanced Portuguese.** Prerequisite: course 3 or equivalent.

**M35. Spanish, Portuguese, and the Nature of Language.** (Same as Spanish M35.) Lecture, three hours. An introduction to language study within the context of Romance languages, focusing on Spanish and Portuguese. The nature of language: its structure, its diversity, its evolution, its socio-cultural settings, its literary uses. The study of language and its significance for other areas of human knowledge.

**M42. Civilization of Spain and Portugal.** (Same as Spanish M42.) Required of majors. Highlights of the civilization of Spain and Portugal, with emphasis on aspects of their artistic, economic, social, and historical development as background for upper division courses. Conducted in English. Mr. Reeve, Mr. Skirius.

**M44. Civilization of Spanish America and Brazil.** (Same as Spanish M44.) Required of majors. Highlights of the civilization of Spanish America and Brazil, with emphasis on aspects of their artistic, economic, social, and historical development as background for upper division courses. Conducted in English. Mr. Reeve, Mr. Skirius.
C132. Romanticism in Brazilian Literature. (Formerly numbered C132.) Lecture, three hours. A study of representative trends and authors. May be concurrently scheduled with course C232. Mr. Hulet

C133. Naturalism, Realism, and Symbolism in Brazilian Literature. (Formerly numbered C133.) Lecture, three hours. A study of representative trends and authors. May be concurrently scheduled with course C233. Mr. Hulet

C134. 20th-Century Brazilian Literature: Poetry and Drama. (Formerly numbered C134.) Lecture, three hours. A study of the principal features through representative works. May be concurrently scheduled with course C127. Mr. Dias

C135. 20th-Century Brazilian Literature: Novel. (Formerly numbered C135.) Lecture, three hours. A study of the most important Brazilian novelists. May be concurrently scheduled with course C234. Mr. Hulet

140. Portuguese, Brazilian, and African Literature in Translation. (Formerly numbered 140A-140B.) Lecture, three hours. Reading and discussion of selected works in translation. Papers and examinations are in English. Mr. Dias, Mr. Hulet

141. Film and Literature of the Portuguese-speaking World. (Formerly numbered 141B.) Lecture, three hours. Students with credit for course 197 will not receive credit for this course. A topical analysis (conducted in English) of the main literary and historical themes of Brazilian culture, through films and literary texts, from colonial beginnings to the present day. Mr. Hulet

197. Brazilian Film and Literature. Lecture, three and one-half hours. Prerequisite: course 25 or consent of instructor. Students with credit for course 141 will not receive credit for this course. A topical analysis (conducted in Portuguese) of the main literary and historical themes of Brazilian culture, through films and literary texts, from colonial beginnings to the present day. Mr. Hulet

199. Special Studies (2 to 4 units). Prerequisite: consent of adviser and instructor. Eight units may be applied toward the major requirements.

Graduate Courses

M200. Research Resources. (Same as Spanish M200.) Lecture, three hours. Identification and use of research resources for graduate students. Mr. Benitez, Mr. Smith

M201. Literary Theory and Criticism. (Same as Spanish M201.) Lecture, three hours. Definition, discussion, and application of the main currents of contemporary literary theory and criticism. Mr. Benitez, Mr. Otero

M203A-M203B. The Development of the Portuguese and Spanish Languages. (Same as Spanish M203A-M203B.) Intensive study of the historical development of the Portuguese and Spanish languages from their origin in spoken Latin. Mr. Otero, Mr. Smith

M244A-M244B. Generative Grammar. Lecture, three hours. Prerequisite: consent of instructor. Course 244A or consent of instructor is prerequisite to 244B. A generative approach to the Portuguese language, with some consideration of the bearing of syntax, semantics, and phonology on style, metaphor, and meter. Mr. Quicoli

M256. Synchronic Morphology and Phonology. Lecture, three hours. A study of theoretical synchronic linguistics as applied to Portuguese. Mr. Quicoli

C224. Medieval Portuguese Literature. (Formerly numbered C224A.) Lecture, three hours. A study of the main genres of medieval Portuguese and Galician literature through representative works. May be concurrently scheduled with course C124. Mr. Dias

C225. Renaissance Portuguese Literature. (Formerly numbered C225B.) Lecture, three hours. A study of the main genres of Renaissance Portuguese literature, with particular emphasis on the works of Luis Camoes. May be concurrently scheduled with course C125. Mr. Dias

C226. Baroque and Neoclassical Portuguese Literature. (Formerly numbered C226B.) Lecture, three hours. A study of the main genres of baroque and neoclassical Portuguese literature through representative works. May be concurrently scheduled with course C126. Mr. Dias

C227. Romanticism and Realism in Portuguese Literature. (Formerly numbered C227C.) Lecture, three hours. A study of the principal features through representative works. May be concurrently scheduled with course C127. Mr. Dias

C228. Post-Romanticism and Naturalism in Portuguese Literature. (Formerly numbered C228C.) Lecture, three hours. A study of representative trends and authors. May be concurrently scheduled with course C128. Mr. Dias

C229. 20th-Century Portuguese Literature. (Formerly numbered C229D.) Lecture, three hours. A study of representative trends and authors. May be concurrently scheduled with course C129. Mr. Dias

C231. Colonial Brazilian Literature. (Formerly numbered C231A.) Lecture, three hours. A study of the most important authors to 1830. May be concurrently scheduled with course C131. Mr. Hulet

C232. Romanticism in Brazilian Literature. (Formerly numbered C232B.) Lecture, three hours. A study of the principal features through representative works. May be concurrently scheduled with course C127. Mr. Dias

C233. Naturalism, Realism, and Symbolism in Brazilian Literature. (Formerly numbered C233C.) Lecture, three hours. A study of representative trends and authors. May be concurrently scheduled with course C133. Mr. Hulet

C234. 20th-Century Brazilian Literature: Poetry and Drama. (Formerly numbered C234D.) Lecture, three hours. A study of the principal features through representative works. May be concurrently scheduled with course C127. Mr. Dias

C235. 20th-Century Brazilian Literature: Novel. (Formerly numbered C235D.) Lecture, three hours. A study of the most important Brazilian novelists. May be concurrently scheduled with course C135. Mr. Hulet

C249. Folk Literature of the Spanish and Portuguese Worlds. (Same as Folklore M249 and Spanish M249.) Lecture, three hours. An intensive study of the folklore of the Spanish and Portuguese cultures as represented in (1) ballad and poetry, (2) narrative and drama, and (3) speech. Ms. Arora, Mr. Robe

M251A-M251B. Studies in Galician-Portuguese and Old Spanish. (Formerly numbered M251B.) Lecture, two hours. A study of the problems related to the historical development of Galegan-Portuguese and Old Spanish. Mr. Otero, Mr. Smith

252. Studies in Early Portuguese Literature. (Formerly numbered 252A-252B.) Lecture, two hours. Mr. Dias

253. Studies in Modern Portuguese Literature. (Formerly numbered 253A-253B.) Lecture, two hours. Mr. Dias

254. Studies in Early Brazilian Literature. (Formerly numbered 254A-254B.) Lecture, two hours. Mr. Hulet

255. Studies in Modern Brazilian Literature. (Formerly numbered 255A-255B.) Lecture, two hours. Mr. Hulet

370. The Teaching of Portuguese in the Secondary School. For future teachers in this field. Mr. Hulet

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading. Mr. Quicoli

596. Directed Individual Study or Research (4 to 8 units). Prerequisite: consent of graduate adviser and Chair. Study or research in areas or subjects not offered as regular courses. No more than eight units may be applied toward the M.A. course requirements.

597. Preparation for Graduate Examinations (4 to 8 units). Prerequisites: official acceptance of candidacy by the department, consent of graduate adviser. Individual preparation for M.A. comprehensive examination or Ph.D. qualifying examinations. May be taken only once for each degree examination and only in the quarter that comprehensive or qualifying examinations are to be taken. S/U grading.


Speech

232 Royce Hall, 825-3303

Professors

Donald E. Hargis, Ph.D., Emeritus
Charles W. Lomas, Ph.D., Emeritus

Associate Professors

Neil M. Malamuth, Ph.D. (Communication Studies), Chair
Paul Irwin Rosenthal, Ph.D. (Communication Studies)
Ralph Richardson, Ph.D., Emeritus

Lecturers

Dale V. Atkins, Ph.D.
Dee A. Bridgewater, Ph.D.
Stephen A. Doyle
Eunieh Oye, Ph.D.
Marie S. Gregory
Thomas E. Miller
Sonya H. Packer

There is no major in speech; however, the following undergraduate courses are offered for interested students:

Lower Division Courses

1. Principles of Oral Communication. Prerequisite: satisfaction of Subject A requirement. Theory and practice of informal public speaking, including selection of content, organization of ideas, language, and delivery; practice in extemporaneous and manuscript speaking; training in critical analysis through reading and listening to contemporary speeches.

2. Public Speaking and Discussion. Prerequisite: course 1. A continuation of course 1, with special emphasis on group discussions, panels, symposia, debates, and formal public speaking. Critical analysis of speeches in both contemporary and historical settings.
Upper Division Courses

107. Principles of Argumentation. Analysis of propositions, tests of evidence, briefing. Study of hindrances to clear thinking, ambiguity of terms, and prejudices. The critical analysis of selected argumentative speeches. Mr. Miller

144. Speech and Community Action. Prerequisite: consent of instructor. An intensive laboratory-based, observation-oriented study of speech and communication practices of action groups, protest groups, and public officials involved with the metropolitan Los Angeles urban crises. Mr. Richardson

175. The Speeches of Abraham Lincoln. Students are introduced to the full span of Lincoln's speaking career. His methods of preparation, the influence of associates, his style, his delivery, and lastly, his effect on the nation are studied. Mr. Richardson

190A-190B. Forensics (2 units each). Prerequisite: consent of instructor. May be repeated once for credit. Mr. Miller

191. Analysis and Briefing (2 units). Intensive study of selected political or social issues; preparation of bibliography; analysis and evaluation of issues and arguments. May be repeated once for credit. Mr. Miller

197. Proseminar in Rhetoric. Prerequisite: senior standing or consent of instructor. A variable topic course involving intensive study of discourse associated with a single major issue or personality.

199. Special Studies (2 to 4 units). Prerequisites: senior standing, consent of instructor.

Study of Religion

See Religion, Study of

Teacher Education

The College of Letters and Science offers a program of courses through which you may receive credit toward a credential to teach in California elementary schools. For details, see “Diversified Liberal Arts” earlier in this chapter.

Urban Studies or Organizational Studies (Interdepartmental)

4289 Bunche Hall, 825-4331

Scope and Objectives

Cities and organizations are multifaceted and can usefully be explored from more than one disciplinary perspective. The Special Program in Urban Studies or Organizational Studies brings together students and faculty from the Departments of History, Political Science, Economics, Sociology, Psychology, and Geography who share an interest in the modern city or in modern organizations. The programs give students a solid grounding in the urban or organizational perspectives and methods of at least two departments. Each of the programs must be taken in conjunction with a major in the social sciences.

Special Undergraduate Programs

You may elect to combine one of these programs with a departmental major and may petition to have the area of specialization recognized with the bachelor’s degree.

The option of completing an individual major in urban studies or organizational studies is also open to qualified students. For more information on individual majors, see the beginning of Chapter 5.
If you have a departmental major, you should seek advising in your major department. If you are interested in the individual major, consult a Letters and Science counselor.

Courses within each specialization must be taken for a letter grade. The specializations must be taken in conjunction with a major in the division of social sciences.

Preparation for the Programs
Required: At least five of the following courses appropriate to the courses to be taken in the specialization: Economics 1 and 2; Sociology 18 and 109 or equivalent; Political Science 40 (urban studies), 80 (organizational studies); Psychology 10; Sociology 1; Geography 4.

Urban Studies Specialization
Required: (1) At least three courses outside the major department selected from Political Science 182A, Sociology 125, Economics 120, Geography 150, Anthropology 167, Psychology 168; (2) a minimum of three courses selected from the following suites outside the major department: Political Science 180, 182B, 188B; Economics 121, 130, 133; Sociology 124, 154, 155; Geography 145, 146, 150, 151, 152, 156; History 154A, 154B, 154C, 154D; Psychology 127, 135, 137A; (3) internship experience in an urban governmental or community service organization.

Organizational Studies Specialization
Required: (1) At least three courses outside the major department selected from Political Science 190, Sociology 121, 141, Management 190; (2) a minimum of three courses selected from the following suites outside the major department: Political Science 142, 145, 146, 186; Economics 101A, 147A, 147B, 170, 171; Sociology 124, 140, 152, 154; Geography 146, 148, 149; Psychology 135, 137A, 148; (3) internship experience in a governmental or service organization.

For further information, contact Professor Robert Fried at the program address.

Women's Studies
(Interdepartmental)

240 Kinsey Hall, 206-8101

Professors
Edward A. Alpers, Ph.D. (History)
Helen S. Astin, Ph.D. (Education)
Martha Banta, Ph.D. (English)
Jeanne M. Giovannoni, Ph.D. (Social Welfare)
Dolores Hayden, M.Arch. (Architecture and Urban Planning)

Nancy M. Henley, Ph.D. (Psychology), Director
Christine Littleton, J.D. (Law), Acting
Anne K. Mellor, Ph.D. (English)
L. Anne Peplau, Ph.D. (Psychology)
Kathryn Kish Sklar, Ph.D. (History)
Ruth B. Yezell, Ph.D. (English)

Associate Professors
Ann L.T. Bergen, Ph.D. (Classics)
Neil M. Malamuth, Ph.D. (Communication Studies)
Karen E. Rowe, Ph.D. (English)

Assistant Professors
Ruth Block, Ph.D. (History)
Susan Brienza, Ph.D. (English)
Jennie Joe, Ph.D. (Anthropology)
Nancy E. Levine, Ph.D. (Anthropology)
Vicki M. Mays, Ph.D. (Psychology)
Sara Melzer, Ph.D. (French)
Gary A. Richwald, M.D., M.P.H. (Public Health)
Sylvia Rodriguez, Ph.D. (Anthropology)

Visiting Assistant Professors
Irene Diamond, Ph.D. (Political Science)
Joan L. Duda, Ph.D. (Kinesiology)

Visiting Lecturer
Mary Elizabeth Perry, Ph.D. (History)

Scope and Objectives
The Women's Studies Program, established in 1975, is an interdisciplinary academic program offering an undergraduate specialization. Students completing a bachelor's degree in the College of Letters and Science may petition to receive a women's studies specialization in addition to a major in their chosen discipline.

The program spans departments, disciplines, and ideologies. It integrates the study of women — their social contributions and cultural experiences — into traditional academic fields, drawing on new research and theories. Women's studies offers tools for personal growth, new knowledge about women and men, and new perspectives for understanding the past and present and influencing the future.

The core faculty members who teach women's studies courses come from various UCLA departments and professional schools. Many professionals within and outside the University contribute their time, expertise, and enthusiasm. The program sponsors a Student Association for Women's Studies and assists other student groups with extracurricular programming on feminist issues. Research in women's studies is sponsored in cooperation with the recently established Center for the Study of Women. A library of information related to women's studies is housed in the program office.

While no formal graduate program exists at UCLA at this time, graduate students are invited to use the program's resources, attend lectures and events, and participate in the faculty seminar on women, culture, and theory.

Special Undergraduate Program

Admission
A women's studies committee composed of the director, faculty members, and a student representative sets program policies and curricula. To be admitted to the specialization, you must have a grade-point average of 2.0 or higher and must formally register with the program. You are encouraged to declare your specialization in women's studies as early as possible and to discuss your proposed course of study with the director or undergraduate advisor.

Requirements for the Specialization
Students participating in this program are required to complete both a departmental major and the women's studies specialization. There are no lower division prerequisites. You must take two core courses (Women's Studies 100 and M197), plus six upper division courses from the "Supporting Courses" lists. At least two of the six courses must be taken in departments other than the major department, and two may be experimental courses offered by the Council on Educational Development (CED). No more than four units of course 199 may be applied.

You are encouraged to draw on the University's diverse resources in creating your specialization program. You may pursue traditional and/or innovative subjects in fields ranging from the humanities and fine arts to the social and life sciences. You may petition to have diverse courses accepted, including courses outside the College of Letters and Science, independent studies, or field study courses.

All courses applied to the specialization must be taken for a letter grade, and you must have a GPA of 2.5 or higher in women's studies courses to receive credit for completing the program. Courses in which you receive a grade below C may not be applied toward the specialization.

Upper Division Core Courses

100. Introduction to Women's Studies. Lecture, three hours. Intended for sophomores and first-quarter juniors, the course is required of students who wish to graduate with a specialization in women's studies. Introduces students to the interdisciplinary and cross-cultural study of women in preparation for further investigation within traditional disciplines.

Ms. Henley
M197. Senior Seminar in Women's Studies. (Formerly numbered 197.) (Same as Education M197.) Discussion, three hours; laboratory, one hour. Prerequisites: course 100 plus two other women's studies courses; for seniors and juniors: consent of instructor. Designed for students completing work in women's studies. Each student pursues research on a specific topic concerning women, explores frameworks for understanding female experience (biological, economic, historical, and psychological), and refines methods for research. Fulfills Letters and Science social science or humanities breadth requirement. Ms. Astin, Ms. Henley

Supporting Upper Division Courses

M102. Sex Roles and Society. (Same as Sociology M102A.) Lecture, three hours; discussion, one hour. Prerequisite: course 100 or Sociology 1 or consent of instructor. The course considers sociological literature pertaining to the development and functions of sex roles in society from a critical perspective. Topics include socialization and gender norms, contemporary sex role strain, and the challenge to traditional notions of sex roles posed by feminist critique.

M107. Women in Literature. (Same as English M107.) Prerequisite: satisfaction of Subject A requirement. A survey of literary works by and about women, the course examines the delineation of women in English and American literature, studies in historical and contemporary themes, and the evolution of forms and techniques in poetry, fiction, and biography. Ms. Meier, Ms. Rowe, Ms. Yeazell

M137E. Work Behavior of Women and Men. (Same as Psychology M137E.) Prerequisites: course 100 or Psychology 10, junior or senior standing. Examination of work behavior of men and women. Topics include antecedents of career choice, job finding, leadership, performance evaluation, discrimination and evaluation bias, job satisfaction, and interdependence of work and family roles.

M148. Women in Higher Education. (Same as Education M148.) Prerequisite: upper division standing. The course examines the education and career development of women in higher education. Specifically, it focuses on undergraduate and graduate women; women faculty and administrators; curricula, programs, and counseling services designed to enhance women's educational and career development, affirmative action, and other recent legislation. Ms. Astin

M158. Women in Italian Culture. (Same as Italian M158.) Lecture, three hours. The course is designed with the intent of examining the role that women have played in Italian society. It concentrates alternatively on the world of the medieval and Renaissance "matriarch" and on the "liberated" women of our times. Historical and political documents and social and religious taboos are presented and discussed, together with other data derived from literature and art. Italian majors are required to read texts in Italian and to prepare papers written in Italian.

M163. Women in Culture and Society. (Same as Anthropology M163.) Prerequisite: Anthropology 5 or 22. A systematic approach to the study of sex roles from an anthropological perspective. A critical review of relevant theoretical issues supported by ethnographic material from traditional cultures and contemporary American culture. Ms. Joe, Ms. Levine, Ms. Rodriguez

M165. The Psychology of Gender. (Same as Psychology M165.) Lecture, two hours; discussion, one hour. The course considers 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 the impact of gender on social interaction. Ms. Peplau

170. Jurisprudence of Sexual Equality. Prerequisites: course 100 or Political Science 10 or Philosophy 6 or 9 or consent of instructor. The course explores models of equality described and/or advocated by legal theorists — equality of opportunity, equality of outcome, equality of respect, etc. — using specific problems of women (e.g., sexual harassment or pregnancy leave policy) for purposes of comparison and critique. Ms. Littleton

M172. The Afro-American Woman in the U.S. (Same as Afro-American Studies M172 and Psychology M172.) Prerequisite: upper division standing. The course focuses on the impact of the social, psychological, political, and economic forces which impact on the interpersonal relationships of Afro-American women as members of a large society and as members of their biological and ethnic group. Ms. Mays

Supporting Courses in Other Departments

Check with the program office for additional course listings.

Anthropology 151. Marriage, Family, and Kinship
Asian American Studies 197. Topics in Asian American Studies: Women

Classics 150A. Origins of the Western View of Women: The Female in Greek Thought
150B. Origins of the Western View of Women: The Female in Roman and Early Christian Thought

Communication Studies 153. The Media and Aggression Against Women

English 180X. Specialized Studies in Literature

French 158. Woman in French Literature

History 136I. Topics in European History: Prostitution in the Western World, 1550 to the Present
136J. Topics in European History: Women (Interdepartmental)
156C-156D-156E. Social History of American Women

Sociology 137F. Special Topics in Social Psychology: Gender and Close Relationships

Public Health 176E. Family and Sexual Violence

World Arts and Cultures (Interdepartmental)

An intercollege, interdepartmental major in world arts and cultures is open to students in both the College of Letters and Science and the College of Fine Arts. You enroll in the college of your choice and fulfill the breadth requirements of that college. For details on this undergraduate major, see Chapter 6 on the College of Fine Arts.
UCLA's College of Fine Arts, the only undergraduate college of its kind in the University of California system, is a young, dynamic center for higher education in the arts. Its distinguished faculty of more than 200 includes visiting artists and scholars who bring a variety of exciting viewpoints to enrich the study of the arts. Its goal is to educate the artist who is connected to society.

The College of Fine Arts consists of four departments: Art, Design, and Art History; Dance; Music; and Theater Arts. The curriculum is designed to provide fine arts students with intensive training in their major within the broader liberal arts education of the University. The creative or performing artist, as well as the historian or critic, is provided an outstanding academic program.

Fine arts majors explore, through research and practice, the unique creativity of world cultures. Nonmajors are offered an educational program intended to foster a better understanding of the visual and performing arts. The college continues to support extracurricular programs in the arts for the benefit not only of the University community, but for the public as well. Such efforts include art gallery and museum exhibits, plays, films, and music and dance concerts.

Photo: Anna Mahler's impressive Tower of Masks dominates the Macgowan Hall courtyard.
The four departments of the College of Fine Arts both borrow from and add to the rich and varied cultural life of the campus. Students in the Department of Art, Design, and Art History are taught to understand the broad panorama of the visual arts, while those in the Dance Department have an opportunity to study ballet, modern, and ethnic dance forms. The Music Department offers specializations in composition and theory, music education, ethnomusicology, history and literature, performance, and systematic musicology. Students in the Theater Arts Department major in either theater or motion picture/television.

World arts and cultures (formerly ethnic arts) is an undergraduate major which integrates art, music, theater arts, anthropology, and folklore and mythology into one unique program. This interdisciplinary major is offered jointly by the

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<tr>
<th>Majors and Degrees Offered</th>
<th>B.A., M.A., M.F.A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>B.A., M.A., Ph.D.</td>
</tr>
<tr>
<td>Art History</td>
<td>B.A., M.A., M.F.A.</td>
</tr>
<tr>
<td>Dance</td>
<td>B.A., M.A.</td>
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<tr>
<td>Design</td>
<td>B.A., M.A., M.F.A.</td>
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<tr>
<td>Motion Picture/Television</td>
<td>B.A., M.A., M.F.A., Ph.D.</td>
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<tr>
<td>Music</td>
<td>B.A., M.A., M.F.A., Ph.D.</td>
</tr>
<tr>
<td>Theater</td>
<td>B.A., M.A., M.F.A., Ph.D.</td>
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<tr>
<td>World Arts and Cultures</td>
<td>B.A.</td>
</tr>
</tbody>
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College of Fine Arts and the College of Letters and Science.

An informative brochure on the UCLA College of Fine Arts is available from the Student Services Office, A239 Murphy Hall, UCLA, Los Angeles, CA 90024.

If you are interested in obtaining teaching credentials for California elementary and secondary schools, consult the Graduate School of Education, 201 Moore Hall.

Bachelor of Arts Degrees

Admission

In addition to the University of California Undergraduate Application, departments in the College of Fine Arts require auditions, portfolio, or evidence of creativity. Detailed information on departmental requirements will be mailed to you on receipt of the application. Deadline date for applications is November 30, 1985, for admission in Fall Quarter 1986.

The Study List

Each quarter the student Study List must include from 12 to 17 units. After your first quarter, you may petition to carry more than 17 units (up to 20 units maximum) if you have an overall grade-point average of 3.0 (B) or better and have attained at least a B average in the preceding quarter with all courses passed. The petitions must be filed and approved by the Dean of the college by the end of the fourth week of instruction.

If you have not filed your Study List by the end of the second week of classes, you must obtain the consent of the Dean of the college to continue for that quarter.

Graduate Courses

Undergraduate students who wish to take courses numbered in the 200 series must petition for advance approval of the department Chair and the Dean of the college and must meet the specific qualifications. Courses numbered in the 400 and 500 series may not be applied toward the degree.

Degree Requirements

Each student must meet six kinds of requirements for the B.A. degree: University, college, and unit requirements, as well as residence, major, and scholarship requirements. The requirements are as follows.

University Requirements

For information on the Subject A and American History and Institutions requirements, see "Undergraduate Degree Requirements" in Chapter 2 of this catalog.

College Requirements

The general requirements of the College of Fine Arts must be completed with a grade-point average of 2.0 or better.

For specific courses that will fulfill the general college requirements and for courses preceded by M or C, consult the college office before enrolling. Courses listed below are used only as a guideline for 1985-86.

English Composition and Rhetoric (4 Units)

English 3 with a grade of C (2.0) or better must be completed by the end of the freshman year and may not be taken on a Passed/Not Passed basis.

Critical Reading and Writing (4 Units)

One course from English 4, *Humanities 2A, 2B, or 2C with a grade of C (2.0) or better must be completed by the end of the sophomore year and may not be taken on a Passed/Not Passed basis.

Foreign Language (12 Units)

(1) Three quarters of one college language other than high school language or (2) level three (four units) of the same language taken in high school are required, with the other eight units made up from courses below in science, social science, or humanities. Foreign students whose entire secondary education has been taken in a language other than English may petition to be exempt from the foreign language requirement.

If Humanities 2A, 2B, or 2C is taken to meet the critical reading and writing requirement, it may not also satisfy the literature requirement. English 4 may never be applied toward the literature requirement.

Science/Mathematics (8 Units)

One course in physical or biological science and one course in natural science, mathematics, or another physical/biological science are required.

Physical and Biological Science Courses:
- Astronomy 3
- Atmospheric Sciences 2, 3
- Biology (except Biology 10, 30)
- Chemistry (except Chemistry 2 for students with high school chemistry)
- Earth and space sciences (except Earth and Space Sciences 8, 20, 115)
- Honors College 44
- Kinesiology 12A, 12B, 13, 14
- Microbiology
- Physics (except Physics 10)
Other Natural Science and Mathematics Courses: Anthropology 1, 2, 11, 124, 126P, 127P; Biology 10; Earth and Space Sciences 8, 20, 115; Geography 1, 2, 5; Honors Collegium 40, 41, 45; mathematics (no remedial, historical, or statistical); Physics 10; Psychology 15, 115, 116.

Social Science (12 Units)
Two courses from the Department of History (one in any period prior to 1600, one in any period after 1600) and one other social science course are required.

Other Social Science Courses: Anthropology (except Anthropology 1, 2, 11, 124, 126P, 127P, 156); economics (principles, history, and theory only); geography (except Geography 1, 2, 5); history (except medical or geological); Honors Collegium 42, 56, 60, 61, 63, 64, 65; Near Eastern languages (Ancient Near East 163A-163B, Jewish Studies 140A-140B, 141, 142); political science (except courses dealing with civil rights and law); psychology (except Psychology 15, 115, 116, education, counseling, family life, or child care); sociology (except mass communications, civil rights, education, law, criminology, marriage, family life, or child care). Note: Survey courses in history which cover "antiquity to present" may be applied only on history after 1600 or on other social science courses.

Humanities (12 Units)
One course in the arts, one course in literature, and one course in philosophy and/or religion are required. Performance, studio, or movie/film courses and those in your major department do not meet this requirement.

The Arts Courses: Architecture 189, 191; Art History 50 series or 101A through 121B; Classics 151A, 151B, 151C, 151D (except art history majors); Dance 134A, 134B, 180A through 187A; Folklore and Mythology 118, 124; Music 2A-2B, 113A-113B, 130 through 135C, 138 through 148, 151A through 153C, 157 through 159, 188A-188B, 189; Theater Arts 5A, 5B, 5C, 102A through 103B, 104D through 105, 189.

Literature Courses: Selected courses in English, ethnic, American, or foreign literature, including works in translation; Classics 10, 20; East Asian Languages and Cultures 129; Folklore and Mythology 15, 101, 108, 130, 131; German 119A through 119J; Honors Collegium 51, 52, 54; humanities, except those that are cross-listed (C courses); Near Eastern languages (Hebrew 120, Iranian 140, Jewish Studies M150A-150B, 151A-151B).

Philosophy/Religion Courses: Anthropology 156; Classics 166A, 166B; East Asian Languages and Cultures 139, 172, 173, 174, 183, 184; Honors Collegium 50, 57; Near Eastern languages (Ancient Near East 130, Iranian 170, Islamics 110); philosophy (all lower division and selected upper division courses). A few course areas that may NOT be applied toward the general college requirements are business, communications, creative writing, criminology, education, engineering, family life, marriage and child care, field studies, home economics, independent studies, interdisciplinary studies, journalism, law, mass media, public health, and speech. Also no 196, 199, or CED courses and no seminars, pro-seminars, or freshman seminars may be applied toward the general requirements of the college.

Additional Nonmajor Department Requirements
Three upper division courses (12 units) must be completed outside your major department. These courses may not be applied toward the general college requirements. Studio, performance, activity, 199, and field studies courses may not be applied as additional nonmajor courses.

Unit Requirements
You must complete for credit, with a passing grade, no less than 180 units and no more than 208 units, of which at least 64 units must be upper division courses (numbered 100 through 199). No more than 16 units of CED courses and eight units of freshman seminars may be applied toward the degree. Credit for 199 courses is limited to 16 units, eight of which may be applied to the major. All 199 courses must be taken for a letter grade.

University 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.

Credit earned through the CEEB Advanced Placement Tests may be applied toward the general college requirements. Portions of Advanced Placement Test credit may be evaluated by corresponding UCLA course numbers (e.g., History 1C). If you take the equivalent UCLA course, unit credit for such duplication will be deducted before graduation.

Residence Requirements
You are "in residence" while enrolled and attending classes at UCLA as a major in the College of Fine Arts. Of the last 45 units completed for the bachelor's degree, 35 must be earned in residence in the College of Fine Arts. (28 units must be upper division — 16 of which must be in the major department). No more than 18 of the 35 units may be completed in UCLA Summer Session.

Courses in University Extension (either class or correspondence) may not be applied toward any part of the residence requirements.

Major Requirements
A major is composed of not less than 14 courses (56 units), including at least nine upper division courses (36 units). Most majors include both lower and upper division courses. Those listed as "Preparation for the Major" (lower division) must be completed before upper division major work is undertaken.

You must complete your major with a scholarship average of at least a 2.0 (C) in all courses in order to remain in the major and must be recommended by the chair of your major department. All courses in your major department must be taken for a letter grade.

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

Any department offering a major in the College of Fine Arts may require a general final examination.

Scholarship and Minimum Progress
A 2.0 (C) average is required in all work attempted at the University of California, exclusive of courses in University Extension and those graded Passed/Not Passed. A C average is also required in all upper division courses in the major taken at the University, as well as in all courses applying to the general college and University requirements.

Minimum Progress: You are expected to complete satisfactorily at least 36 units during three consecutive quarters in residence; you will be placed on probation if you fail to pass these units. You will be subject to dismissal if you fail to pass at least 32 units in three consecutive regular quarters in residence.

World Arts and Cultures
An intercollege, interdepartmental major in world arts and cultures is open to students in both the College of Fine Arts and the College of Letters and Science. You enroll in the college of your choice and fulfill the breadth requirements of that college. Counseling is available in the department of your concentration. For details on this major, see the "World Arts and Cultures" section later in this chapter.

Honors
To receive Dean's Honors in the College of Fine Arts, you must have at least 12 graded units per quarter 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 will be posted on your transcript for the appropriate quarter.

Honors with the Bachelor's Degree are awarded to students with superior grade-point averages. To be eligible, you 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: Cum laude, an overall average of 3.55; Magna cum laude, 3.65; Summa cum laude, 3.7.
Counseling and Program Planning

The College of Fine Arts offers preadmission advising, program planning in the major and general degree requirements, and individual meetings with departmental counselors and faculty, including a yearly degree check sent to each student. 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, College of Fine Arts, A239 Murphy Hall (825-9705).

Graduate Study

The advanced degree programs offered in the College of Fine Arts provide graduate students with unique research opportunities when combined with special resources, such as the Film, TV, and Radio Archives, the University Research Library, the special collections of the Art, Music, and Theater Arts Libraries, and the University's exhibition and performance halls.

The College of Fine Arts cooperates with UCLA's Graduate School of Management in offering a Master of Business Administration (M.B.A.) in Arts Management. Participating students serve quarter-long internships with such professional arts organizations as the Los Angeles County Museum of Art, the Mark Taper Forum, and the Los Angeles Philharmonic Orchestra.

The Producers Program is a new M.F.A. management program in the Department of Theater Arts, with options in either theater or motion picture/television.

A program in teaching is offered by the Graduate School of Education in each of the fine arts areas.

Fellowships, grants, and assistantships are available through the Dean of the Graduate Division. The Graduate Affirmative Affairs Office provides counseling, academic support, and financial assistance to ethnic minority students.

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 a foreign institution, each department in the college has limitations and additional requirements. In general, samples of your work (dance audition, art portfolio, playwriting sample, etc.) are required. Detailed information can be found in the departmental listings which follow.

Other Requirements

Requirements to fulfill each degree objective vary according to the degree and the department. See the departmental listings which follow for specific requirements and procedures.

Art, Design, and Art History

1300 Dickson Art Center, 825-3281

Professors
Samuel Amato, B.F.A. (Art)
Albert Boime, Ph.D. (Art History)
William J. Binc (Art)
Raymond B. Brown, M.A. (Art), Chair
Jack B. Carter, M.A. (Design)
Susan B. Downey, Ph.D. (Art History)
Elliott L. Elgart, M.F.A. (Art)
Robert H. Gray, M.F.A.
Robert F. Heinecken, M.A. (Art)
J. Bernard Kester, M.A. (Design)
David M. Kunzle, Ph.D. (Art History)
Vasa Milinčič (Design)
Lee Mulligan (Art)
Carlo Pedretti, M.A. (Art History and Armand Hammer Professor of Leonardo Studies)
Jan Stussy, M.F.A. (Art)

Emeritus Professors
Laura F. Andreson, M.A.
Alexander Badawy, D.L.A., Ph.D.
E. Maurice Bloch, Ph.D.
Archive V. Fetty, M.A.
Thomas Jennings, M.A.
Lester D. Longman, Ph.D., L.H.D., D.F.A.
John A. Neuhrat
Gordon M. Nunes, M.A.
Katharina Otto-Dorn, Ph.D.
Frederick S. Wignat, M.A.

Associate Professors
James W. Bassler, M.A. (Design)
William C. Brown, M.A. (Design)
Chris Burden, M.F.A., Acting (Art)
Ioli Kalavrezou-Mazeiner, Ph.D. (Art History)
Mitsuru Kataoka, M.A. (Design)
Cecelia F. Klein, Ph.D. (Art History)
Donald F. McCallum, Ph.D. (Art History)
Martin J. Powers, Ph.D. (Art History)
Arnold Rubin, Ph.D. (Art History)
Adrian Saxe, B.F.A. (Design)
Nathan Shapira, Dottore in Architettura (Design)

Assistant Professors
Kathleen A. Bick (Design)
Irene A. Bierman, Ph.D. (Art History)
Barbara Drucker, M.F.A. (Art)
Alice M. McCloskey, M.A. (Design)
Charles Ray, M.F.A. (Art)
Joanna Woods-Marsden, Ph.D. (Art History)
Madeleine Sunkees, B.Ed., Emeritus

Adjunct Assistant Professor
Edith A. Tonelli, Ph.D. (Art History)

Visiting Lecturers
Shelley M. Bennett, Ph.D. (Art History)
Leslie Biler, M.A. (Art)
Carol Blake, M.F.A. (Art)
Jerrold Burchman, M.A. (Art)
Den Chadwick (Design)
Laddie John Dill (Art)
Art Durinaki, M.F.A. (Design)
Avi Engel, M.F.A. (Design)
Roger Herman, M.F.A. (Art)
Clayton Lee, M.F.A. (Design)
Paul McCarthy, M.F.A. (Art)
Alexis Smith (Art)
Don Suggs, M.F.A. (Art)
Lois Swinmore, M.F.A. (Design)
Jeff Weiss, M.F.A. (Art)
Jean S. Weiss, Ph.D. (Art History)
Rush White, M.F.A. (Art)

Scope and Objectives

As the department name indicates, art, design, and art history are largely autonomous divisions. Scope and objectives are different for each, although all fields lead to Bachelor of Arts and Master of Arts degrees and all benefit from the rich and varied art resources at UCLA and in the Los Angeles community. Also offered are a Master of Fine Arts in Art and a Ph.D. in Art History.

Art courses include painting and drawing, sculpture, printmaking, photography, and new forms and concepts (which include performance, installation, and video). Students are introduced to diverse media and ideas in lower division courses and have the opportunity to specialize in upper division. Individual expression is encouraged in a general way for those who wish careers requiring art-related knowledge and in a specific sense for those who go on to careers as professional artists.

Art history courses survey Western and non-Western art from earliest human history to the present. Students learn to treat artistic monuments and trends from a historical point of view, analytically rather than subjectively. This curriculum prepares students for careers in which a broad knowledge of art is important and provides students preparing for graduate study with a foundation for research requiring independent critical judgment.

Design courses teach skills and organizational concepts necessary to application of art in contemporary life, including studies in visual communication (graphics, video, electronic imagery), costume, ceramics, textiles, fiber, industrial, product, and interior space design.

Bachelor of Arts in Art

Preparation for the Major

Required: Art 5A, 5B, 5C, 15, 21, 22, and one course from Art History 50, 51, 54, 55, 56, 57.

The Major

Required: A minimum of 14 upper division courses, including Art 130, 133, 137, 140, 145, 147, 148, and 149, one course from Art History
101A through 121B, and five courses of art electives. It is recommended that you have each quarter's program approved by a departmental adviser.

**Bachelor of Arts in Art History**

**Preparation for the Major**

*Required:* Art History 50, 51, 54, 55, 56, 57.

**The Major**

*Required:* Twelve courses of upper division art history as follows:

1. A total of nine courses from the following nine areas (at least three courses in one area for the concentration, at least one course each in four of the remaining areas, and two additional courses from any of the nine areas):
   - (a) 101A, 101B, 101C, 102
   - (b) 103A, 103B, 103C, 103D, 103E
   - (c) 104A, 104B, C104C
   - (d) 105A, 105B, 105C, 105D, 105E
   - (f) 110A, 110B, 110C, 110D, 110E, 120C, 121B
   - (g) 112A, 112B, 112C
   - (h) 114A, 114B, 114C, 114D, C115A, C115B, C115C, C115D, C115E, C115F

2. Three art history electives which may include courses 125, 197, 199 (design or studio courses do not apply as electives), and no more than four units of Classics 151A, 151B, 151C, 151D.

In addition to the 12 courses (48 units) of upper division art history, three upper division courses from other departments related to the area of concentration are to be selected.

3. Two quarters of one foreign language or equivalent. The language should be related to the concentration area and is in addition to the college foreign language requirements.

4. It is recommended that you have each quarter’s program approved by a departmental adviser.

**Bachelor of Arts in Design**

**Preparation for the Major**

*Required:* Design 30A, 30B, 31A, 31B, 32A, 32B, four courses from 33A through 33G, and one course from Art History 50, 51, 54, 55, 56, 57.

**The Major**

*Required:* A minimum of 12 upper division courses, including eight courses from Design 161A through 172B and four courses of art electives.

It is recommended that you have each quarter’s program approved by a departmental adviser.

**Master of Arts in Art History**

**Art Specialty**

**Admission**

Students are admitted in Fall Quarter only. Regular admission requires a B.A. or equivalent and faculty consent following the annual review of creative work in February. Applicants must submit slides (maximum 20) or videotape (if applying to the video field) to the Graduate Assistant, Department of Art, Design, and Art History, 1300 Dickson, UCLA, Los Angeles, CA 90024.

Provisional admission may be granted by work with faculty sponsors for three quarters, pending reconsideration of regular admission.

**Major Fields or Subdisciplines**

Drawing, painting, sculpture, printmaking, photography, video, new forms and concepts. No limit to the variations, extent, or value of these designations is intended.

**Course Requirements**

A minimum of 36 quarter units in the department in courses 101A through 295 is required, with a B average or better.

Within those 36 units, a minimum of 20 quarter units in the 200 series must be taken in the field of specialization.

An additional 36 quarter units of art history, theory, and criticism in undergraduate and/or graduate study are required (for students with little or no art history in undergraduate work, some or all of these units may be taken as electives beyond the 20 units of graduate coursework required). Subjects related to your special interest may be substituted by petition.

A total of eight units of Art 596 may be applied toward the 36 units required for the degree; four units may be applied toward the graduate course requirement.

**Comprehensive Examination Plan**

Each degree is granted on the basis of the quality of work as demonstrated in the exhibition which accompanies the final comprehensive examination. The number of units of credit attained is irrelevant to this judgment.

A preconcluding review of work precedes the final comprehensive examination. The examination, usually oral, includes a formal exhibition of work and a document of vita, photo records of works, and a statement of the artist. The document is retained as property of the University.

**Design Specialty**

**Admission**

Students are admitted in Fall, Winter, and Spring Quarters. An acceptable portfolio is required, in the form of slides (maximum 20) or videotape (if applying to the electronic imagery field). Acceptance is by a majority vote of the design faculty.

Applicants who have a B.A. degree or equivalent may be admitted on an unconditional basis or on a provisional basis. If you are admitted on an unconditional basis, an initial advisory committee is formed to guide you in your studies. Provisional admission is recommended for two quarters when you show great promise, but your grade-point average is below 3.0, preparation for the graduate area of specialization is insufficient as demonstrated in your portfolio, or undergraduate preparation is inadequate as indicated in transcripts. An advisory committee is formed to outline a program of study that will allow you to continue on an unconditional basis.

**Major Fields or Subdisciplines**

Communication imagery, image transfer, electronic imagery, computer imagery, costume, ceramics, fiber structures, textiles, industrial design, exhibition design.

**Course Requirements**

A minimum of 36 quarter units in the department (or nondepartmental courses with the graduate advisor's consent) in courses 101A through 295 (and possibly 596) is required, with a B average. These must include a minimum of 20 quarter units of design courses numbered above 200, of which at least eight units must be from Design 290A-290B-290C and of which at least eight units must be devoted to a comprehensive project in your area of study. In addition, eight quarter units of art history are required (if you have a B.A. or B.F.A. in Art which includes a background in the history of art, you may substitute eight units in other courses that are germane to your graduate pursuit).

A total of eight units of course 596 may be applied toward the 36 units required for the degree; four units may be applied toward the graduate course requirement.

**Comprehensive Examination Plan**

The comprehensive examination (offered each quarter) consists of an oral examination and a concentrated body of work which is presented as the master's statement. Also required is an accompanying record of the project, consisting of documentation in the form of slides of physical work, research material, and other visual material, and which may include a written statement as determined by the graduate guidance committee.
Master of Arts in Art History

Admission

A minimum grade-point average of 3.25 overall and 3.5 in upper division art history courses is required. The Graduate Record Examination (GRE) is required, although no minimum score has been established. Three letters of recommendation (preferably from art historians) are required. The statement of purpose submitted with the application is given weight in the evaluation and should be as specific as possible about your interests in art history. In addition, you must have completed six full courses in the history of art (grade of B or better and not including studio courses), with at least two courses in each group noted below. Specific areas may not be offered in satisfaction of more than one requirement.

Group A: (1) Egyptian, (2) ancient Near East, (3) classical, (4) medieval, (5) Renaissance, (6) baroque, (7) modern, and (8) American.


Applicants demonstrating exceptional promise but lacking some or all of the six required courses may, at the discretion of the graduate review committee, be admitted on condition that they make up those courses. Deficiencies must be made up during the first two quarters in residence and may not be applied toward the ten courses required for the degree. Instead of taking a course, you may substitute a competency examination in the deficient area.

Prospective students may contact the Graduate Affairs Assistant, Department of Art, Design, and Art History, 1300 Dickson, UCLA, Los Angeles, CA, 90024, for brochures and information. The department has no special departmental application.

Major Fields or Subdisciplines

Sixteen fields in two groups, as noted under "Admission" above.

Foreign Language Requirement

Reading knowledge of French and German is required of all students except those intending to major in an Asian (i.e., Chinese, Japanese, South Asian), pre-Columbian, or Islamic art history area. Students majoring in Chinese or Japanese art history must substitute either Chinese or Japanese respectively for either French or German. Those majoring in a South Asian or Islamic art history area must substitute for either French or German, an appropriate classical research language of South Asia or Islamic culture respectively. In all cases, the final decisions regarding choice must be made in consultation with, and with the consent of, the major adviser. Students majoring in pre-Columbian art history must substitute Spanish for French.

With the exception of Asian and Islamic art history majors, all students must demonstrate reading fluency in both foreign languages in any of the following ways: (1) by passing the department language examination, (2) by passing the Educational Testing Service (ETS) examination with a minimum score of 600, (3) by enrolling in and completing with a minimum grade of B, UCLA's French 5, German 6, and/or Spanish 25. One of these language requirements must be satisfied by the end of the second quarter in residence and the other by the end of the fifth.

Students majoring in an Asian or Islamic art history area must satisfy their European language requirement by the end of the fifth quarter in residence and may do so in any of the three ways listed above. The Asian or Islamic language requirement, however, is normally satisfied by enrolling in an appropriate course sequence for six consecutive quarters (normally beginning with the first quarter of graduate study) and by maintaining a grade of B or better in those courses. Details and/or exceptions must be worked out with the major adviser.

Course Requirements

The M.A. degree requires the completion of a major and two minors. You must select an unrelated minor from the group (A or B) which does not include your major area, and you are required to take a minimum of ten graduate and upper division courses, of which at least eight must be in art history and of which at least six must be graduate courses (in the 200 and 500 series). At least four of these must be in the 200 series. No more than two 596 courses may be applied toward the graduate or elective course requirement. You must take Art History 201, four courses in the major, and two courses in each minor.

Thesis Plan

The thesis committee is established after completion of all course requirements. At the same time, you select a thesis topic in your major field. The thesis should deal succinctly with the topic in an independent, critical, and original fashion while taking fully into account the present state of research on the problem.

Master of Fine Arts in Art

Art Specialty

Admission

Students are admitted in Fall Quarter only. See "Admission" under the Master of Arts degree in Art (art specialty) above.

The M.A. is not prerequisite to the M.F.A. but may be elected as your stated degree objective. Usually, however, students proceed directly to the M.F.A. as a terminal degree. The unit requirements applied to the M.A. will not apply to the M.F.A., with the exception of the accumulative art history units.

Major Fields or Subdisciplines

Drawing, painting, sculpture, printmaking, photography, video, new forms and concepts. No limit to the variations, extent, or value of these designations is intended.

Course Requirements

A minimum of 72 quarter units in the department in courses 101A through 295 is required, with a B average or better.

Within those 72 units, a minimum of 40 quarter units in the 200 series must be taken in the field of specialization.

An additional 40 quarter units of art history, theory, and criticism in undergraduate and/or graduate study are required (for students with little or no art history in undergraduate work, some or all of these units may be taken as electives beyond the 40 units of graduate coursework required). Subjects related to your special interest may be substituted by petition.

A total of 12 units of Art 596 may be applied toward the 72 units required for the degree; four units may be applied toward the graduate course requirement.

Comprehensive Examination Plan

Same as the plan offered for the Master of Arts degree in Art (art specialty), as noted above.

Design Specialty

Admission

Admission requirements and procedures are essentially the same as for the M.A. (design specialty), except that the M.F.A. degree is the highest academic degree awarded in the studio disciplines of art and is conferred on the basis of outstanding achievement and consistent demonstration of quality throughout an original body of creative work. A higher standard of demonstrated ability and preparation in the area of intended study is usually applied in the portfolio review. M.F.A. applicants are not admitted on a provisional basis when there are deficiencies in the portfolio, preparation, or academic record.

Major Fields or Subdisciplines

Communication imagery, image transfer, electronic imagery, computer imagery, costume, ceramics, fiber structures, textiles, industrial design, exhibition design.

Course Requirements

A minimum of 72 quarter units of upper division and graduate design courses is required, of which at least eight units must be from Design 290A-290B-290C and of which at least 12 units must be devoted to a comprehensive project in your area of study.

Within those 72 units, a minimum of 52 quarter units in the 200 series must be taken in the field of specialization.
A minimum of 40 quarter units of art history in undergraduate or graduate study is also required. For students with little or no art history in undergraduate work, some or all of these units may be taken as electives beyond the 40 units of graduate coursework required. You may substitute a maximum of 12 units in other courses that are germane to your graduate pursuit, with the faculty adviser’s consent.

A total of 12 units of course 596 may be applied toward the graduate and elective course requirements for the degree.

Comprehensive Examination Plan
Same as the plan offered for the Master of Arts degree in Art (design specialty), as noted above.

Ph.D. in Art History
Admission
The M.A. in Art History is required for admission to the Ph.D. degree program. An M.A. in Art History from another institution may be accepted as equivalent to that from UCLA or the holder may be accepted into the program at a stage determined by the graduate review committee. All incoming Ph.D. students must have taken and passed with a grade of B or better at least two courses (upper division and/ or graduate) in areas not related to the proposed major (as outlined in the M.A. in Art History course requirements). Deficiencies must be made up during the first two quarters in residence and may not be applied toward the eight courses required for the Ph.D.

The application must include, in addition to official transcripts and Graduate Record Examination (GRE) scores, all of the following:

1. A standard statement of purpose (approximately 400 words).
2. A copy of the M.A. thesis or, if no thesis was written, one major research paper written at the M.A. level in the major (or intended major) field.
3. Three or more letters of recommendation from individuals familiar with your scholarly work, of which one must be a detailed letter of assessment and endorsement from your major adviser for the M.A.
4. A written statement from the intended Ph.D. major adviser of willingness to supervise your Ph.D. work.
5. Evidence of reading fluency in two appropriate foreign languages.

Students applying directly to the Ph.D. program from the M.A. in Art History program at UCLA follow a slightly modified procedure. For details, see the graduate affairs assistant.

Reading knowledge of French and German is requisite for admission at the Ph.D. level for those majoring in all areas except Asian, Islamic, or pre-Columbian. You may demonstrate this knowledge by submitting an Educational Testing Service (ETS) score of 600 or better, taking and passing the relevant department language examination(s), or completing UCLA’s German 6 and/or French 5 with a grade of B or better.

Students intending to major in an Asian or Islamic art history area must demonstrate, by the means outlined above, reading fluency in either French or German. In addition, they must complete with a grade of B or better six consecutive quarter courses (or equivalent) in an appropriate Asian or Islamic language. Determination of the appropriate language and acceptable equivalencies should be worked out in advance with the intended major adviser.

Students intending to major in pre-Columbian art history must demonstrate, by the means outlined above, reading fluency in German and Spanish. In the latter case, UCLA’s Spanish 25, passed with a grade of B or better, fulfills the requirement.

Students who have passed a required foreign language at another institution should consult the chair of the department’s language committee to determine if their previous examination is acceptable.

Prospective students may contact the Graduate Affairs Assistant, Department of Art, Design, and Art History, 1300 Dickson, UCLA, Los Angeles, CA 90024, for brochures and information. The department has no special departmental application.

Major Fields or Subdisciplines
See “Admission” under the Master of Arts degree in Art History above.

Foreign Language Requirement
You are normally required to demonstrate, no later than the time of your University Oral Qualifying Examination, reading fluency in one or more foreign languages in addition to those required for admission. Among those fields requiring such reading fluency are Egypt, ancient Near East, classical, medieval, Renaissance, Islamic, pre-Columbian, and all Asian areas. The applicability of this requirement, the language(s) required, and the exact means of satisfying the requirement are determined in consultation with the major adviser.

Course Requirements
The Ph.D. requires demonstrated competence in a major and two minors. If you choose two art history minors, one must be selected from the group (A or B) which does not include the major area (see group listings under Master of Arts in Art History above). If you choose one extra-departmental minor, it must be related to the major field in art history. The other minor may or may not be related to the major area.

You must have taken a minimum of four courses (at least one a graduate course) in one or more unrelated areas during the M.A. and/or Ph.D. program. Credit may be given for coursework at another institution.

In all, a minimum of eight graduate and upper division courses are required, of which at least three must be art history courses on the graduate (200 and 500) level. Of this total, you must take at least three, and may take up to five, extra-departmental upper division and/or graduate courses, which have to be approved by the major adviser.

Qualifying Examinations
After completion of coursework and language study, you must take the Ph.D. written comprehensive examination to test your breadth and depth of knowledge in the major and both minor fields of study. If you fail the examination, or any part thereof, that portion may be repeated during the subsequent quarter in residence. No further repetition will be allowed.

A dissertation topic is selected after you pass the written comprehensive examination; the members of your doctoral committee are then nominated, and the committee is appointed by the Dean of the Graduate Division.

After having submitted a dissertation proposal, you then take the University Oral Qualifying Examination, given by your doctoral committee. Assuming there is no more than one no pass vote, you may initiate the procedure to become advanced to candidacy.

Final Oral Examination
The doctoral committee may decide, by unanimous agreement, to waive the final oral examination (not normally required). If a final oral examination is required, it is held after the final draft of the dissertation has been circulated among the committee members. In case of failure, the doctoral committee decides, by unanimous agreement, whether or not you may be reexamined.

Art
Lower Division Courses
5A. Introduction to Art. Studio, eight hours; five hours arranged. Creative work in fine arts related to historical and contemporary issues selected from media such as drawing, painting, sculpture, printmaking, photography, and new forms and concepts (performance, video, nonobject art).
5B. Introduction to Art. Studio, eight hours: five hours arranged. Prerequisite: course 5A. Continuation of course 5A.
5C. Introduction to Art. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B. Continuation of courses 5A, 5B.
15. Intermediate Art. Studio, eight hours; five hours arranged. Prerequisites: courses 5A, 5B, 5C. Continuation of courses 5A, 5B, 5C, with increased emphasis on individual creative development.
22. Art and Artists/History and Theory. Lecture/discussion, three hours. Discussion and analysis of artists and art, historical and contemporary.
### Upper Division Courses

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>130</td>
<td>Drawing</td>
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<td>131</td>
<td>Painting</td>
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<td>132</td>
<td>New Forms and Concepts</td>
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<td>140</td>
<td>Printmaking</td>
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<td>145</td>
<td>Sculpture</td>
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<td>147</td>
<td>Photography</td>
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<tr>
<td>271</td>
<td>Graduate Painting</td>
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<td>272</td>
<td>Graduate Printmaking</td>
</tr>
<tr>
<td>273</td>
<td>Graduate Sculpture</td>
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<tr>
<td>274</td>
<td>Graduate Photography</td>
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### Art History

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<th>Course Code</th>
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<td>Contemporary Art</td>
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### Graduate Courses

Prerequisite for all courses: consent of instructor. All courses may be repeated for credit unless otherwise noted.  

### Art History

#### Lower Division Courses

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<tr>
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<td>Egyptian Art and Archaeology</td>
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<td>101B</td>
<td>Egyptian Art and Archaeology</td>
</tr>
<tr>
<td>102</td>
<td>Art of the Near East</td>
</tr>
<tr>
<td>103B</td>
<td>Hellenistic Art</td>
</tr>
<tr>
<td>103C</td>
<td>Roman Art</td>
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<td>103D</td>
<td>Etruscan Art</td>
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<td>103E</td>
<td>Late Roman Art</td>
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<td>104A</td>
<td>Western Islamic Art</td>
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<td>104B</td>
<td>Eastern Islamic Art</td>
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<td>104C</td>
<td>Problems in Islamic Art</td>
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### Graduate Courses

Prerequisite for all courses: consent of instructor. All courses may be repeated for credit unless otherwise noted.
105E. Byzantine Art. (Formerly numbered Art 105E.) Lecture, three hours. Prerequisite: course 51 or consent of instructor. The theory and development of Byzantine art from the iconoclastic controversy to 1453 and the diffusion of Byzantine art in Armenia, Georgia, the Caucasus, and Russia. Ms. Kalavrezou-Maxeiner

106A. Italian Art of the Trecento. (Formerly numbered Art 106A.) Lecture, three hours. Prerequisite: course 57 or consent of instructor. Art and architecture of the 14th century. Ms. Weisz

106B. Italian Art of the Quattrocento. (Formerly numbered Art 106B.) Lecture, three hours. Prerequisite: course 57. Art and architecture of the 15th century. Ms. Weisz, Ms. Woods-Marsden

106C. Italian Art of the Cinquecento. (Formerly numbered Art 106C.) Lecture, three hours. Prerequisite: course 57. Art and architecture of the 16th century. Ms. Weisz, Ms. Woods-Marsden

108A. Northern Renaissance Art. (Formerly numbered Art 108A.) Lecture, three hours. Prerequisite: course 57. Painting and sculpture in the Northern Renaissance.

108B. Northern Renaissance Art. (Formerly numbered Art 108B.) Lecture, three hours. Prerequisite: course 108A. Painting and sculpture in the Northern Renaissance.

109. Baroque Art. (Formerly numbered Art 109A.) Lecture, three hours. Prerequisite: course 57. Art and architecture of Italy and Spain, 16th to late 18th century. Mr. Kunzle

109A. Baroque Art. (Formerly numbered Art 109B.) Lecture, three hours. Prerequisite: course 109A. Art and architecture of Northern Europe, 16th to late 17th century. Mr. Kunzle

109C. European Art of the 18th Century. (Formerly numbered Art 109C.) Lecture, three hours. Prerequisite: course 57. Painting, architecture, and sculpture of the 18th century examined in the light of political and intellectual developments. Special emphasis on the effect of the rise of democratic institutions, especially the French Revolution. Mr. Kunzle


110A. European Art of the 19th Century. (Formerly numbered Art 110A.) Lecture, three hours. Prerequisite: course 54. Neoclassicism and Romanticism, with emphasis on France — the development and influence of David, Ingres, and Delacroix. Mr. Boime, Mr. Kunzle

110B. European Art of the 19th Century: Realism and Impressionism. (Formerly numbered Art 110B.) Lecture, three hours. Prerequisite: course 54. An inquiry into the problem of realism, with emphasis on French art, but including developments in England and Germany. Ms. Boime, Mr. Kunzle

110C. European Art of the 19th and 20th Centuries: Postimpressionism to Surrealism. (Formerly numbered Art 110C.) Lecture, three hours. Prerequisite: course 54. A study of the major developments in modern art, 1880s to 1930, including Seurat, Cezanne, Gauguin, Van Gogh, Art Nouveau, Fauvism, German expressionism. Mr. Kunzle

110D. Contemporary Art. (Formerly numbered Art 110D.) Lecture, three hours. Prerequisite: course 54. European and American art since World War II. Mr. Boime, Mr. Kunzle

110E. Political Perspectives on Contemporary Art (Post-World War II). (Formerly numbered Art 110E.) Prerequisite: course 54. Includes vanguard painting in the U.S. (Picasso, abstract expressionism, and pop art, etc.) and the popular media such as comics and murals, all of which are analyzed according to the dominant values under capitalism: alienation, consumerism, racism, imperialism, and sexism. Art and politics are examined in press and women's art in the U.S. and the art of the socialist cultures of Cuba since 1959 and Chile from 1970 to 1973. Mr. Kunzle

112A. American Art. (Formerly numbered Art 112A.) Lecture, three hours. Architecture in the United States from the Colonial period to the 19th century. Ms. Weisz

112B. American Art. (Formerly numbered Art 112B.) Lecture, three hours. Painting and sculpture in the United States from the Colonial period to the 19th century. Ms. Weisz

112C. American Art. (Formerly numbered Art 112C.) Lecture, three hours. Art and architecture in the United States in the 20th century. Ms. Weisz

114A. The Early Art of India. (Formerly numbered Art 114A.) Lecture, three hours. Not open to freshmen. Survey of Indian art from the Indus Valley culture to the 10th century, on the basis of Buddhist and Hindu backgrounds of the arts. Ms. McEachern

114B. Chinese Art. (Formerly numbered Art 114B.) Lecture, three hours. Not open to freshmen. Survey of the arts of China from the Neolithic times to the 18th century. The various arts are related to the developing historical background of the country. Ms. Powers

114C. Japanese Art. (Formerly numbered Art 114C.) Lecture, three hours. Not open to freshmen. Japanese art from its beginning in prehistory through the 19th century. Emphasis on the development of Buddhist art and its relationship with the culture of China. Mr. McCallum

114D. The Later Art of India. (Formerly numbered Art 114D.) Lecture, three hours. Prerequisite: course 114A or consent of instructor. Survey of Indian art from the 10th to the 19th century. The decline of Buddhist art, the last efflorescence of Hindu architecture, Muslim painting and architecture, and Raja painting. Mr. McCallum

115A. Advanced Indian Art. (Formerly numbered Art C115A.) Lecture, three hours. Prerequisite: course 114A. Study in Indian sculpture and architecture. Concurrently scheduled with course C257. Mr. Powers

115B. Advanced Chinese Art. (Formerly numbered Art C115B.) Lecture, three hours. Prerequisite: course 114B. Study in Chinese painting and sculpture. Concurrently scheduled with course C258. Ms. Klein

115C. Advanced Japanese Art. (Formerly numbered Art C115C.) Lecture, three hours. Prerequisite: course 114C. Study in Japanese painting and sculpture. Concurrently scheduled with course C259. Mr. McCallum

115D. Art of Early China, Neolithic to A.D. 906. Lecture, three hours. Prerequisite: course 114B or consent of instructor. Focuses on the period generally known as "early China," ranging from the earliest Neolithic artifacts to the end of the Tang dynasty (618-906). Concurrently scheduled with course C261A. Mr. Powers

115E. Chinese Art of the Sung and Yuan Dynasties, 906-1368. Lecture, three hours. Prerequisite: course 114B or consent of instructor. Focuses on the evolution of Chinese painting and some of the sculpture from the Sung through Yuan dynasties (906-1368). Concurrently scheduled with course C261A. Mr. Powers

115F. Chinese Art from the Ming Dynasty to the People's Republic, 1368 to the Present. Lecture, three hours. Prerequisite: course 114B or consent of instructor. Focuses on the evolution of Chinese painting and graphic art from the Ming dynasty through the late 1970s. Concurrently scheduled with course C261C. Mr. Powers

117A. Advanced Studies in Pre-Columbian Art: Mexico. (Formerly numbered Art C117A.) Lecture, three hours. Prerequisite: course 118B or consent of instructor. A study of the art of selected cultures of northern Mesoamerica from ca. 1200 B.C. to the Conquest, with emphasis on historical and iconographic problems. Concurrently scheduled with course C218A. Ms. Klein

C117B. Advanced Studies in Pre-Columbian Art: Central America. (Formerly numbered Art C117B.) Lecture, three hours. Prerequisite: course 118B or consent of instructor. A study of the art of selected cultures of southern Mesoamerica and the remainder of Central America from ca. 2000 B.C. to the Conquest, with particular emphasis on the history and iconography of the art of the Maya. Concurrently scheduled with course C218B. Ms. Klein

C117C. Advanced Studies in Pre-Columbian Art: The Andes. (Formerly numbered Art C117C.) Lecture, three hours. Prerequisite: course 118B or consent of instructor. A study of the art of the Central Andes, from the pre-Conquest period to the late 18th century. Concurrently scheduled with course C218C. Ms. Klein

118A. The Arts of Oceania. (Formerly numbered Art 118A.) Lecture, three hours. Prerequisite: course 55 or consent of instructor. Survey of the arts of the major island groupings of the Pacific, emphasizing style-regions and broad historical relationships. Ms. Klein, Mr. Rubin

118B. The Arts of Pre-Columbian America. (Formerly numbered Art 118B.) Lecture, three hours. Prerequisite: course 55 or consent of instructor. Survey of the art of the cultures developed in the area between (and including) Mexico and Peru from ca. 1000 B.C. to the Conquest. Ms. Klein

118C. The Arts of Sub-Saharan Africa. (Formerly numbered Art 118C.) Lecture, three hours. Prerequisite: course 55 or consent of instructor. Survey of the art of the great region of sub-Saharan Africa. Mr. Rubin

118D. The Arts of Native North America. (Formerly numbered Art 118D.) Lecture, three hours. Prerequisite: course 55 or consent of instructor. Survey of the art of Native North America. Mr. Rubin

119A. Advanced Studies in African Art: Western Africa. (Formerly numbered Art C119A.) Lecture, three hours. Prerequisite: course 118C or consent of instructor. Survey of the art of Western Africa. Mr. Rubin

119B. Advanced Studies in African Art: Central Africa. (Formerly numbered Art C119B.) Lecture, three hours. Prerequisite: course 118C or consent of instructor. Survey of the art of Central Africa. Mr. Rubin

120A. History of Prints. (Formerly numbered Art 120A.) Lecture, three hours. Development of style and techniques of expression in the graphic arts from the 15th to the early 19th century.

120B. History of Prints. (Formerly numbered Art 120B.) Lecture, three hours. Development of style and techniques of expression in the graphic arts from the 16th to the early 19th century.

120C. History of Prints. (Formerly numbered Art 120C.) Lecture, three hours. Development of style and techniques of expression in the graphic arts of the later 19th and 20th centuries.

121A. Critical and Historical Studies in Drawing. (Formerly numbered Art 121A.) Lecture, three hours. Development of style and means of expression in drawing from the late Middle Ages to the early Renaissance.

121B. Critical and Historical Studies in Drawing. (Formerly numbered Art 121B.) Lecture, three hours. Development of style and means of expression in drawing from the late Renaissance to the present.
125. Tutorial Conferences. (Formerly numbered Art 125.) Discussion, two hours. Prerequisites: courses 50, 51, 54, 57. Limited to undergraduate history majors. Discussion of selected art topics, with emphasis on related readings in music, literature, history, and philosophy. Concurrently scheduled with course C119A. Mr. Rubin

197. Honors Course. Hours to be arranged. Prerequisites: 3.0 GPA overall, 3.5 in major, consent of instructor, junior or senior standing. Individual studies for majors. May be repeated once for credit.

199. Special Studies in Art (2 to 8 units). Hours to be arranged. Prerequisite: 3.0 GPA in major, consent of instructor, senior standing. Individual studies for majors. May be taken for a maximum of eight units.

Graduate Courses

Prerequisite for all courses: consent of instructor. All courses may be repeated for credit (unless otherwise noted) on recommendation of the advisor: they are not open to undergraduate students.

201. Historiography of Art History. (Formerly numbered Art 201.) Seminar, two hours. A critical study of the various approaches to art history through the centuries. The course may concentrate on one time period, the work of one or more authors, or a particular methodology.

202. Methodology of Art History (2 to 8 units). (Formerly numbered Art 202.) Sections oriented to the development and refinement of specialized research skills appropriate to particular periods and areas in the history of art.

203. Museum Studies. (Formerly numbered Art 203.) Seminar, two hours. Course focuses on various aspects of museum activities: concepts and historical evolution of art museums and collecting; methodology of exhibitions; problems involved in acquisition and evaluation of works of art.

204. Restoration, Preservation, and Conservation. (Formerly numbered Art 204.) Seminar, two hours. May not be repeated.

205. Studies in Prints. (Formerly numbered Art 205.) Seminar, two hours. Critical studies in the history and connoisseurship of the graphic arts in the Western world. Group or individual studies often culminate in professionally directed exhibitions produced by the Grunwald Center for Graphic Arts.

206. Studies in Drawings. (Formerly numbered Art 206.) Seminar, two hours. Critical studies in the history and connoisseurship of draughtsmanship in the Western world. Individual studies emphasize professional presentation. Group studies may culminate in exhibitions sponsored by the Grunwald Center for the Graphic Arts.

210. Egyptian Art. (Formerly numbered Art 210.) Seminar, two hours. Prerequisites: courses 101A, 101B, 101C, 102. A course designed to cover art in Egypt during the Old, Middle, and New Kingdoms. Students should be ready to prepare for every meeting a briefing of a topic from archaeological memoirs, not to exceed ten minutes. There are some lectures.

213. Problems in Islamic Art. (Formerly numbered Art 213.) Seminar, two hours. The art and architecture of the Islamic world (Spain to Iran) from the 7th to the 17th century. The seminar deals with either monumetal or theoretical problems relating to Islamic culture and artistic production.

214. Problems in Islamic Art. (formerly numbered Art C214.) Lecture, three hours. Prerequisite: consent of instructor. The course deals with either monuments or theoretical problems related to Islamic culture and artistic production. Concurrently scheduled with course C104C. Ms. Bierman

215A. Advanced Studies in African Art: Western Africa. (Formerly numbered Art C216A.) Lecture, three hours. Prerequisite: course 118C or consent of instructor. Consideration of the network of stylistic, historical, and cultural relationships existing among the peoples of the upper Niger region. Studies in adjacent portions of the Western Guinea Coast. Concurrently scheduled with course C119A. Mr. Rubin

216B. Advanced Studies in African Art: Central Africa. (Formerly numbered Art C216B.) Lecture, three hours. Prerequisite: course 118C or consent of instructor. Northern and Eastern Nigeria, Cameroon, and the Ogowe River Basin. Concurrently scheduled with course C119B. Mr. Rubin

218A. Advanced Studies in Pre-Columbian Art: Mexico. (Formerly numbered Art C218A.) Lecture, three hours. Prerequisite: course 118B or consent of instructor. A study of the art of selected cultures of northern Mesoamerica from ca. 1200 B.C. to the Conquest, with emphasis on historical and iconographic problems. Concurrently scheduled with course C117A. Ms. Klein

218B. Advanced Studies in Pre-Columbian Art: Central America. (Formerly numbered Art C218B.) Lecture, three hours. Prerequisite: course 118B or consent of instructor. A study of the art of selected cultures of southern Mesoamerica and the remainder of Central America from ca. 2000 B.C. to the Conquest, with particular emphasis on the history and iconography of the art of the Maya. Concurrently scheduled with course C117B. Ms. Klein

219A. Oceanic Art. Discussion, two hours. Prerequisite: consent of instructor. Studies in selected topics in the art of the Pacific islands.

219B. Pre-Columbian Art. Discussion, two hours. Prerequisite: consent of instructor. Studies in selected topics in the art of pre-Hispanic Latin America.

219C. African Art. Discussion, two hours. Prerequisite: consent of instructor. Studies in selected topics in the art of sub-Saharan Africa.

219D. Native North American Art. Discussion, two hours. Prerequisite: consent of instructor. Studies in selected topics in the art of the American Indian.

220. Oceanic, Pre-Columbian, African, and Native North American Art. (Formerly numbered Art 220.) Discussion, two hours. Prerequisite: consent of instructor. Studies in selected topics comparing the arts of Oceania, Africa, and pre-Columbian and Native North America.

221. Topics in Classical Art. (Formerly numbered Art 221.) Lecture, two to three hours. Studies in Graeco-Roman art. A site-by-site survey of the Near East (Afghanistan, Iran, Iraq, Syria) during the periods of Greek and Parthian control. Ms. Downey

223. Classical Art. (Formerly numbered Art 223.) Seminar, two hours. Studies in Graeco-Roman art and archaeology. Studies of specific periods, sites, or artistic media. Ms. Downey

225. Medieval Art. (Formerly numbered Art 225.) Seminar, two hours. Studies in selected topics in Byzantine and European medieval art. Ms. Kalavrezou-Maxeiner


229. Renaissance and Baroque Paleography. (Formerly numbered Art 229.) Seminar. Prerequisites: knowledge of Latin. A workshop approach to documents pertaining to artistic commissions from the 15th to the 17th century in Italy to study various aspects of handwriting in official and private inscriptions, correspondence, treatises, and inscriptions.

230. Italian Renaissance Art. (Formerly numbered Art 230.) Seminar, two hours. Prerequisite: knowledge of Italian. A study of various aspects of Leonardo's theoretical approach to art in terms of sources and the impact on followers. Mr. Pedretti

231. Leonardo and Renaissance Theory of Art. (Formerly numbered Art 231.) Seminar, two hours. Prerequisite: knowledge of Italian. A study of various aspects of Leonardo’s theoretical approach to art in terms of sources and the impact on followers. Mr. Pedretti

235. Northern Renaissance Art. (Formerly numbered Art 235.) Seminar, two hours. Prerequisite: knowledge of German. The seminar focuses on a selected topic (e.g., a particular artist, trend, or problem). Research papers and oral reports are required.

240. Baroque Art. (Formerly numbered Art 240.) Seminar, two hours. Prerequisite: course 118B. The seminar focuses on a selected topic (e.g., a particular artist, trend, or problem). Research papers and oral reports are required. Language requirements depend on area of focus.

244. Topics in European Art from 1700 to 1900. (Formerly numbered Art 244.) Lecture, two to three hours.

245. European Art from 1700 to 1900. (Formerly numbered Art 245.) Seminar, two hours.


253. Modern Art. (Formerly numbered Art 253.) Seminar, two hours. Changing topics in modern art (including illustration and other popular forms) which reflect the interests of particular faculty members. Political and economic factors affecting the arts of France and Germany at various times are emphasized.

255. American Art. (Formerly numbered Art 255.) Seminar, two hours. Advanced studies in the evolution of American art, chiefly architecture and painting from 1750 to 1950. The seminar emphasizes research skills appropriate to particular periods and sites: consent of instructor. Studies in selected topics comparing the arts of Colombia, Ecuador, Peru, and Bolivia ca. 4000 B.C. to the Conquest, with particular emphasis on the history and iconography of the art of Peru. Concurrently scheduled with course C117A. Ms. Klein

258. Advanced Indian Art. (Formerly numbered Art C258.) Lecture, three hours. Prerequisite: course C114A. Study in Indian sculpture and architecture. Concurrently scheduled with course C115A.

259. Advanced Chinese Art. (Formerly numbered Art C259.) Lecture, three hours. Prerequisite: course C114B. Study in Chinese painting and sculpture. Concurrently scheduled with course C115B. Ms. Bennett

259. Advanced Japanese Art. (Formerly numbered Art C259.) Lecture, three hours. Prerequisite: course C114C. Study in Japanese painting and sculpture. Concurrently scheduled with course C115C. Mr. McCallum

260. Asian Art. (Formerly numbered Art 260.) Seminar, two hours. Advanced studies in the secular and religious artistic traditions of India, China, Japan, and adjacent regions. Topics vary and are offered every other year. Mr. McCallum, Mr. Powers

261A. Art of Early China, Neolithic to A.D. 906. Lecture, three hours. Prerequisite: course C114B or consent of instructor. Focuses on the period generally known as “early China,” ranging from the earliest Neolithic artifacts to the end of the T’ang dynasty (A.D. 805-906). Concurrently scheduled with course C115D. Mr. Powers
C261B. Chinese Art of the Sung and Yuan Dynasties, 906-1368. Lecture, three hours. Prerequisite: course 114B or consent of instructor. Focuses on the evolution of Chinese painting and some of the sculpture from the Sung through Yuan dynasties (906-1368). Concurrently scheduled with course C115E.

C261C. Chinese Art from the Ming Dynasty to the People's Republic, 1368 to the Present. Lecture, three hours. Prerequisite: course 114B or consent of instructor. Focuses on the evolution of Chinese painting and graphic art from the Ming dynasty through the late 1970s. Concurrently scheduled with course C115F. Mr. Powers.

265. Fieldwork in Archaeology (2 to 8 units). Formerly numbered Art 265. Participation in archaeological excavations or other archaeological research under supervision of the staff.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research (2 to 8 units). Prerequisite: consent of instructor.

597. Preparation for Master's Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units). Formerly numbered Art 597. Prerequisite: consent of instructor. S/U grading.

598. Research for and Preparation of Master's Thesis (2 to 8 units). Formerly numbered Art 598. Prerequisite: consent of instructor. S/U grading.


Design

Lower Division Courses

30A. Nature of Design. (Formerly numbered Art 30A.) Lecture; three hours; discussion, one hour. Open to nonmajors; not open for credit to students with credit for former course 30A. Understanding the design process, with emphasis on development of a visual language; a study of creative, scientific, technological, economic, and cultural factors influencing design in our physical environment.

30B. Design Resources. (Formerly numbered Art 30B.) Lecture/discussion, three hours. Prerequisite: course 30A. Investigation of resources for creativity as an introduction to research.

31A. Fundamentals of Design: Color. (Formerly numbered Art 31A.) Lecture, two hours; laboratory, four hours. Course 32A may be taken concurrently. Exploration of color in theory and practice. Development and articulation of sensory concepts.

31B. Fundamentals of Design: Form. (Formerly numbered Art 31B.) Lecture, two hours; laboratory, four hours. Course 32B may be taken concurrently. Interpretation of three-dimensional concepts as a foundation for creativity: origin and solution of problems.

32A. Perceptual Drawing. (Formerly numbered Art 32A.) Demonstration/discussion/laboratory, eight hours. Course 31A may be taken concurrently. Not open for credit to students with credit for former course 32A. Translation of perception through delineation, drawing, and other descriptive media.

32B. Visual Presentation. (Formerly numbered Art 32B.) Demonstration/discussion/laboratory, eight hours. Prerequisite: course 32A. Course 31B may be taken concurrently. Translation of perception through delineation, drawing, and other descriptive media.

33A. Materials and Processes: Ceramics (2 units). (Formerly numbered Art 33A.) Demonstration/discussion/laboratory, four hours. Introduction to processes and media in design. Forming and processing techniques in traditional and contemporary ceramics. May be repeated once.

33B. Materials and Processes: Visual Representation (2 units). (Formerly numbered Art 33B.) Demonstration/discussion/laboratory, four hours. Introduction to processes and media in design. Use of drafting instruments. Measuring and construction methods. Orthographic and isometric projection of information analysis and representation and visualization. Preparation to support the design task. May be repeated once.

33C. Materials and Processes: Graphic Processes (2 units). (Formerly numbered Art 33C.) Demonstration/discussion/laboratory, four hours. Introduction to processes and media in design. Photography as a means of depicting and recording design concepts. Introduction to photomechanical techniques and photographic generation of images; introduction to graphic presentation production. May be repeated once.

33D. Materials and Processes: Production Processes (2 units). (Formerly numbered Art 33D.) Demonstration/discussion/laboratory, four hours. Introduction to materials and processes in design. Introduction to the use of industrial technology. Processes covering the methods of production and handforming. Emphasis on finishing with industrial materials and systems, including plastics, metal, woods, cardboards, and other materials. May be repeated once.

33F. Materials and Processes: Textiles (2 units). (Formerly numbered Art 33F.) Demonstration/discussion/laboratory, four hours. Introduction to media and processes in design. Fundamental methods of textile structure and design. May be repeated once.

33G. Materials and Processes: Design Photography (2 units). (Formerly numbered Art 33G.) Demonstration/discussion/laboratory, four hours. Introduction to media and processes in design. Photography as a means to visualize design concepts. Introduction to camera operation, the processing of photographic materials, laboratory and lighting procedures. Use of the design area laboratory. May be repeated once.

33H. History of Design. (Formerly numbered Art 33A-33B.) Lecture, three hours; discussion, one hour. Course 33A is prerequisite to 33B. Analysis of significant concepts of form in relation to social, technological, and historical developments.

Upper Division Courses

(I) Comparative Studies in Design

161A. Ceramics. (Formerly numbered Art 161A.) Lecture, three hours; laboratory, to be arranged. The evolution of ceramic form through geographic, social, and technological influences.

161B. World Costume. (Formerly numbered Art 161B.) Lecture, three hours; laboratory, to be arranged. Not open for credit to students with credit for former course 161B. Costume and body ornamentation: symbolic significance and evolving forms within their social, cultural, and geographic context.

161C. Graphics. (Formerly numbered Art 161C.) Lecture, three hours; laboratory, to be arranged. Not open for credit to students with credit for former course 161C. Study of graphic symbols, signs, and images, within social, cultural, and historical contexts.

161D. Industrialization. (Formerly numbered Art 161D.) Lecture, three hours; laboratory, to be arranged. Industry design, and society: their evolution and changing relationships.

161E. Shelter. (Formerly numbered Art 161E.) Lecture, three hours; laboratory, to be arranged. The development of interior spaces in relation to structure, visual quality, function, human needs, and behavior.

161H. Textiles. (Formerly numbered Art 161H.) Lecture, three hours. The development of textile forms through geographic, cultural, stylistic, and technological influences.

161J. Video Imagery. (Formerly numbered Art 161J.) Lecture, three hours; laboratory, to be arranged. Analysis of videographic form.

161K. Historic Fashions. (Formerly numbered Art 161K.) Lecture, three hours; discussion, two hours. Fashions and stylistic changes in Western dress from the late medieval period to the present time, studied in relationship to the social and cultural background of each era.

(II) Concept and Form in Design

162A. Ceramics. (Formerly numbered Art 162A.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Creative development of ceramic materials and processes, with emphasis on handbuilding methods; investigation and analysis of form and expressive content. May be repeated once.

162B. Ceramics. (Formerly numbered Art 162B.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, 162A, or equivalent. Emphasis on the wheelthrowing method and materials science as sources of aesthetic content. May be repeated once.

162C. Costumes. (Formerly numbered Art 162C.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Not open to students with credit for former course 163A. Introduction to the creative process in designing contemporary costume. May be repeated once.

162D. Costumes. (Formerly numbered Art 162D.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Not open to students with credit for former course 163B. Further development of the design process, with emphasis on the symbolic aspect of contemporary costume. May be repeated once.

163A. Sculpture. (Formerly numbered Art 163A.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Further development of sculpture as a means of depicting and recording design concepts. Introduction to camera operation, the processing of photographic materials, laboratory and lighting procedures. Use of the design area laboratory. May be repeated once.

163B. Costumes. (Formerly numbered Art 163B.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Design and construction of woven forms. May be repeated once.

164A. Textiles. (Formerly numbered Art 164A.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. The derivation of non-loom methods of fabric construction using pliable elements. May be repeated once.

164B. Fiber Sculpture. (Formerly numbered Art 164B.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Derivation of non-loom methods of fabric construction using pliable elements. May be repeated once.

164C. Graphics. (Formerly numbered Art 164C.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. The derivation of letterforms, typography, and reproduction technology. May be repeated once.

164D. Fiber Sculpture. (Formerly numbered Art 164D.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. The derivation of letterforms, typography, and reproduction technology. May be repeated once.
169A-169B. Product. (Formerly numbered Art 169A-169B.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Course 169A is prerequisite to 169B. Product development in industry, function, aesthetics, and material properties as they relate to human needs. Each course may be repeated once.

Mr. Shapira

170A-170B. Interior Spaces. (Formerly numbered Art 170A-170B.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Course 170A is prerequisite to 170B. Not open to students with credit for former courses 170A and 170B. The definition of structure and space in relation to human needs. Each course may be repeated once.

Mr. Shapira

171A. Textiles. (Formerly numbered Art 171A.) Lecture, two hours; laboratory, four, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, 32B, or equivalent. Systems of fabric surface organization, including the study of color, pattern, and methods of printing. May be repeated once.

Mr. Bassler

172A. Video Imagery. (Formerly numbered Art 172A.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 30A, 30B, 31A, 31B, 32A, or equivalent. Exploration of graphic processes in visual systems. Design theory and procedures related to typographic form, computer and video graphic film as they communicate visually. (i.e., poster, brochure, book, film, and exhibition).

280. Communication Imagery (2 to 8 units). (Formerly numbered Art 280.) Laboratory, two to four hours. Exploration of graphic processes in visual systems. Design theory and procedures related to typographic form, computer and video graphic film as they communicate visually (i.e., poster, brochure, book, film, and exhibition).

281. Image Transfer (2 to 8 units). (Formerly numbered Art 281.) Laboratory, two to four hours. Advanced experimental work in print processes. Employment of the fixed image, such as offset lithography, offset or letter press, screen printing, and emulsion printing, through photo/mechanical means.

282. Electronic Imagery (2 to 8 units). (Formerly numbered Art 282.) Laboratory, two to four hours. Development of expressive and design applications in video and computer-generated forms. The manipulation of visual, time, motion, and aural characteristics of electronic imagery is developed with video cameras, VTR, and electronic synthesizers. Experience and viewed on television monitors or in print forms; images are stored on videotapes for later analysis.

Mr. Kataoka

283. Costume (2 to 8 units). (Formerly numbered Art 283.) Seminar, two hours; laboratory, two hours. Advanced formulation and development of design ideas for contemporary fashion, dance, drama, or ritual. Research on the evolution of style and modes of expression in historical and modern costumes.

Mr. Saxe

284. Ceramics (2 to 8 units). (Formerly numbered Art 284.) Seminar, two hours; laboratory, two hours. Advanced research and application of ceramic theory and methodology. Emphasis on the development of a responsible, personal aesthetic. Includes, but is not limited to, investigations of clay and glaze design technology, design for industry, clay as medium, and the historical importance of ceramics as a socially responsible discipline.

Mr. Saxe

285. Design and Structure (2 to 8 units). (Formerly numbered Art 285.) Laboratory, two to four hours. Emphasis on developing methods of critical evaluation. Work is of a subjective and expressive nature in areas of fiber, ceramics, graphics, and visual presentation. Exploration of form, with emphasis on experimentation with materials and processes.

Mr. Vasa

286. The History of Fiber (2 to 8 units). (Formerly numbered Art 286.) Laboratory, two to four hours. Advanced experimental work with the elements of fabric design, including surface manipulation and methods of fabrication which may include but are not limited to dye and printing processes.

290A-290B-290C. Design Seminar: A Collaborative View. (Formerly numbered Art 290A-290B-290C.) Seminar, three hours.

290A. Formalization Processes. Critical examination of theoretical concepts underlying the design process, including the initiation of an idea, its interpretation, and execution by the designer.

290B. Design Programming. Critical examination of ideation, concept, and concrete form for execution and/or production by others.

290C. Visual Communication. Critical examination of imagery in its social context.

292. Shelter (2 to 8 units). (Formerly numbered Art 292.) Development of individual projects to investigate concepts of shelter. Exploration of traditional and contemporary forms, methods, and materials.

Mr. Shapira

293. Interior Space Design (2 to 8 units). (Formerly numbered Art 293.) The concept and practice of designing interior spaces. Evaluation of visual and functional needs for interior spaces (ranging from personal to social spaces) in two- and three-dimensional projects involving color, light, surface, materials, equipment, furniture, etc.

Mr. Kester, Mr. Shapira

294. Industrial Design (2 to 8 units). (Formerly numbered Art 294.) Laboratory, two to four hours. In-depth studies in topics such as design and management, person-object compatibility, visual identity programs, containing systems, transportation, design for developing countries, ergonomics, urban components, area studies, materials, and processes.

295. Exhibition Design (2 to 8 units). (Formerly numbered Art 295.) Laboratory, two to four hours. Interpretation and presentation of materials for exhibition. Students may elect to work with instructor and gallery staff on regularly scheduled productions or they may outline their own project and proceed by producing studies, renderings, or schematics or by fabricating models.

Mr. Carter

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: consent of adviser. For students, supervised apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research (2 to 8 units). Prerequisite: consent of instructor.

Related Courses in Another Department

Classics 251A. Seminar in Classical Archaeology: The Aegean Bronze Age

251B. Seminar in Classical Archaeology: Greco-Roman Architecture

251C. Seminar in Classical Archaeology: Greco-Roman Sculpture

251D. Seminar in Classical Archaeology: Greco-Roman Painting

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.

Dance

124 Dance Building, 825-3951

Professors

Elise Dunn, M.A.
Carol Schothorn, M.A., Chair
Marion Scott
Doris Siegel
Allegre Snyder, M.A.
Emma Lewis Thomas, Ph.D.
Pia Gilbert, Emeritus
Alma M. Hawkins, Ed.D., Emeritus

Associate Professors

Erma Dosamantes-Alperson, Ph.D.
Judy Mitoma, M.A.

Assistant Professor

Angelia Leung-Fisher, M.A.
Lecturer
Suemobu Togi

Visiting Lecturers
Juditha Gantz, M.A.
Margaret Hills
Martha Kalman, M.A.
Margaret Oved Marshall
Emilio Pulido-Huizar, B.A.C.
Stephanie Schoelzel, M.F.A.
Martha Kalman, M.A.

Scope and Objectives
Bodily skill, artistry, and deep understanding are necessary for an intelligent and creative artist. Dancers at UCLA receive extensive movement experience in contemporary dance, ballet, improvisation, and ethnic forms through practical work in studios, workshops, and performances. The art of dance is explored in costume design, lighting and scenic design, music and sound, and video. The development and relevance of dance is studied through courses in dance history, ethnology, notation, therapy, kinesiology, and education. Modern choreography is the basis of the UCLA program in dance.

UCLA offers the Bachelor of Arts degree in Dance combining professional training with the liberal study essential to the development of each dancer's own creative potential. The graduate program awards the Master of Arts degree in Dance, designed for students preparing to continue professionally as choreographers, performers, designers, teachers, researchers, and therapists, with specific areas of focus in choreography/performance, dance ethnology, and dance education, and the Master of Arts degree in Dance/Movement Therapy. The therapy program is approved by the American Dance Therapy Association.

Bachelor of Arts Degree
The dance major offered through the College of Fine Arts leads to the Bachelor of Arts degree. Students who wish to confer with the departmental counselor regarding program planning and major requirements should see Wendy Urfrig in the department office.

Preparation for the Major

The Major
Required: A total of 58 units of upper division coursework, including Dance 100A-100B-100C, 113A-113B-113C, C120, 123A, 123B, 132A-132B, 134A, 134B, 141, 144, 148, 149, and eight units selected from upper division dance electives.

Admission to the upper division major is determined by a screening and evaluation conducted during Spring Quarter of your sophomore year. All entering transfer students are auditioned for placement in technique and choreography classes.

Master of Arts in Dance
Admission
A bachelor's degree with an undergraduate major in dance or equivalent experience is required. Some of this experience may have been gained outside the academic setting through such avenues as studio work. The department has its own application form (in addition to that used by the Graduate Admissions Office); three letters of recommendation and an audition are also required.

The audition looks at your technical proficiency and creative potential, which is expected to be no lower than the level of the UCLA undergraduate junior. Special attention is given to the creative aspects of dance. Because the department recognizes the importance of diversity and specialization at the graduate level, you are evaluated according to your primary focus (i.e., performance/choreography, education, therapy, or ethnology).

Prospective students may write to the Department of Dance, 124 Dance Building, UCLA, Los Angeles, CA 90024, for departmental brochures which give additional information on the graduate program.

Foreign Language Requirement
There is no foreign language requirement at the graduate level. However, if you specialize in dance ethnology and plan to do fieldwork, it is recommended that, during your graduate study or before, you gain working knowledge of the language of your research area.

Course Requirements
Nine courses (or more depending on your specialization) are required, distributed as follows: (1) Dance 230; (2) four courses (16 units) in the department at the graduate level (200 series); (3) four courses (16 units) in or outside the department at the upper division or graduate level. These may not be classes taken to fulfill deficiencies nor technique or ethnic performance classes. In addition to the nine required courses, six half-courses (12 units) in studio technique must be taken, one per quarter.

Eight units of 500-series courses (596A, 596B, 596C, 598) may be applied toward the total course requirement; four units may be applied toward the minimum graduate course requirement. These requirements are to be partially fulfilled by one of the following patterns: (1) Dance 151, 211A through 211F (choreography/performance); (2) courses 151, 211A-211B-211C, 251A-251B (dance education); (3) courses 280A-280B-280C, 280E (dance ethnology).


Other areas such as dance history, philosophy and criticism, dance kinesiology, dance production, dance and media, music for dance, and dance notation may be pursued on the advice of the Chair or an adviser after you have been in the graduate program for several quarters and have identified a unique interest and competence in one of these areas.

While fieldwork is not a requirement for those specializing in the area of dance ethnology, it is strongly suggested as part of that program.

Teaching Experience
Teaching experience is not a requirement for the degree. It is highly recommended, however, for those graduating with a focus in dance education.

Thesis Plan
If you choose the thesis plan, you will prepare a report of the results of your original research or creative work. Before beginning work on the thesis, you must obtain approval of the subject and general plan from the graduate faculty committee. If the thesis plan is accepted, a thesis committee will be formed. Conditions for reexamination in case you fail the first presentation are based on the support of several faculty members.

Comprehensive Examination Plan
You must declare your intention to take the comprehensive examination plan in your third or fourth quarter by preparing a written proposal of the plan, which is to be presented and defended before a panel of faculty. The examination, administered by a committee of your choice selected from faculty in your specialization, Dance faculty outside your specialization, and faculty outside the department, consists of three written questions and an oral test and takes approximately three days to complete. Each committee member will grade each question pass, pass with honors, or fail. In order to pass, each question must be graded pass or better by two of the three committee members. If any questions are failed, you may retake the failed portion(s) once only.

Master of Arts in Dance/Movement Therapy
An M.A. in Dance/Movement Therapy is required for registry as a therapist with the American Dance Therapy Association (ADTA).

Admission
In addition to the requirements listed above under the M.A. in Dance, an undergraduate course in abnormal psychology is required,
and other courses in psychology (developmental, personality, and group dynamics) are highly recommended.

Course Requirements


The program in dance therapy requires field experience or internship to provide an orientation to the hospital setting and experience as a movement therapist. The second year is designed as an intensive experience; two full days each week, with an opportunity to work with different populations and to assume a broad range of responsibilities in a therapeutic setting.

Thesis Plan

You must prepare a written research thesis on a topic related to your internship. Your thesis will be supervised by senior faculty members in your major field and one faculty member from another department.

Comprehensive Examination Plan

You must declare your intention to take the comprehensive examination plan in your third or fourth quarter by preparing a written proposal of the plan, which is to be presented and defended before a panel of faculty. The examination, administered by a committee of your choice selected from faculty in your specialization, Dance faculty outside your specialization, and faculty outside the department, consists of three written questions and an oral test and takes approximately three days to complete. Each committee member will grade each question pass, pass with honors, or fail. In order to pass, each question must be graded pass or better by two of the three committee members. If any questions are failed, you may retake the failed portion(s) only once.

Lower Division Courses

1A-1F. Fundamentals of Modern Dance (2 units each). (Formerly numbered 10A-10B-10C and 11A-11B-11C.) Studio, three hours. Designed for non-dance majors. Courses must be taken in sequence. Study of dance technique, improvisation, and choreography. Includes critical viewing, reading, and discussion of modern dance artists’ historical/aesthetic styles.

6F-6W-6S. Fundamentals of Ballet (2 units per year). (Formerly numbered 30AF-30AW-30AS.) Laboratory, four hours. Prerequisite: dance major or consent of instructor. Students are admitted in Fall Quarter only. Study of ballet techniques and principles, including dance terminology. In Progress grading (credit to be given only on completion of course 6S). Ms. Hills (F,W,Sp)

7F-7W-7S. Fundamentals of Ballet (2 units per year). (Formerly numbered 30BF-30BW-30BS.) Laboratory, four hours. Prerequisite: dance major or consent of instructor. Students are admitted in Fall Quarter only. Study of ballet techniques and principles, including dance terminology. In Progress grading (credit to be given only on completion of course 7S). Ms. Hills (F,W,Sp)

10. Introduction to Dance (2 units). (Formerly numbered 50.) An introduction to the many and varied theoretical aspects of dance as a discipline.

11A-11F. Modern Dance Technique and Choreography (2 units each). (Formerly numbered 36A-36B-36C and 37A-37B-37C.) Lecture, one hour; studio, three hours. Limited to dance majors. Experiences designed to achieve beginning to intermediate levels of aesthetic awareness and technical and improvisational skills, as well as an understanding of the creative process of structure and form in dance compositions.

Ms. Kalman, Ms. Leung-Fisher (F,W,Sp)

20. Music Analysis for Dance (2 units). (Formerly numbered 35.) Lecture, two hours; laboratory, one hour. Study of the elements of music, music structures, and their relationship to dance, with emphasis on rhythmic analysis, dance accompaniment, and teacher-accompanist roles.

25A. Beginning Labanotation (2 units). (Formerly numbered 38A.) Lecture, two hours; laboratory, one hour. Introduction to writing dance/movement in Labanotation. Basic skills in reading dances from the notated score.

Ms. Leung-Fisher, Mrs. Scotchorn (F,W)

25B. Intermediate Labanotation (2 units). (Formerly numbered 38B.) Lecture, two hours; laboratory, one hour. Prerequisite: course 25A. Continued studies in Labanotation. Experiences in recording dance/movement and interpreting the notated score.

Ms. Leung-Fisher, Mrs. Scotchorn (W,Sp)

40. Introduction to Dance Theater (2 units). (Formerly numbered 52.) Lecture, two hours; laboratory, two hours. Prerequisite: course 11A or consent of instructor. Study of the creative elements of choreography, sound, sound, and design and how they interact with the practical elements of personnel, materials, and procedures in presenting dance theater.

Mrs. Siegel (W)

48. Laboratory in Dance Production (1 unit). (Formerly numbered 92.) Laboratory, two hours. Realization of concepts of lighting, sound, costume, scene design, and stage practices in departmental dance productions. Must be repeated once in another year. P/NP grading.

70. Survey of Dancing in Selected Cultures (2 units). Studio, three hours. Introduction to dances and their movement characteristics in Western and non-Western cultures. Mrs. Dunin (F,Sp)

71A. Dance of Indonesia (2 units). (Formerly numbered 71A and 71H.) Studio, three hours. Dance experience is not required. Introduction to the technique and repertory of dance traditions (e.g., Java, Bali, Sundas). Ms. Mitoma (F,W,Sp)

71C. Dance of Japan (2 units). (Formerly numbered 71G.) Studio, three hours. Dance experience is not required. Technique and repertory from the court dance tradition (e.g., Gagaku). Mr. Tog (F,W,Sp)

71D. Dance of India (2 units). (Formerly numbered 71E.) Studio, three hours. Dance experience is not required. Introduction to dance in India, with emphasis on a particular tradition (e.g., Bharata Natyam). Ms. Yodh (F,W,Sp)

71E. Dance of Korea (2 units). (Formerly numbered 71F.) Studio, three hours. Dance experience is not required. Introduction to dance in India, with emphasis on a particular tradition (e.g., Korean classical and folk).

72B. Dance of Ghana (2 units). (Formerly numbered 71B.) Studio, three hours. Dance experience is not required. Introduction to the technique and repertory of a selected dance tradition (e.g., Ghanaian folk). Ms. Marshall (W,Sp)

73B. Dance of Mexico (2 units). (Formerly numbered 71J.) Studio, three hours. Dance experience is not required. Introduction to forms and styles in dances of several ethnographic regions. Emphasis on identifying dance characteristics through actual dancing.

Mr. Pulido-Huizar (F,W,Sp)

74B. Dance of Yugoslavia (2 units). (Formerly numbered 71P.) Studio, three hours. Dance experience is not required. Introduction to forms and styles in dances of several ethnographic regions. Emphasis on identifying dance characteristics through actual dancing.

Mrs. Dunin (F,W)

74C. Dance of Spain (2 units). (Formerly numbered 71M.) Studio, three hours. Dance experience is not required. Technique and repertory from selected ethnographic regions.

Ms. Marshall (F,W,Sp)

79A-79Z. Dance of a Selected Culture (2 units each). Studio, three hours. Instruction to forms and styles in dances of a selected culture area.

80A-80B. Movement as Cultural Behavior (2 units each). (Formerly numbered 46A-46B.) Studio, three hours. Prerequisite: world arts and cultures major or consent of instructor. Studio/laboratory examination of the individual and cultural factors which affect expressive movement in cultures. Experimental classes which enhance kinesthetic and movement awareness of self and others through cultural perspective.

Ms. Mitoma (W,Sp)

Upper Division Courses

100A-100B-100C. Modern Dance: Intermediate Technique and Performance (2 units each). (Formerly numbered 150A-150B-150C.) Lecture, three hours; laboratory, four hours. Prerequisite: course 11F. Limited to dance majors. Intermediate to advanced levels of technical skill emphasizing musically, spatial awareness, and movement complexity. Choreographic assignments include use of composed music, group forms, and the stage space.

Mrs. Scotchorn (F,W,Sp)

101A-101B-101C. Intermediate Modern Dance Technique and Performance (2 units each). (Formerly numbered 112A-112B-112C.) Lecture, two hours; laboratory, two hours. Technique levels II and III. Emphasis on increasing technical skill. Each course may be repeated once.

Ms. Leung-Fisher (F,W,Sp)

102A-102B-102C. Advanced Modern Dance Technique (2 units each). (Formerly numbered 114A-114B-114C.) Lecture, one hour; studio, five hours. Technique levels IV and V. Studies in advanced technique, with emphasis on performing skills. Each course may be repeated once.

Ms. Kalman (F,W,Sp)

103. Improvisation in Dance (2 units). (Formerly numbered 116.) Studio, four hours. Prerequisite: dance major or consent of instructor. Developing and aesthetic perspective through the use of imagery, sound, and other art. Concentration and projection.

Ms. Kalman (W)

106A-106B-106C. Intermediate Ballet (2 units each). (Formerly numbered 131A-131B-131C.) Lecture, one hour; laboratory, three hours. Prerequisites: courses 7F-7W-7S or consent of instructor. Courses must be taken in sequence. Study of techniques and principles of classical ballet, including phrasing, combinations, and repertoire.

Ms. Hills (F,W,Sp)

107A-107B-107C. Advanced Ballet (2 units each). (Formerly numbered 132A-132B-132C.) Lecture, two hours; laboratory, six hours. Prerequisite: course 106C. Advanced technique in classical ballet, with emphasis on performing skills. Each course may be repeated once. Ms. Hills (F,W,Sp)

113A-113B-113C. Advanced Modern Dance: Technique, Choreography, and Performance (2 units each). (Formerly numbered 153A-153B-153C.) Lecture, three hours; laboratory, four hours. Prerequisite: course 100C. Advanced technique studies, with emphasis on developing performance qualities: dynamism, focus, projection, expressive range. Independent work in solo and group choreography culminating in a final performance project.
14. Form and Structure in Choreography. (Formerly numbered 155.) Lecture, one hour; laboratory, three hours. Prerequisite: dance major or consent of instructor. A study of the craft of choreography. Emphasis on breath movement, phrasing, ABA, theme and variations, rondo. Learning to discipline and shape the creative impulse into specific form with emphasis on staging. Ms. Scott (Sp)

C120. Music as Dance Accompaniment. (Formerly numbered C154.) Prerequisite: course 20 or consent of instructor. Piano and percussion improvisation for dance. Choreographer-composer relationships. History of music for dance, with emphasis on contemporary trends. Music for the dance performance. May be concurrently scheduled with course C220. Ms. Gilbert (W)

123A. Anatomy of the Dancer. (Formerly numbered 111A.) Prerequisite: course 122A. Study of the human muscular-skeletal system as related to dance. Ms. Gantz (F,W)


123C. Projects in Dance Kinesiology. (Formerly numbered 111C.) Prerequisite: course 122A. In-depth study of selected topics introduced in courses 123A and 123B. Ms. Gantz (Sp)

125. Principles of Movement Analysis: Laban Analysis. (Formerly numbered 136.) Lecture. two hours; laboratory, two hours. Prerequisite: dance major or consent of instructor. Basic principles of Laban analysis. Emphasis on experiential understanding of movement through the study of motion factors and elementary concepts of spatial dynamics. Focus on the qualitative area of movement to further comprehension of dance as a creative art form. Ms. Gantz

126. Advanced Labanotation. (Formerly numbered 159.) Lecture, two hours; laboratory, two hours. Prerequisite: course 255. Skills in reading and writing complex movement; reconstruction and score preparation in modern dance, ballet, and ethnic dance. Mrs. Scobhorn (Sp)

132A-132B. Philosophical Bases and Trends in Dance (4 units, 2 units). (Formerly numbered 128A-128B.) Lecture. two hours, laboratory, two hours. Prerequisite: course 122A. Study of the history of dance from ancient times to the present. Mr. Bolte

134A. History of Dance in Western Culture, Origins to 1650. (Formerly numbered 151A.) The development of dance styles in Western culture; function in society and relationship to contemporary artistic expression; ancient Egypt through European Renaissance. Mrs. Thomas (F)

134B. History of Dance in Western Culture, 1600 to the Present. (Formerly numbered 151B.) Prerequisite: course 134A or consent of instructor. Survey of dance styles in European and American cultures from early baroque to the present. Mrs. Thomas (W)

141. Lighting Design for Dance Theater (2 units). (Formerly numbered 152A.) Lecture, two hours; laboratory, two hours. Prerequisite: course 11F or consent of instructor. Lighting for dance: examination of aesthetics, principles, and technical elements. Application to selected choreographies to be publicly performed. Ms. Siegel (F,Sp)

142. Advanced Studies in Dance Theater Lighting (2 or 4 units). (Formerly numbered 152C.) Lecture, four hours; laboratory, four or five hours. Prerequisite: course 141 or consent of instructor. Analysis of diverse dance theater lighting problems at an advanced level and individual development of creative solutions. May be taken for a maximum of four units. Ms. Siegel (W,Sp)

144. Costume and Scenic Design Concepts for Dance (4 units). (Formerly numbered 152B.) Lecture, two hours; laboratory, two hours. Prerequisite: course 11F or consent of instructor. General study of costume history, selected historical styles, and introductory drawing as a conceptual basis for visual awareness in theatrical design. Techniques, design-chorographer relationships are explored. Ms. Schoelzel (F,Sp)

148. Advanced Laboratory in Dance Production (1 unit). (Formerly numbered 192.) Lecture, two hours; laboratory, two hours. Prerequisite or corequisite: courses 141 and 144, or consent of instructor. Further development and application of concepts of lighting, sound, costume, scenic design, and stage practices in departmental dance productions. May be repeated once. Mr. Pulido-Huizar (F,Sp)

149. Dance Performance Practicum (1 unit). (Formerly numbered 193.) Laboratory, four hours. Dancing in selected choreography in public performance. P/NP grading.

151. Foundations of Dance Education. (Formerly numbered 127.) Lecture, two hours; laboratory, three hours. Prerequisite: dance major or consent of instructor. Introduction to movement concepts, skills, and teaching principles for modern dance instruction. Includes supervised teaching practicum. Ms. Leung-Fisher (F,Sp)

152. Dance as Culture in Education. (Formerly numbered 128.) Lecture, two hours; laboratory, two hours. Prerequisite: course 70 or consent of instructor. Theoretical and practical aspects of teaching ethnic dance, especially in higher education. Mrs. Dunin (F)

153. Creative Dance for Children. (Formerly numbered 160.) Lecture, three hours; laboratory, one hour. Prerequisite: dance major or consent of instructor. Extension to movement concepts, skills, and principles for teaching children's dance; emphasis on dance as a creative medium of expression. Ms. Mitoma (F,Sp)

160A. Movement Dynamics and Personality Growth (2 units). (Formerly numbered 160A-160F.) Lecture, one hour; laboratory, three hours. Prerequisite: course 100C or consent of instructor. The course focuses on group processes and dynamics, both at the nonverbal (movement) and verbal modes of experience and work toward achieving a significant level of psychological insight, to assist in functioning professionally as an effective dance/movement therapist. Ms. Wyman (F)

171B. Dance of Indonesia (2 units). (Formerly numbered 171A and 171H.) Studio, three hours. Prerequisite: course 11B or consent of instructor. Study of the techniques and repertoire of a selected dance tradition (e.g., Java, Bali, or Sunda). Dance in relation to music, aesthetic principles, and cultural context. May be repeated once. Ms. Mitoma (W,Sp)

171C. Dance of Japan (2 units). (Formerly numbered 171G.) Studio, three hours. Prerequisite: course 71C. Technique and repertoire of a selected tradition. Dance in relation to music, aesthetic principles, and cultural context. May be repeated once. Mr. Togi (F,Sp)

171D. Dance of India (2 units). (Formerly numbered 171E.) Studio, three hours. Prerequisite: course 71D. Technique and repertoire of a selected tradition. Dance in relation to music, aesthetic principles, and cultural context. May be repeated once. Ms. Yodh (F,Sp)

171E. Dance of Korea (2 units). (Formerly numbered 171Q.) Studio, three hours. Prerequisite: course 71E. Technique and repertoire of a selected tradition. Dance in relation to music, aesthetic principles, and cultural context. May be repeated once. Ms. Yodh (F,Sp)

172B. Dance of Ghana (2 units). (Formerly numbered 171B.) Studio, three hours. Prerequisite: course 72B. Technique and repertoire. Dance in relation to music, aesthetic principles, and cultural context. May be repeated once.

173B. Dance of Mexico (2 units). (Formerly numbered 173B.) Lecture, three hours. Prerequisite: course 73B. Dance techniques of selected ethno-geographic regions. May be repeated once. Mr. Pulido-Huizar (F,Sp)

174B. Dance of Yugoslavia (2 units). (Formerly numbered 171F.) Studio, three hours. Prerequisite: course 74C. Technique and repertoire of a selected tradition. Dance in relation to music, aesthetic principles, and cultural context. May be repeated once.

176B. Dance of Israel (2 units). (Formerly numbered 171F.) Studio, three hours. Prerequisite: course 76B. Technique and repertoire from selected ethno-geographic regions. Mrs. Marshall (F,Sp)

179A-179Z. Dance of a Selected Culture (2 units each). Studio, three hours. Prerequisite: course 79 (in corresponding culture area). Develops the dance technique of a selected culture area. May be repeated for a maximum of four units.

180A-180B. Introduction to Dance Ethnography. (Formerly numbered 141A-141B.) A study of the physical, environmental, and cultural influences on ritual and social dance forms. Students learn basic observational and recording techniques, including beginning Labanotation. Mrs. Dunin (W,Sp)

181A. Dance Cultures of Asia. (Formerly numbered 140B.) An introduction to the dance cultures of Asia. How the theories and practices of dance are influenced by historical and social factors and by local, cultural, and aesthetic systems. Lectures are illustrated with demonstrations, films, and slides. Ms. Mitoma (F)

181B. Dance in Southeast Asia. (Formerly numbered 140C.) A survey of dance forms in India and the Philippines. Social, historical, and aesthetic factors are considered. Lectures are illustrated with demonstrations, films, and slides. Ms. Mitoma (F)

181C. Dance in East Asia. (Formerly numbered 145.) Prerequisite: course 181A or consent of instructor. A survey of the dances of Japan, China, and Korea and the factors which have influenced their development. Historical, social, and ethnic background of the relationship of dance to other art forms. Lectures are illustrated with demonstrations, films, and slides. Ms. Mitoma (F)

181D. Dance in South Asia. (Formerly numbered 143.) Prerequisite: course 181A or consent of instructor. A survey of dance forms in India and Sri Lanka. Factors influencing the development of dance, its social function, and its relationship to other art forms. Lectures are illustrated with demonstrations, films, and slides.

182A. Dance Cultures of Africa. (Formerly numbered 140A.) An illustrated survey of dance in Sub-Saharan cultures, the role of dance in society, historical background, and related folklore. Mrs. Snyder (F)

183A. Dance in Latin America. (Formerly numbered 146.) Prerequisite: course 73B, 173B, or consent of instructor. An introduction to the dances of Latin America, factors influencing their development and social function, consideration of the relationship of dance to other art forms. Lectures are illustrated with demonstrations, films, and slides.

184B. Dance in the Balkans. (Formerly numbered 142.) Prerequisite: course 74B. An illustrated survey of dance, with attention to cultural and social contexts: Albania, Bulgaria, Greece, Romania, and Yugoslavia. Mrs. Dunin (W)

187A. Dance Cultures of Native American Indians. (Formerly numbered 140C.) An illustrated survey of Native American Indian dance, the role of dance in society, historical background, and related folklore. Mrs. Snyder (Sp)
190. Advanced Dance Performance (2 units). (Formerly numbered 190A-190B-190C) Lecture, one hour; laboratory, three hours. The study and performance of major choreography. May be repeated twice. (F,W,Sp)

191. Repertory Dance Tour (2 to 4 units). Prerequisite: dance major or consent of instructor. Creation and performance of dance concerts in the community, with special emphasis on the problems of the touring dance company and a variety of professional aspects. Mrs. Kalman (F)

197A-197B. Proseminar: Dance Perspectives (2 units each). Prerequisite: upper division standing or consent of instructor. Consideration of the aesthetic evolution from the work of the great artists of our time. Stylistic references in Italy, France, England, Denmark, and Russia are analyzed. Mrs. Thomas

199. Special Studies in Dance (2 to 8 units). Prerequisites: senior standing, consent of instructor.

Graduate Courses

211A-211F. Advanced Choreography. (Formerly numbered 204A-204B-204C and 204D-204E-204F) Lecture, two hours; laboratory, two hours. Prerequisite: course 113C or equivalent. Theoretical aspects of advanced choreography for the student who has reached the level of self-initiation of substantive creative works. The courses focus on refinement and realistic self-evaluation, as well as critical counsel by acknowledged choreographers. Mrs. Taggert, Mrs. Scott (F,W,Sp)

C220. Music as Dance Accompaniment. (Formerly numbered C225.) Prerequisite: course 20 or consent of instructor. Piano and percussion improvisation for dance. Choreographer-composer relationships. History of music for dance, with emphasis on contemporary trends. Music for the dance performance. May be concurrently scheduled with course C120. Graduate students must complete two additional assignments. May not be applied toward the M.A. degree requirements. Mrs. Gilbert (W)

221. Music for Dance. (Formerly numbered 206.) Prerequisite: course C120. Theory of the aesthetic and functional relationship of music to dance. Mrs. Gilbert (W)

223. Principles of Dance Kinesiology. (Formerly numbered 211A.) Prerequisite: consent of instructor. The scientific basis for movement for dance: A study of the anatomical, kinesiological, and physical principles and demands of dance. Mrs. Gantz (F)

225A-225B. Theories of Movement: Laban Analysis. (Formerly numbered 238A-238B) Lecture, two hours; laboratory, three hours. Theoretical analysis of movement as a means for analyzing and describing human movement. Use of Laban movement analysis to increase movement observation skills and a theoretical understanding of the role of movement in dance, nonverbal behavior, and cross-cultural dance studies. Focus on complex movement patterns and timing. Ms. Gantz (F, 225B); Sp, 225A)

226. Advanced Studies in Notation (2 units). (Formerly numbered 200.) Prerequisite: course 126. Selected problems in directing from the noted repertoire; principles of teaching, comparative notation systems, writing projects. Mrs. Scotchorn

230. Research Methods and Bibliography in Dance. (Formerly numbered 202.) Survey of methods for scholarly analysis of dance materials using systems from the social sciences, physical sciences, and humanities. Mrs. Thomas (F,Sp)

231A-231B. Philosophical Bases and Trends in Dance (4 units). Prerequisite: upper division honors status. (Formerly numbered 258B.) Lecture, three hours. Prerequisite: course 100C. Critical analysis of dance as a creative experience and the role of professional and educational dance in our society. Emphasis on theories and methods of analysis in contemporary philosophic literature. Study of present-day concepts and their relationship to other art forms and cultures. Evaluations of graduate students are based on extended reading list and term papers. May be applied toward the M.A. degree requirements. Mrs. Gilbert (W,Sp)

232. Aesthetics of Dance. (Formerly numbered 210.) Analysis of aesthetic concepts and critical methods used in writing about dance. Mrs. Thomas

234. Renaissance Dance: Analysis and Re-creation. (Formerly numbered 223.) Lecture, two hours; studio, two hours. Prerequisites: courses 134A and 134B, or consent of instructor. Analysis and re-creation of the study of 15th- and 16th-century dance styles from Domenico da Piacenza through Cesare Negri. Mrs. Thomas

235. The History of Ballet. (Formerly numbered 221.) Prerequisites: courses 134A and 134B, or consent of instructor. Development of ballet from 19th-century Romanticism to the present. Stylistic references in Italy, France, England, Denmark, and Russia are analyzed. Mrs. Thomas

236. Dance in the 20th Century. (Formerly numbered 220.) Prerequisites: courses 134A and 134B, or consent of instructor. Seminar in historical development of 20th-century dance. Mrs. Thomas

240. Principles of Dance Theater. (Formerly numbered 208.) Relationship of architecture, technology, and history of the theater to choreography. Directing theories for choreographers. Role of choreography in drama, opera, and other forms of theater. Mrs. Scotchorn (W)

251A-251B. Advanced Studies in Dance Education. (Formerly numbered 227A-227B) 251A. Prerequisite: consent of instructor. Survey of conceptual and methodological foundations of dance education. 251B. Prerequisite: course 251A. Students design dance curriculum using theories of movement, creativity, and learning. Ms. Leung-Fisher (F, 251B); Sp, 251A)

260A-260B-260C. Group Dynamics and Process (2 units each). Discussion, two hours; laboratory, two hours. Prerequisite: candidate in dance/movement therapy program. An experiential-didactic exploration of unfolding group dynamics and process within an ongoing movement therapy group. Ms. Dosamantes-Alperson (F,W,Sp)

261A-261B-261C. Dance Movement Therapy. (Formerly numbered 251A-251B-251C) Lecture, two hours; laboratory, two hours. Prerequisite: consent of instructor. 261A. Theory and practice: historical overview of the field: introduction to basic theoretical concepts and their translation into practice. 261B. Kinetic imagery: contribution of creative process and receptive knowing to therapy; unique functions served by movement and image modes explored theoretically and experientially. 261C. Theory and method: assumptions and methods of current clinical approaches; students are expected to develop their own theoretical model. Mrs. Ms. Wyman (F,W,Sp)

262A-262B-262C. Seminar in Dance Movement Therapy. (Formerly numbered 252A-252B-252C) Lecture, two hours; laboratory, two hours. Prerequisites: courses 261A-261B-261C. 262A. Developmental perspective. Information of life-span approach to human development and object relationships established from infancy through senescence; concepts applied to individual clients demonstrated by clinical specialists. 262B. Individual Psychodynamics and Therapeutic Intervention. Relationships between individual psychodynamics and therapeutic objectives. 262C. Systems Perspective. System theory concepts applied to dyads, groups, families, and cultures. Mrs. Dosamantes-Alperson (F,W,Sp)


375. Teaching Apprenticeship Program (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading. (F,W,Sp)

451. Teaching Assistant Seminar (2 units). (Formerly numbered 495.) Lecture, one hour; laboratory, three hours. Prerequisites: consent of instructor. Directed field study to provide teaching experience in the community school or other approved site. No more than four units may be applied toward the M.A. degree requirements. S/U grading. (F,W)

452. Directed Field Study in Dance Education (2 to 8 units). (Formerly numbered 496.) Seminar, one hour; field study, two hours minimum. Prerequisite: consent of instructor. Directed field study to provide teaching experience in the community school or other approved site. No more than four units may be applied toward the M.A. degree requirements. S/U grading. (F,W)


596A. Directed Individual Study or Research (2 to 8 units). 596R. Directed Study or Research in a Hospital or Clinic (2 to 8 units). S/U grading.

597. Preparation for M.A. Comprehensive Examination (No credit).


Related Courses in Other Departments

Anthropology 133R. Aesthetic Anthropology
Art (Art, Design, and Art History) 5A, 5B, 5C. Introduction to Art
Art History (Art, Design, and Art History) 50. Ancient Art
51. Medieval Art
54. Modern Art
55. African, Oceanian, and Native American Art
56. Asian Art
57. Renaissance and Baroque Art
110A, 110B, 110C. European Art
110D, 110E. Contemporary Art
Design (Art, Design and Art History) 161J. Video Imagery

English 80. Major American Authors
85. The American Novel
90. Shakespeare
100A. Introduction to Poetry
100B. Introduction to Drama
112. Children's Literature
133A-133B-133C. Creative Writing: Poetry
134A-134B-134C. Creative Writing: Short Story
135A-135B-135C. Creative Writing: Drama
167. The Drama, 1842-1945

Humanities 1A, 1B, 1C. World Literature
Music 2A-2B. Introduction to the Literature of Music
132A-132B. Development of Jazz
135A-135B-135C. History of the Opera
140A-140B-140C. Musical Cultures of the World
314 / Dance / COLLEGE OF FINE ARTS
Ethnic Arts
See World Arts and Cultures

Motion Picture/Television
See Theater Arts

Music
2539 Schoenberg Hall Annex, 825-4761

Professors
Aiden Ashforth, Ph.D.
Elaine R. Barkin, Ph.D.
Murray C. Bradshaw, Ph.D.
Malcolm S. Cole, Ph.D.
Frank A. D'Aconce, Ph.D.
Paul E. Des Marais, M.A.
Marie Louise Gollner, Ph.D.
Frederick F. Hammond, Ph.D.
Thomas F. Harmon, Ph.D., Chair
Richard A. Hudson, Ph.D.
William R. Hutchinson, Ph.D.
Nazer A. Jairazbey, Ph.D.
Henni Lazarof, M.F.A.
James W. Porter, M.A.
Paul V. Reale, Ph.D.
Gilbert Reaney, M.A.
Abraham A. Schwadron, Mus. A.D.
Robert M. Stevenson, Ph.D.
Roy E. Travis, M.A.
D. K. Wilgus, Ph.D. (Anglo-American Folksong)
Robert S. Winter, Ph.D.

Associate Professors
Charlotte A. Hath, Ph.D.
A. Jihad Racy, Ph.D.
James E. Westbrook, D.M.A.

Assistant Professors
Sue Carole De Vale, Ph.D.
Jacqueline C. Dielje, Ph.D.
Roger Kendall, Ph.D., Visiting
Warren Pinkney, Ph.D.

Lecturers
Gary G. Gray, M.M.
John L. Hall, M.M.
William Hatcher, M.M.
Gordon Henderson, M.M.E.
Maureen D. Hopper, Ed.D.
Bess Karp, M.A.
Samuel Kramchmalnick, Senior
Tsun Y. Lui
Peggy Ann Sheffield, M.M.
Sheridon W. Stokes
Suenoubo Togi
Aube Tzerto, B.M., Senior
Donn E. Weiss, M.M., Senior

Adjunct Assistant Professors
Roger Bourland, Ph.D.
Irene Lenerson, Ph.D.

Visiting Lecturers
Gerald E. Anderson, M.S.
Salome R. Arkatov, M.A.
Robyn Graham, B.M.
Mario Guarneri, M.S.
John A. Guarneri
Johana Harris
Sybil D. Hast, M.A.
John T. Johnson, B.M.
Yukiko Kamei
Kobla Latchko, B.F.A.
Danny Lee
James R. Low, B.M.
Steven J. Loza, M.A.
Shirley L. Marcus, B.M.
Lou Anne Neill, M.A.
Theodore Norman
Nils Olivier, M.M.
Mitchell T. Peters, M.M.
David Rakian, B.M.
Donald J. Staples, B.A.
Alexander Treger
Peter Yates, M.F.A.
Ikuko Yuge
Paul Zbists, M.M.

Scope and Objectives
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 a 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, ethnomusicology, historical musicology, music education, and systematic musicology; specialized studies leading to the degree of Master of Fine Arts (performance practices) are offered in all classical solo instruments, voice, opera, and conducting.

Bachelor of Arts Degree
Admission
All applicants for admission and change of major are required to pass an audition in their principal performing medium.

Aptitude and achievement tests are required for enrollment in Music 11A, 12A, and 14A. These examinations are administered during registration week only; dates are published in the Schedule of Classes. Students planning to complete a major in music, whether or not they have taken courses elsewhere, are required to pass a piano skills test (those without keyboard background may take courses 4A-4B-4C concurrently with 11A-11B-11C). The test must be passed by the end of course 11C or the first year as a music major, whichever comes first. Students with exceptional ability and achievement are placed into courses 11A-11B, 12A-12B, and/or 14A through 14D. Further information may be obtained from the Music Department Student Services Office, 2539 Schoenberg Hall Annex.

General Requirements
All music majors must enroll in one performance organization (Music 90A-90N, 91A-91Z) each quarter in residence and must participate in a minimum of two different organizations over the course of their stay at UCLA. One of which must be from courses 90A-90H or 91A-91Z.

Preparation for the Major
Required: Music 11A-11F, 12A-12B, 14A-14C, 14D, 26A-26B-26C, two courses from 60A-65, and one college year of French, German, Italian, or Spanish or at least one course at level three (you may use this to fulfill the college language requirement). If you plan to specialize in history and literature or systematic musicology, you are encouraged to take six quarters (or the equivalent) of German.

The Major
Required: A minimum of ten courses in upper division, including Music 106A, 126A-126B-126C, five courses selected from one of the specializations listed below, and one free elective course for all areas except music education.

French, German, Italian, or Spanish and an average grade of at least B in the basic areas that normally constitute the undergraduate core curriculum in music (harmony, counterpoint, music history, analysis, and musicianship).

Those applying for the Ph.D. must have completed a Master of Arts degree in Music (or an equivalent degree). The degree normally will have been taken in the same field of concentration as the proposed doctorate. If you wish to obtain a doctorate in a field other than that of the M.A., additional coursework, as prescribed by the department, must be completed.

Applicants for all degrees (M.A., M.F.A., and Ph.D.) are also required to (1) take a departmental assessment examination (details will automatically be sent after the application has been received); (2) submit a letter describing their background of study and stating their reasons for wishing to pursue graduate studies in music; (3) submit three letters of recommendation from former instructors and/or professionals with whom they have worked; and (4) submit written examples of their work. For all branches of musicology and music education, a paper on an appropriate subject should be submitted; for composition, musical scores; for M.F.A. applicants, a repertoire list and sample concert or recital programs. Ph.D. applicants should submit the M.A. thesis or composition; of German, French, or Italian in historical musicology; of French, German, or Italian in systematic musicology, systematic musicology, composition, and music education, and Master of Fine Arts (performance practices) in all classical solo instruments, voice, opera, and conducting.

Major Fields
The Music Department offers the degrees of Master of Arts and Doctor of Philosophy in the fields of historical musicology, ethnomusicology, systematic musicology, composition, and music education, and Master of Fine Arts (performance practices) in all classical solo instruments, voice, opera, and conducting.

Teaching Credentials
You may earn credentials for teaching music and other subjects in California elementary and secondary schools in conjunction with the Graduate School of Education; completion of the teacher credential program in the Teacher Education Laboratory is required. Interested applicants should consult the Graduate School of Education (201 Moore Hall) and the faculty adviser in music education for information.

Master of Arts Degree

Foreign Language Requirement
Reading knowledge of German or French is required in ethnomusicology and systematic musicology; of French, German, or Italian in composition; of German, French, Italian, or Spanish in music education; and of German and a choice of French, Italian, or Latin in historical musicology. If you lack this proficiency when you enter the program, you must begin language study during your first year in residence.

Course Requirements
You are required to complete a minimum of nine courses, five of which must be at the 200 level. Only four units of Music 596A, 596B, or 596C and four units of course 597 or 598 may be applied toward the total course requirement. No more than four units of all types of 500-series courses may be applied toward the minimum graduate course requirement. Upper division courses that may be applied toward the minimum of nine courses include 103A, 103B, 104A, 104B, 106B*, 106C*, 107A*, 107B*, 107C*, 108, 109A, 109B, 109C, 110A**, 110B, 111A**, 111B, 112A, 112B, 118A, 118B, 119A, 119B, 140A, 140B, 140C, 141, 142A, 142B, 143A, 143B, 145, 145A, 145B, 146C, 147A, 147B, 148, 149, 151A, 151B, 152, 153A, 153B, 153C, 156, 157, 175 (four units only), M180, M181, 184, 187. Course 598 serves to guide the preparation of the thesis and should normally be taken during your last quarter in residence.

*Does not apply to students whose emphasis is composition
**Does not apply to students whose emphasis is music education

Course requirements for each field are as follows:

Historical Musicology: Music 200A, 201A-201B-201C, either 210 or 211 (students planning to enter the Ph.D. program are strongly advised to take both courses 210 and 211 in the first year of residence), 250A or 250B, two quarters of 260A through 260F, and one elective on the recommendation of the graduate adviser.

Systematic Musicology: Music 200A, 200B, three quarters of 272, one course from 255, 269, 273, or 275, and three electives on the recommendation of the graduate adviser.


Composition: Music 200A, one course from 251A through 251D, 252A, 2528, and 252C in sequence (with the option of substituting course 596A for 252C), 266A or 266B, and three electives on the recommendation of the graduate adviser. In addition to the thesis, you are expected to produce other works involving both instrumental and vocal music for both solo
and ensemble forces. You are also responsible for the campus presentation of one original work during each year of residency.

**Music Education**: You may choose either the thesis or comprehensive examination plan. Within each plan you must select a course of study that covers a special field of interest — choral, instrumental, or general topics — as listed below. For the thesis plan, Music 200A, 200B, C225, three courses from 118A, 118B, 119A, 119B, 270A through 270G (required in the special fields), and three elective courses from one of the special fields below are required. For the comprehensive examination plan, Music 200A, C225, four courses from 118A, 118B, 119A, 119B, 270A through 270G (required in the special fields), and three elective courses from one of the special fields below are required.


**Thesis Plan**
All M.A. students must use the thesis plan, except those specializing in music education who may follow either the thesis or comprehensive examination plan.

In all areas except composition, the thesis is an extended essay. In composition, the thesis is a work proposed by the student and approved by the composers’ council. The thesis topic is first approved by the area council; the topic and the composition of the master’s committee are then taken up by the graduate committee.

**Comprehensive Examination Plan**
You may use the comprehensive examination plan in lieu of the thesis plan only if you are specializing in music education and are not going on to the Ph.D. The plan has three components: (1) the realization in performance of a creative project appropriate to elementary, secondary, or higher education (e.g., choral or instrumental ensemble performance, original curricular design, original compositions or transcriptions); (2) a paper equivalent to a graduate seminar paper, including research, description of procedures, and analysis of the selected project; and (3) a final conference and evaluation.

**Final Examination**
The final examination is oral and includes discussion of both the thesis and related matters. This examination does not apply to music education students electing the comprehensive examination plan.

**Master of Fine Arts Degree**

**Foreign Language Requirement**
Reading knowledge of French, German, or Italian is required. Candidates in the opera specialty must also be fluent in speaking one of these languages. The language requirement should be satisfied by the end of your first year in residence.

All M.F.A. students are required to pass a departmental terminology examination covering standard musical terminology as well as basic and advanced performance practice, in keeping with the terminology requirements of the various music departments. The examination should be satisfied by the end of your second year in residence.

**Course Requirements**
You are required to complete a minimum of 18 courses, including at least six at the 200 level and six or more in the 400 series. Only four units of Music 596A, 596B, or 596C and eight units of course 598 may be applied toward the total course requirement. No more than four units of all types of 500-series courses may be applied toward the departmental course requirement. The minimum residence requirement for the M.F.A. is two years.

Course requirements are as follows: Music 200A, three quarters of 261A through 261F, six quarters of 400-level performance instruction, two quarters (eight units) of 598, and six elective courses. Conducting students declare either a choral or instrumental specialization. Six quarters of course 475 are required in the area of specialization (i.e., choral or instrumental) and at least two quarters in the other specialization. (On a two-year program, the ratio would be four to one.) Recommended electives include courses 108, 140A, 140B, 140C, 175, 187, 596A, 596B, 596C, and additional courses from the 200 and 400 series. A maximum of four units of chamber ensembles (course 175) may be applied toward the minimum 18 courses. Course 598 serves to guide the preparation of the final project and should normally be taken during your last two quarters in residence.

With the exception of your first quarter in residence, you must participate in a public performance of a soloistic nature each quarter for a minimum of four units of chamber ensembles (course 175) may be applied toward the minimum 18 courses. Course 598 serves to guide the preparation of the final project and should normally be taken during your last two quarters in residence.

Ph.D. Degree

**Admission**
See “Admission” under Graduate Study above. In addition, applicants for the Ph.D. in music education must have two years teaching experience at the elementary or secondary level to be considered for admission.

**Foreign Language Requirement**
Reading knowledge of French and German is required in systematic musicology, ethnomusicology, and music education; reading knowledge of French, German, and a choice of Italian, Latin, or another language approved by the council on historical musicology is required in that area. In the field of composition, two languages are required, one of which must be German or French; the other may be selected from German, French, Latin, Italian, or Russian.

**Course Requirements**
You may petition to your area council, on the advice of your graduate adviser, for exemption from specific requirements on the basis of equivalent work done at the M.A. level.
Course requirements for each field of study are listed below. In each area, you may complete the residence requirement by electing courses (on consent of the graduate adviser) from the 200- or 100-level courses listed under the course requirements for the M.A.

**Historical Musicology:** Music 200A, 201A-201B-201C, 210, 211, 250A or 250B, and five quarters of 260A through 260F. If you received the M.A. in historical musicology from UCLA, you will normally take a minimum of three quarters of courses 260A through 260F in the Ph.D. program.

**Systematic Musicology:** Music 200A, 200B, five quarters of 272, and one quarter of 255, 269, 273, or 275. If you received the M.A. in systematic musicology from UCLA, you will normally take a minimum of two quarters of course 272 in the Ph.D. program.

**Ethnomusicology:** Music 140A-140B-140C, 200A, 200B, C290A-C290B, and six seminars, at least three of which must be course 280; the others are to be selected from courses 248, 253, 254A, 254B, 255. You are also expected to complete two area studies courses. Parts of these requirements, but not the 280 seminars, may be completed at the M.A. level.

**Composition:** Music 200A, one course from 251A through 251D, six quarters of 252A, 252B, 252C in sequence (with the option of substituting course 596A for 252C), and 266A or 266B. If you received the M.A. in composition from UCLA, you will normally take a minimum of three quarters of course 252 in the Ph.D. program. If you received the M.A. in composition elsewhere, you will normally take six quarters of courses 252A, 252B, 252C in sequence, with the option of substituting course 596A for either or both 252Cs. In addition to the dissertation, you are expected to produce another work, involving both instrumental and vocal music for both solo and ensemble performance. You will normally be required to undertake a minissertation proposal and request for a doctoral committee; this committee administers the University Oral Qualifying Examination.

Qualifying Examinations

When you and your guidance committee believe you are ready to take the qualifying examination, you should submit a schedule to the Student Services Office and the committee members listing the order in which the examinations are to be taken. The Student Services Office acts as proctor for the tests. Normally the six written examinations are spread over a two-week period but should be completed within three weeks. Repeat examinations may be scheduled in consultation with the guidance committee and after a stipulated period of time. Contact the Student Services Office for details on the written examinations.

When you successfully complete the written examinations, a departmental oral qualifying examination is scheduled. After passing the oral examination, you may submit your dissertation proposal and request for a doctoral committee; this committee administers the University Oral Qualifying Examination.

In all fields but composition, the dissertation is an extended monograph. In composition, the dissertation consists of (1) an extended composition accompanied by a short description of the style and techniques of the work and (2) an analytical monograph dealing with some aspect of 20th-century music.

**Candidate in Philosophy Degree**

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

**Final Oral Examination**

A final oral examination is required by the department.

**Lower Division Courses**

**1A-1B. Fundamentals of Music.** Lecture, three hours; laboratory, two hours. 1A. Sight-singing, ear training, reading music; fundamentals of music literacy. Ms. Karp and the Staff 1B. Prerequisite: course 1A or consent of instructor. Diatonic harmony; four-part writing, including inversions, seventh, secondary dominants, and modulation; organization of melody and accompaniment; simple analysis; advanced sight-singing and ear training. Ms. Karp and the Staff

**2A-2B. Introduction to the Literature of Music.** Lecture, four hours; laboratory, one hour. Course 2A is not prerequisite to 2B. Designed for nonmusic majors. 2A surveys the technical and formal principles of music literature through the mid-18th century. 2B surveys music literature from the mid-18th century to the present.

**4A-4B-4C. Basic Musicianship (2 units each).** Laboratory, three hours. Class instruction in elementary ear training and keyboard skills. Miss Sheffield

**5A-5B-5C. Fundamentals of Sound and Music of the World (2 units each).** Prerequisite: consent of instructor. The acoustical makeup of sound (pitch, tone quality); tuning systems; modes and scales; harmony and polyphony; rhythm and meter; notational systems; relationships of music to culture. Laboratory includes ear training and instrumental techniques. Mr. Hutchison and the Staff

**6G-6G-6B. Graduate Review of Music History and Analysis (2 units each).** Prerequisites: graduate standing. Designed to help entering graduate students remedy entrance deficiencies. Clearance of deficiencies is by examination. May be repeated for credit.

**8G. Graduate Piano Sight-Reading (2 units).** Prerequisite: graduate standing. Designed to help entering graduate students remedy entrance deficiencies. Clearance of deficiencies is by examination. May be repeated.

**10. Computer-Assisted Sight-Singing Laboratory (2 units).** Lecture, two hours; laboratory, one hour. Prerequisites: course 1A or equivalent, consent of instructor. An individualized, self-instructional approach for the development of sight-singing skills through the use of a music computer, keyboard instrument, and linear program learning.

**11A-11F. Musicianship (2 units each).** Laboratory, four hours. Prerequisites: aptitude, achievement, and piano skills tests. Series (A-F) must be taken in sequence. For courses 11B-11F, a grade of C (2.0) or better in the previous course in the series is required. Corequisites: courses in the 12A-12B or 14A through 14D series. 11A. Sight-singing and dictation of intervals and diatonic melodies, keyboard score reading with two lines in various clefs, and elementary rhythmic exercises. 11B. Sight-singing of melodies with simple modulations, diatonic harmonic dictation and analysis, sight-reading keyboard music, keyboard sight-reading of cadences, score reading up to three parts, and rhythmic exercises. 11C. Sight-singing of more difficult melodies, two-part dictation, elementary figured bass dictation, keyboard sight-reading up to four parts, and rhythmic exercises. 11D. Sight-singing, two-part dictation, figured bass playing, score reading of chamber scores, and rhythmic exercises. 11E. Sight-singing, two-part dictation, figured bass playing, sight-reading of chamber scores, keyboard sight-reading, and rhythmic exercises. 11F. Sight-singing of chromatic melodies, two-part dictation, chromatic figured bass playing, keyboard reading of orchestral parts, and rhythmic exercises.

**12A-12B. Countertone (2 units each).** Lecture, four hours. Corequisites: courses in the 11A-11F series. 12A. Prerequisites: aptitude, achievement, and piano skills tests. 16th-century modal counterpart in two parts, including the writing of motets. 12B. Prerequisites: courses 12A, 14B. 18th-century modal counterpart in two parts, including the writing of inventions.

**14A-14B-14C. Common Practice Harmony (2 units each).** Lecture, four hours. Series (14A through 14D). Corequisites: courses 11A and 12A. 14A. Prerequisites: grade of C (2.0) or better in course 14A. Common practice harmony through extended dominants and diminished sevenths in all inversions, along with modulations to all diatonic keys. 14C. Prerequisites: grade of C (2.0) or better in course 14B. Chromatic harmony, including augmented sixth chords, Neapolitan sixths, and altered chords, along with complex modulations.

**14D. Modern Harmony (2 units).** Lecture, four hours. Prerequisite: grade of C (2.0) or better in course 14D. Corequisite: course in the 11A-11F series. 14D. 20th-century practices, including nonfunctional harmony, par-diatonicism, polytonality, and serialism.

**26A-26B-26C. History and Analysis of Music I.** Lecture, four hours; laboratory, one hour. Prerequisites: courses 11A-11B-11C, 12A, 14A-14B. Courses 11C and 12A may be taken concurrently with course 26A. 26B. Prerequisite: grade of C (2.0) or better in course 26C. The history and literature of music from the beginning of the Christian era to 1750, with emphasis on analysis of representative works of each style period. Materials selected illustrate the history of style and changing techniques of composition.

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*318 / Music / COLLEGE OF FINE ARTS*
Upper Division Courses

100A-100B-100C. Music in American Education (2 units each). Lecture, three hours; laboratory, one hour. Prerequisites: courses 11A-11F, 12A-12B, 14A-14C, 14D, 26A-26B-26C, 193, 195. Course 110A is prerequisite to 100B; course 110A is prerequisite to 100C. A critical study of principles and practices in music education, historical and current, at elementary and secondary levels. Each course may be taken independently for credit. 100A. General Music; 100B. Choral Music; 100C. Instrumental Music.

Mr. Anderson, Mr. Hatcher, Miss Hooper

101. Advanced Keyboard Harmony and Score Reading. Lecture, one hour; laboratory, two hours. Prerequisite: course 11F or consent of instructor. Emphasis on practical problems in scoring for string and small ensembles. 101A. Lecture, one hour; laboratory, two hours. Prerequisites: courses 11A-11F, 12A-12B, 14A-14C, 14D. Course 101A or consent of instructor is prerequisite to 103B. Techniques of tonal coherence studied through analysis and compositional exercises in the styles of the given periods.

103A-103B. Advanced Theory. Discussion, three hours; laboratory, one hour. Prerequisites: courses 11A-11F, 12A-12B, 14A-14C, 14D. Course 103A or consent of instructor is prerequisite to 103B. Techniques of tonal coherence studied through analysis and compositional exercises in the styles of the given periods.

104A. Advanced Counterpoint. Discussion, three hours. Prerequisites: courses 11A-11F, 12A-12B, 14A-14C, 14D. Course 104A or consent of instructor is prerequisite to 104B. Comparative contrapuntal practices and forms from all periods studied through analysis and compositional exercises in the styles of the given periods.

105. Introduction to Composition. Lecture, three hours. Prerequisites: courses 11A-11F, 12A-12B, 14A-14C, 14D. Intended for music majors in specialization. The nature of the compositional process is explored, with selected exercises in specific techniques and styles.

106A. Instrumentation. Discussion, three hours. Prerequisites: courses 11A-11F, 12A-12B, 14A-14C, 14D. Not open to students with credit for course 106A prior to Fall Quarter 1984. Ranges and characteristics of instruments, exercises in scoring.

106B-106C. Advanced Orchestration. Formerly numbered 106A-106B. Discussion, three hours. Prerequisite: course 106A. Course 106B is prerequisite to 106C and is not open for credit to students with credit for course 106A prior to Fall Quarter 1984. Scoring and analysis for ensembles and full orchestra.

107A-107B-107C. Composition. Lecture, three hours. Prerequisites: courses 11A-11F, 12A-12B, 14A-14C, 14D. Course 107A is prerequisite to 107B, which is prerequisite to 107C. Designed for students specializing in composition and theory. Vocal and instrumental composition in the smaller forms, including and composition of 20th-century techniques.

108. Acoustics. Lecture, three hours. Prerequisite: consent of instructor. The interaction between acoustical and musical phenomena. Tuning systems, consonance and dissonance, tonal quality. Lecture, demonstration, discussion, and tours of instrumental collections and acoustical research facilities.

Mr. Hutchinson
C17A-C17F. Selected Topics in the History of Music. (Formerly numbered 127A-127F.) Lecture, three hours. Prerequisites to all courses: courses 11A-11F, 12A-12B, 14A-14C, 14D, 26A-26B-26C; in addition 126A is prerequisite to C127D, 126B is prerequisite to C127E, and 126C is prerequisite to C127F. Designed as a proseminal for undergraduates in preparation for graduate work. Special aspects of the music of each period are studied in depth. May be concurrently scheduled with courses C227A-C227F. C127A. Medieval. C127B. Renaissance; C127C. Baroque; C127D. Classic; C127E. Romantic; C127F. 20th Century.

130. Music of the United States. Prerequisite: course 2A or consent of instructor. A survey of American music from Colonial times to the present. Mr. Stevenson
131A-131B. Music of Hispanic America. Prerequisite: consent of instructor. Course 131A is not prerequisite to 131B. Survey of art music, including attention to the major cultural subdivisons of the area. 131A. Colonial to the 19th Century; 131B. The 20th Century. Mr. Stevenson

132A-132B. Development of Jazz. Lecture, three hours; laboratory, one hour. Prerequisite: consent of instructor. Course 132A is prerequisite to 132B. An introduction to jazz; its historical background and its development in the United States. Mr. Pinckney
133. Bach. Lecture, two hours; laboratory, two hours. The life and works of Johann Sebastian Bach.
134. Beethoven. Lecture, two hours; laboratory, two hours. The life and works of Ludwig van Beethoven.
137A-137B. Psychology of Music. 137A. Designed for nonmajors. An introduction to the psychology of music; historical background and the broad field of study, including the use of music as a stimulus, tests and measurement, and related modes of musical behavior. 137B. Prerequisites: courses 11A-11B-11C, 12A, 14A-14B, and 26A-26B-26C, or consent of instructor. A study of the psychological factors and problems in music from the point of view of the listener, performer, and composer.
138. Aesthetics of Music. Lecture, three hours. Designed for nonmajors. A historical survey of musical aesthetic thought and practice. Selected readings and musical examples. Mr. Schwadron
139. History and Literature of Church Music. Prerequisite: consent of instructor. A survey of the forms and liturgies of Western church music.
140A-140B-140C. Musical Cultures of the World. Prerequisite: consent of instructor. Course 140A is not prerequisite to 140B, which is not prerequisite to 140C. A survey of art music in Europe and the world, including Western art music, the role of music in society and its relationship to other arts; consideration also to scale structure, instruments, musical forms, and performance standards. 140A deals with the musical cultures of Europe and the Americas; 140B with those of the Near East and Africa; 140C with those of South Asia, Southeast Asia, and the Far East.

141. Survey of Music in Japan. Lecture, three hours. A survey of the main genres of Japanese traditional music, including Gagaku, Buddhist chant, Biwa music, Koto music, Shamisen music, and the music used in various theatrical forms.
142A-142B. Folk Music of Eastern Europe and the Mediterranean. Prerequisite: consent of instructor. Course 142A is prerequisite to 142B. Introduces the student to the forms and styles of traditional music in Eastern Europe (including the Balkans). Historical and ethnological aspects of the music are illustrated by numerous recorded examples from the main cultural subdivisions of the area. 142B introduces the student to the forms and styles of traditional music in the Mediterranean basin, particularly those in which interaction between European and Oriental styles is apparent. Mr. Porter, Mr. Racy
143A-143B. Music of Africa. Lecture, three hours; laboratory, two hours. Prerequisites: courses 140A-140B-140C or consent of instructor. Course 143A is prerequisite to 143B. An investigation of the historical backgrounds and characteristics of American popular music and its relation to American culture, with emphasis on 20th-century popular music and its major composers, including a comparison between traditional pre-1950 popular music and trends in post-1950 popular music.
145. History of Chinese Opera. Prerequisite: consent of instructor. A survey of dramatic elements in Chinese operas, including singing, dance, and acrobatics. Emphasis on traditional and modern Peking opera and its relation to Cantonese and other genres. Mr. Lui
146A-146B-146C. Studies in Chinese Instrumental Music. Lecture, three hours; laboratory, one hour. Prerequisites: course 146A or consent of instructor. Courses 146A and 146B are not prerequisite to 146C, which is not prerequisite to 146C. 146A. A study of the literature, major sources, paleography, theory, and philosophy of the Ch'in and P'i P'a, including transcription and analysis. 146B. A comprehensive study of Chinese music, including instruments, classification system, specific musical notation, and use in the context of Chinese society. 146C. A study of the rules of improvisation, particularly as related to the Shanghai style, as realized on the P'i P'a, Ti, Er Hu, San Shien, Sheo, and related instruments. Mr. Lui
147A-147B. Music of China. Lecture, three hours; laboratory, two hours. Prerequisites: courses 140A-140B-140C or consent of instructor. 147A. History and theory of the music of China, including a survey of various provincial instruments. 147B. Prerequisite: course 147A. Introduction to various notational systems. Analysis of representative styles. Mr. Lui
148. Folk Music of South Asia. Prerequisite: consent of instructor. An illustrated survey of some of the regional genres, styles, and musical instruments found in India and Pakistan, with special reference to the religious, social, economic, and cultural aspects of their occurrence. Mr. Jairazbhoy
149. The Anthropology of Music. A cross-cultural examination of music in the context of social behavior and how musical patterns reflect patterns exhibited in other cultural systems, including economic, political, religious, and social structure.
152. Survey of Music in India. A consideration of the main music genres in India, with particular reference to the religious, sociocultural, and historical background of the country.
153A-153B-153C. Music of the American Indians. American Indian music is studied within the broader context of styles, cultural values, and sources. Films, recordings, lectures, and limited group singing and dancing relate the music to the culture producing it. 153A. Musics of the Eastern, California-Yuman, Great Basins, and Northwest Coast Areas; 153B. Musics of the Athabaskan, Pueblo, Plains, and Modern Pan-American Trends; 153C. Sociology of American Indian music, with special reference to the influence of music in which cultural values, prescriptions, oral traditions, language, and technological advances have affected music of various tribes. Ms. Heath

154A-154B. The Afro-American Musical Heritage. (Same as Folklore M154A-M154B.) Prerequisite: course 1A or consent of instructor. Course 154A is prerequisite to 154B. A study of Afro-American rhythm, dance, music, field hollers, spirituals, minstrel songs, spirituals, blues, and jazz; the contrast between West African, Afro-American, and Afro-Brazilian musical traditions.
155. Audio Technology for Musicians. Lecture, two hours; laboratory, three hours. Prerequisites: course 107A or equivalent, consent of instructor. Not open for credit to students with credit for former course 156A. Designed for students specializing in composition. Applicable acoustical and electronic theory, history of technological and compositional development of classical electronic music. Analysis, manipulation of analog and digital synthesizers and ancillary equipment, invention and realization of materials.
156. Electronic Music: Theory and Techniques. (Formerly numbered 156A.) Lecture, three hours; laboratory, three hours. Prerequisites: course 107A or equivalent, consent of instructor. Not open for credit to students with credit for former course 156A. Designed for students specializing in composition. Applicable acoustical and electronic theory, history of technological and compositional development of classical electronic music. Analysis, manipulation of analog and digital synthesizers and ancillary equipment, invention and realization of materials.
157. Music of Brazil. Prerequisites: consent of instructor, some knowledge of Portuguese. History of ethnic and art music in Brazil, with some reference to Portuguese antecedents. Mr. Stevenson
158. Music of India. Lecture, three hours; laboratory, two hours. Major Black and Creole figures in the origin and development of jazz in New Orleans from the turn of the 20th century through the 1960s, with emphasis on polyrhythms, regional music, traditional music, and stylistic analysis. Mr. Ashworth
159. The Development of Rock. Prerequisite: consent of instructor. The history of rock from the 1950s to the 1970s. An in-depth survey of stylistic trends illustrated by pertinent examples and accompanied by related musical examples. Mr. Stevenson
160A-160B. Undergraduate Instruction in Performance for the Performance Specialist. Limited to upper division music majors who have been accepted by audition into the performance specialization. Individual instruction of one hour per week. Students must perform in a noon concert once during their junior year and must present a full recital in their senior year. Units are distributed on the basis of one unit each for Fall and Winter Quarters and four units for Spring Quarter. Prerequisites are assigned by the applied instructor in Fall and Winter and by jury examination in Spring. May be repeated for credit.
160A. Violin. Ms. Kamei, Mr. Tregre
160B. Viola. Ms. Kamei
160C. Cello. Mr. Oliver
160D. String Bass. Mr. Zbits
160E. Harp. Ms. Neil
160F. Classical Guitar. Mr. Norman, Mr. Yates
160G. Viola da gamba. Ms. Marcus
160H. Lute. Ms. Lace
161A. Flute. Mr. Stokes
161B. Oboe. Mr. Gray
161C. Clarinet. Mr. Grey
161D. Bassoon. Mr. Bassoon
161E. Saxophone. Mr. Gray
161F. Trumpet. Mr. Guarnieri
162A. French Horn. Mr. Graham
162B. Trombone. Mr. Staggs
162C. Tuba. Mr. Johnson
163. Percussion. Mr. Peters
164A. Piano. Mrs. Harris, Mr. Tzerko, and the Staff
164B. Organ. Mr. Harmon
164C. Harpsichord. Ms. Karp
165. Voice. Mr. Guarnieri and the Staff
174A-174E. Musical Terminology and Diction for Musicians (1 unit each). (Formerly numbered 174A-174D.) Prerequisite: music major or consent of instructor. Recommended for music students in any area and at any level. Specialized work in pronunciation, diction, and music terminology is aimed to the performance and interpretation of vocal and instrumental scores to enable students to function in today's multinational world of music. Students may enroll in two sections per quarter; a total of four units may be applied toward the degree requirements. Each course may be repeated once for credit. 174A. German; 174B. French; 174C. Spanish; 174D. Italian; 174E. English. Mrs. Hstatt

175. Chamber Ensembles (2 units). Prerequisite: audition. Students must be at the advanced level of their instrument to participate. Applied study of the performance practices of literature appropriate to the ensemble. Students may enroll in two sections per quarter; a total of twelve units may be applied toward the degree requirements. May be repeated for credit. 175A. C190B, or consent of instructor. Mr. Schwadron

C190A-C190B. Proseminar in Ethnomusicology. (Formerly numbered 190a-190b.) Lecture, three hours. Prerequisites: courses 140A-140B-140C. May be concurrently scheduled with courses C290A-C290B.

193. Proseminar in Music Education (2 units). Prerequisite: concurrent enrollment in course 193. Discussion, two hours; laboratory, two hours. Prerequisites: completion of two quarters of current practice. Mr. Anderson, Miss Hansen.

195. Field Studies in Music Education (2 units). Discussion, two hours; laboratory, two hours. Prerequisite: completion of one quarter of the course. Mr. Rameau.

196. Special Studies in Music (2 or 4 units). Hours to be arranged. Prerequisites: senior standing, consent of instructor and department chair, 3.0 GPA. Individual studies in music resulting in a research project. May be repeated for a maximum of eight units. Mr. Harmon and the Staff

Graduate Courses

200A. Research Methods and Bibliography (6 units). Lecture, three hours. Prerequisite: graduate standing. A survey of general bibliographic material in music.

200B. Research Methods and Bibliography (6 units). Lecture, three hours. Prerequisite: course 200A, or consent of instructor. May be repeated for credit.

202A. Seminar in Field and Laboratory Methods in Ethnomusicology (6 units each). Lecture, three hours. Prerequisites: courses C190A-C190B or consent of instructor. Training includes experience in handling of technical apparatus, films, recording, processing, and editing; field projects. Mr. Jairazbhoy

225. Seminar in Musical Instruments of the Non-Western World (6 units). Lecture, three hours. Prerequisites: courses 140A-140B-140C and C190A-C190B, or consent of instructor. Mr. De Vele

250A-250B. Seminar in the History of Music Theory (6 units each). Lecture, three hours. Prerequisite: course 200A. Course 250A is not prerequisite to 250B. 250A. Music Theory from Antiquity through Zarlino; 250B. Music Theory from Rameau to the Present. Mr. D’Accone, Mr. Rameau

251A. Seminar in Special Topics in Composition and Theory. Seminar, three hours. An intensive exploration of specialized aspects of composition. May be repeated for credit. 251A. Orchestration; 251B. Specific Media; 251C. Specific Styles; 251D. Computational Analysis.

252A-252B-252C. Seminar in Composition (6 units each). Lecture, three hours. Prerequisites: courses 106B, 107C. Course 252A is prerequisite to 252B, which is prerequisite to 252C. Courses may be taken out of sequence only by consent of instructor. May be repeated for credit.

253. Seminar in Notation and Transcription in Ethnomusicology (6 units). Lecture, three hours. Prerequisites: courses 140A-140B-140C and C190A-C190B, or consent of instructor.

254A. Seminar in Field and Laboratory Methods in Ethnomusicology (6 units each). Lecture, three hours. Prerequisites: courses C190A-C190B or consent of instructor. Training includes experience in handling of technical apparatus, films, recording, processing, and editing; field projects. Mr. Jairazbhoy

255. Seminar in Musical Instruments of the Non-Western World (6 units). Lecture, three hours. Prerequisites: courses 140A-140B-140C and C190A-C190B, or consent of instructor. Mr. De Vele

256. Seminar in Musical Form (6 units). Lecture, three hours. Prerequisites: courses 126A-126B-126C. The analysis of structural organizations in music.

257. Seminar in Music of the United States and Canada. Seminar, three hours. Prerequisite: course 130.

M258. Seminar in Folk Music. (Same as Folklore M258.) Seminar, three hours. Prerequisite: consent of instructor. Mr. Porter, Mr. Wilgus

260A-260F. Seminar in Historical Musicology (6 units each). Lecture, three hours. Prerequisites: courses 200A, 201A-201B-201C, and 210 or 211 (either may be taken concurrently). May be repeated for credit. 260A. Medieval; 260B. Renaissance; 260C. Baroque; 260D. Classical; 260E. Romantic; 260F. 19th Century.

261A-261F. Problems in Performative Practices. Seminar, three hours. Prerequisites: courses 151A-151B or consent of instructor. An investigation of primary source readings in performance practices as related to the period; analytical reports and practical applications in class demonstrations. May be repeated for credit. 261A. Medieval; 261B. Renaissance; 261C. Baroque; 261D. Classical; 261E. Romantic; 261F. Contemporary.

266A-266B. Seminar in Music of the 20th Century. Seminar, three hours. Prerequisites: courses 126A-126B-126C. 266A. Discussion and analysis of the major works of the 20th century before World War II. Emphasis on the study of works written at the same time in history 266B. Discussion and analysis of composers and their works from 1945 to the present.

269. Seminar in the History of European Instruments. Seminar, three hours. Mr. Hammond

270A-270G. Seminar in Music Education (6 units each). Lecture, three hours. Prerequisites: courses 250A-250G. Literature, three hours. Prerequisite: consent of instructor. May be repeated for credit. 270A. History; 270B. Non-Western Musics; 270C. Curriculum Innovations; 270D. Teaching and Measurements; 270E. Choral Literature; 270F. Instrumental Literature; 270G. General Topics.
280A-465B. Classical Music of India. Seminar, three hours. Prerequisite: consent of instructor. A study of the history, theory, and style of north and south Indian classical music. The first quarter is concerned primarily with music history and traditional theory, while the second quarter involves analysis of present-day forms, styles, and techniques, and the use of instruments.

280B. Seminar in Ethiopian Music. Seminar, three hours. Prerequisite: course 140A-140B-140C, 190A-190B, 200A, 200B. May be repeated for credit.

281A-281B. Music of Indonesia. Lecture, three hours. Prerequisite: consent of instructor. During the first quarter, emphasis is on the music and related performing arts of Javanese and Balinese, and the second quarter focuses on the music and performing arts of Bali and other Indonesian islands. Concurrent participation in the Near East performance group is required.

282. Music of Iran and Other Non-Arabic-Speaking Communities. Seminar, three hours. Prerequisite: consent of instructor. A comparative study of the music of Iran and other related areas, including Turkey, with particular reference to their historical and cultural background, sources on music theory and aesthetics, instruments, style, technique of improvisation, and contemporary practice.


284. Music of the Near East. Lecture, three hours. Prerequisite: consent of instructor. An investigation of the historical and cultural backgrounds, the main musical styles, the relationship between theory and practice and emphasis on mode and improvisation, and 20th-century trends. Concurrent participation in the Near East performance group is required.

285. Music of Tibet. Seminar, three hours. Prerequisite: consent of instructor. A study of the traditional music of ethnic Tibetan music, art, and folklore in its cultural matrix and its relationship with other arts. Topics include traditional instruments and ensembles and studies in formal and stylistic analysis.

286A-286B. Seminar in African Music. Seminar, three hours. Prerequisite: consent of instructor. A study of the history, theory, and practice of north and south Indian classical music. The first quarter is concerned primarily with music history and traditional theory, while the second quarter involves analysis of present-day forms, styles, techniques, and musical instruments. Concurrent participation in the Indian performance group is required. Mr. Jairazbhoy


288. Seminar in North American Indian Music. Seminar, three hours. Prerequisite: consent of instructor. A survey of representative musical styles of Native North American Indians, including problems of transcription, methods of analysis, symbolic implications of song texts. Emphasis on the relationship between music and cultural context. The influence of Western music in acculturative contexts is also discussed. Ms. Hath
The UCLA Department of Theater Arts is considered among the finest of its kind in the country and is the only one that combines theater, motion picture, and television in a single department.

The department bases its work on a solid foundation in the liberal arts. The purpose of the curriculum is to develop in its students a scholarly, creative, and professional approach to the theater arts. The aim of the department is to train graduates who will eventually make original contributions in the field of their work.

Each of the department's two divisions, Theater and Motion Picture/Television, offers an undergraduate program leading to the Bachelor of Arts degree, as well as graduate programs leading to the Master of Arts, Master of Fine Arts, and Ph.D. degrees.

**Bachelor of Arts in Motion Picture/Television**

**Preparation for the Major**

Admission to this major is not automatic. You may not apply until just prior to achieving full standing as a junior at the University. You must have at least 84 quarter units (56 semester units) of credit and have completed the general University and College of Fine Arts requirements before entering the major. You must also obtain departmental consent by (1) filing a letter of intention, (2) giving evidence of creative or critical ability when requested, and (3) providing additional material as determined by the department.

**The Major**

The major in motion picture/television consists of 68 upper division units taken in the junior and senior years. These include Theater Arts 109, 134A, 166 (eight units), 185 (eight units); one of the following writing courses: 131, 133, 135 (eight units), 181B; two of the following film history courses: 105A, 106B, 106C, 106D, 106E, 108, 110A; two of the following film criticism courses: 107, 110B, 112, 113, 114, 116; two motion picture/television elective area courses; and four upper division adviser-approved cognate courses pertinent to your study in at least two other departments, including the theater area of the Department of Theater Arts (these courses may not be used to satisfy College of Fine Arts or University requirements). It is recommended that the majority of the required courses be completed during the junior year.

You should be mindful of the exigencies inherent in filmmaking and be prepared to meet the additional demands of time and costs.

Note: 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.

Check the Schedule of Classes for courses limited to majors only.

**Bachelor of Arts in Theater**

**Preparation for the Major**

Required: Theater Arts 5A, 5B, 5C, 10, 20, English 90.

**The Major**

Required: A total of 60 upper division units, including Theater Arts 130A, 140A, 141A, 142A, 143, 160 or 161A*, 170, C172 (eight units); one course from 122, 144A, C146, 149A, 174, C190A, C190B; 22 units of approved upper division theater arts electives.

Through certain of these required courses, you are responsible for completing specific production assignments related to production activity of the theater curriculum during each quarter in residence.

*If course 161A is used to complete the requirement, 24 units of electives will be required.

**Graduate Study**

The Department of Theater Arts offers the Master of Arts (M.A.), Master of Fine Arts (M.F.A.), and Doctor of Philosophy (Ph.D.) degrees in the following specializations: (1) motion picture/television and (2) theater.

**Admission**

Students are generally admitted in the Fall Quarter only. Applicants for another quarter should consult the Student Affairs Office, Theater Arts, 1327 Macgowan Hall, UCLA, Los Angeles, CA 90024. Admission is competitive, and only a limited number of students are accepted each year in each program. The department does not have an application in addition to the one used by the Graduate Admissions Office, and no screening examination prior to admission is required.

In addition to satisfying minimum University requirements for graduate admission, you must:

1. Have completed an undergraduate major in theater or motion picture/television comparable to that offered at UCLA. Students whose theater arts preparation is determined to be deficient will be required to make up those deficiencies.

2. Provide the department with at least three letters of reference and a statement of purpose.

Additional admission requirements are noted under each specific program.

**Master of Arts in Motion Picture/Television**

**Admission**

If you do not have an undergraduate major comparable to that of the department, you must submit for consideration film and television work done at other institutions (confirmed as your work by the instructors originally involved), as well as evidence of your production and scriptwriting competence. Alternatively, you may be required to take such courses at UCLA as will fulfill these requirements, though these courses may not be applied toward the minimum of nine courses required for the M.A. degree.

**Major Fields or Subdisciplines**

The program requires that you be conversant in both film and television, as you are tested on each in the comprehensive examination.

**Foreign Language Requirement**

You may be required to demonstrate competence in a foreign language if necessary to support the research in your area of specialization.

**Course Requirements**

A minimum of nine courses is required, five of which must be 200-level courses in film and/or television history, theory, and criticism. In addition, Theater Arts 200 is required of all stu-
The written examination consists of three days of testing, four hours each day, and examines a broad range of knowledge in motion picture/television and a general plan of investigation from the film/television studies committee. You must present the adviser and the committee with a prospectus of the thesis and a petition to advance to candidacy. Both are used as the basis for approval. A thesis committee is formed when you are within one quarter of completing the coursework, at which time you are eligible to advance to candidacy. If your thesis fails to pass the committee, you may present a rewritten version for approval. The number of times a thesis may be presented depends on assessments made by the committee.

**Comprehensive Examination Plan**

The written examination consists of three days of testing, four hours each day, and examines a broad range of knowledge in motion picture/television. After completion, your committee grades you either pass or fail. You may repeat any failed portions of the examination once in the following quarter.

**Master of Arts in Theater**

**Admission**

Requirements include a sample of scholarly or critical writing, statement of purpose, and other information (resume, portfolio, script interview, etc.) that may be required to establish the quality of work in the specialization.

**Major Fields or Subdisciplines**

The program leads to a general graduate degree, though there are opportunities, through your electives and thesis or research paper topic, to stress a particular interest such as acting, children's theater, design, directing, playwriting, puppet theater, theater history and criticism, theater management, and theater technology.

**Foreign Language Requirement**

The program does not require a foreign language, but you are urged to develop a proficiency in either French, German, Spanish, or Italian.

**Course Requirements**

You are required to complete a minimum of ten and one-half courses (42 units), five of which must be at the graduate level, in at least one year of intensive study, laboratory exercises, and research leading to the successful completion of either the thesis or comprehensive examination plan. You are required to take an active part in the production program of the department as partial fulfillment of the degree requirements.

The required courses are Theater Arts 200, 245A-245B, and C272 (a two-unit course to be taken three times). After consultation with your adviser, you will select six courses, including one graduate course in theater history and another in theater production theory, as well as four other courses which emphasize production practice or historical study. Students accepted for joint M.A. and Ph.D. programs are required to take courses 205A, 205B, and 205C.

Only eight units from the 596 series may be applied toward the total course requirement, and only four of these units may be applied toward the minimum graduate course requirement. No 598 courses may be applied toward the total course requirement.

**Thesis Plan**

Before beginning work on the thesis, you must obtain approval of a subject dealing with history, aesthetics, or criticism in motion picture/television and a general plan of investigation from the M.A. committee. A thesis committee is formed when you are within one quarter of completing the coursework, at which time you are eligible to advance to candidacy. You must present the adviser and the committee with a prospectus of the thesis and a petition to advance to candidacy. Both are used as the basis for approval. If your thesis fails to pass the committee, you may present a rewritten version for approval. The number of times a thesis may be presented depends on assessments made by the committee.

**Comprehensive Examination Plan**

If you elect this plan, you must complete an examination consisting of a 50-page research paper which may be associated with four units of Theater Arts 596A, a one-hour oral defense of the paper, and a two-part, six-hour written examination covering theater history and production practice. The examination normally occurs during the final quarter of residency, at which time you should have advanced to candidacy.

**Master of Fine Arts in Motion Picture/Television**

**Admission**

Applicants with diverse backgrounds and undergraduate majors in areas other than theater arts are encouraged. You must state clearly your degree objective (M.F.A.) and the area of specialization desired within the program: animation, filmmaking, screenwriting, producers program, or television production.

If you intend to concentrate in film or television production, a description of a film or television project designed to be undertaken during graduate study at UCLA is required. This should be in proposal, script, or treatment form.

If you intend to concentrate in writing, a finished full-length feature script in dramatic form is desirable; however, other forms of creative writing may be submitted.

If you intend to concentrate in animation, a description of an animation project to be undertaken during graduate study must be submitted, preferably in storyboard form. Other creative work may be submitted.

If you intend to concentrate in the producers program, you must submit a comprehensive statement detailing your reasons for pursuing a career as a producer/executive in motion picture/television.

**Major Fields or Subdisciplines**

The program includes specializations in animation, filmmaking (fictional, documentary, education), screenwriting, and television production. Ethnographic film is a subdiscipline.

**Course Requirements**

A total of 18 courses is required for the degree, five of which must be graduate level. At least three courses must be in the 200 series in film history, aesthetics, or structure. Course requirements for each specialization are available in the Student Affairs Office, 1327 Macgowan Hall.

Only 16 units of Theater Arts 596 may be applied toward the total course requirement, and only four of these units may be applied toward the minimum graduate course requirement. Only four units of course 596A and four units of course 596B may be taken prior to advancement to candidacy. Courses 596C through 596F may be taken only after advancement to candidacy.

Fieldwork and internships are not required but may be taken as courses which may be applied toward the degree.

**Comprehensive Examination Plan**

The comprehensive plan is satisfied by fulfillment of projects appropriate to your specialization. No later than the beginning of your final quarter in residence, you must submit for approval to the M.F.A. committee the appropriate documents for advancement to candidacy and a list of at least three faculty members who will serve on your committee. Consult the Student Affairs Office, 1327 Macgowan Hall, for further information.
M.A.-African Area Studies/M.F.A.
The Motion Picture/Television Division of the Department of Theater Arts and the African Area Studies Program have an articulated degree program which allows students to combine study for the M.A. in African Area Studies and the M.F.A., with a specialization in motion picture/television. Articulated programs do not allow course credit to be applied toward more than one degree. Interested students should write to the Graduate Adviser, African Area Studies Program, UCLA African Studies Center.

Master of Fine Arts in Theater

Admission
Evidence of creative ability and professional intent is required. At the time of application to the Graduate Division, you must clearly state the degree objective (M.F.A.) and one of the following areas of specialization within the M.F.A. (Theater) program.

Acting: Submit strong letters of recommendation from directors familiar with your work, a complete resume of your experience, and photographs; audition for the M.F.A. faculty committee or its representative.

Design (scenic, costume, or both): Submit examples of creative work such as a portfolio of designs, sketches, working drawings, and photographs.

Directing: Submit evidence of motivation and talent through production and prompt books, reviews, critical commentaries, and strong letters of recommendation. An interview may be requested by the department.

Playwriting: Submit examples of creative writing such as full-length plays, one-act plays, and screenplays.

Producers Program: Submit a comprehensive statement detailing your reasons for pursuing a career as a producer/executive in theater.

Puppet Theater: Submit actual puppets and photographs; audition for the M.F.A. committee or its representative.

Theater Technology: Submit evidence of ability demonstrated through production books, working drawings, lighting plots, photographs, and strong letters of recommendation.

Major Fields or Subdisciplines
The areas of specialization for the M.F.A. program are as specified above.

Foreign Language Requirement
There is no foreign language requirement for the M.F.A. degree.

Course Requirements
A total of 18 courses (72 units) is required. Only 16 units of Theater Arts 596 may be applied toward the total course requirement and the minimum graduate course requirement.

Specific course requirements for each specialization are available in the Student Affairs Office, 1327 Macgowan Hall.

Fieldwork: Occasionally, students fulfill project requirements in the field. As an example, a student might complete a directing or design project with a community or church organization or a municipal division such as the Parks and Recreation Department.

Internship: Some specializations, such as the producers program and puppet theater, may take advantage of opportunities offered by professional organizations.

Comprehensive Examination Plan
The plan is satisfied by fulfilling a series of creative projects appropriate to your specialization. On completion of the final creative project or last quarter of residency, whichever is last, you must file for advancement to candidacy. The committee then reviews and evaluates your record for a degree. Your participation in the final review is at the discretion of the committee.

Ph.D. in Motion Picture/Television

Admission
Completion of a master's degree (M.A. or M.F.A.) equivalent to those offered by the UCLA Department of Theater Arts is required. In exceptional cases, students with an M.A. outside the field will be considered for direct admission to the program. Evidence of potential as a practicing scholar is indicated by (1) breadth and depth of advanced coursework in history, theory, and criticism; (2) imagination and quality of scholarly writing; (3) academic achievements and potential as indicated by the grade-point average, Graduate Record Examination (GRE) scores, awards, scholarships, teaching assistantships, etc.

The dossier submitted for admission must contain a letter describing your reasons for wishing to earn the Ph.D., plus the master's thesis or writing samples that demonstrate a high level of ability to write criticism or historical narrative.

Note: Supporting material will be returned only if accompanied by postage, envelope, and shipping instructions. Further information is available from the Student Affairs Office, Theater Arts, 1327 Macgowan Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines
You are expected to understand film and television within their social contexts as significant forms of art and communication, and to achieve by disciplined study a mastery of their history, theory, and criticism.

Foreign Language Requirement
Mastery of one foreign language is required and must be demonstrated in one of the following ways: (1) passing the Educational Testing Service (ETS) examination in French, Spanish, German, or Russian with a score of 500 or better; (2) completing level five or equivalent, with a minimum grade of C, in any foreign language; (3) passing a UCLA language examination given in any foreign language department. When mastery of more than one foreign language is necessary for your dissertation study, you will be required to take courses or pass examinations in the additional language(s). Normally, the required foreign language examinations must be passed by the end of your first year of residence.

In certain cases with committee approval, a research tool such as statistics or computer science may be substituted for the foreign language.

Course Requirements
During the first six quarters in the motion picture/television specialization, you must take 13½ courses. During your first year in residence, Theater Arts 211B, 215, and 273 must be completed, while course 274 is required in your last quarter in residence. In addition to this core sequence, course 496 is also required. Further, you must select nine graduate elective courses, at least six of which must be drawn from film and television studies offerings.

You must select from these elective courses three areas of concentration, chosen to broaden your familiarity and competence with various and diverse subject matters. A suggested list of concentrations is as follows: film theory, criticism, narrative studies, film and the other arts, authors, genres, documentary, film history, American film, European film, non-Western film/television, television studies, media and society, film/television as a business enterprise, and film/television production. It is expected that the dissertation topic will emerge from one of the concentrations.

Teaching Experience
Every student must complete Theater Arts 495A or 496, depending on program requirements.

Qualifying Examinations
At the end of your second quarter in residence, you must take a preliminary oral examination to be conducted by a representative committee of the faculty of your specialization. The committee will specify the areas of review and test your background preparation and progress to date and determine general fitness to continue in the doctoral program.
After completing all language and course requirements, approval of a dissertation prospectus, and appointment of a dissertation committee, you are required to pass a written qualifying examination administered in three-hour segments during four successive days. Information regarding the examination is available from the divisional Ph.D. committee. You may be reexamined on any failed parts of the examination.

After you pass the written examination, a doctoral committee is formed to administer the University Oral Qualifying Examination. You are advanced to candidacy only on successful completion of this examination.

A dissertation demonstrating your ability to carry out independent and significant inquiry in a historical, theoretical, or critical field of theater arts is required. Final award of the Ph.D. depends on successful completion of the dissertation.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
A final oral examination, held after the completion of the dissertation, may be required at the option of the dissertation committee.

Ph.D. in Theater
Admission
See admission requirements for the Ph.D. in Motion Picture/Television. In addition, theater applicants must submit evidence of artistic competence in some facet of theater production. Simultaneous application may be made to both the M.A. and Ph.D. programs in theater.

Major Fields or Subdisciplines
The Ph.D. student in theater is expected to be knowledgeable regarding theater history and theory, critical methods, theatrical production, and dramatic literature.

Foreign Language Requirement
See foreign language requirements for the Ph.D. in Motion Picture/Television.

Course Requirements
During the first six quarters (two academic years), you must complete a minimum of 12 graduate courses (200 or 500 level) and two professional courses (Theater Arts 495A and 495B). Courses 216A, 216B, 216C are required. The remaining nine courses will be elective graduate courses, seminars, or tutorials. Of these electives, no more than four may be taken outside the division and no more than two may be tutorials. In addition, the distribution of electives must include at least one each in the areas of Western and non-Western theater study. These electives must augment the required courses so as to constitute a definable area of study associated with the dissertation topic. The dissertation will be a historical, critical, analytical, or experimental study of a theater topic.

Teaching Experience
Every student must complete Theater Arts 495A or 496, depending on program requirements.

Qualifying Examinations
See the description of qualifying examinations under the Ph.D. in Motion Picture/Television.

Candidate in Philosophy Degree
You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination
A final oral examination, held after the completion of the dissertation, may be required at the option of the dissertation committee.

Lower Division Courses

Theater Area

5A. History and Drama of the Theater from Primitive Times to 1640. Lecture, three hours; discussion, one hour. Required of theater majors. The history of the influence of different cultures, traditions, and technologies on the development of theater as a social institution.

5B. History and Drama of the Theater from 1640 to 1900. Lecture, three hours; discussion, one hour. Required of theater majors. The history of the influence of different cultures, traditions, and technologies on the development of theater as a social institution.

5C. History and Drama of the Theater from 1900 to the Present. Lecture, three hours; discussion, one hour. Required of theater majors. The history of the influence of different cultures, traditions, and technologies on the development of theater as a social institution.

10. Fundamentals of Theater Production. Lecture, three hours; laboratory, three hours. Required of theater majors in the first quarter in residence. A basic study of the relationship of acting, stage management, scenery, lighting, costume, and sound to the production of the play. Emphasis on the planning, procedures, materials, equipment, and disciplines of theater production.

20. Acting Fundamentals. Lecture/laboratory. Required of theater majors. An introduction to the interpretation of drama through the art of the actor. Development of individual insights, skills, and disciplines in the presentation of dramatic material to an audience.

Upper Division Courses

Theater and General Secondary Credential Areas

100. The Teaching of Theater. Lecture, three hours. Prerequisites: courses 160 or 161A, and 162A, or consent of instructor. Highly recommended for students pursuing a secondary teaching credential. Study of current methods and problems of production as related to the secondary level.

101. Introduction to Theater Arts (2 units). Lecture, two hours; laboratory, two hours. Not open for credit to theater arts majors. A survey of theater, motion pictures, television, and radio, together with critical analysis of their roles in contemporary culture, leading to an appreciation and understanding of the theater arts. A nontechnical presentation for the general student. P/NP grading.

102A. Selected Topics on the History of the European Theater. Lecture, three hours. Prerequisites: course 5A or equivalent, consent of instructor. An investigation in depth of a selected area of study in theater history from the Greeks through the Renaissance. May be repeated twice for credit.

102B. Selected Topics on the History of the European Theater. Lecture, three hours. Prerequisites: course 5B or equivalent and/or consent of instructor. An investigation in depth of a selected area of study in theater history from the baroque to the present. May be repeated twice for credit.

102D. History of the European Theater. Lecture, three hours. Prerequisite: consent of instructor. Not open for credit to students with credit for more than one course from the 5A, 5B, 5C series. A survey of the development of the theater from the Greeks to the present.

102E. The Theater of the Non-European World. Lecture, three hours: discussion, one hour. A survey of theater forms of the non-European world in which primary attention is concentrated on an examination and analysis of the traditional dance-drama and puppet theaters of East Asia, Southeast Asia, South Asia, the Middle East, and Africa. Analogous forms from European theater are included for comparative purposes.

103A. Black People's Theater in America, Slavery to 1860. Lecture, three hours. An exploration of all extant materials on the history and literature of the theater as developed and performed by black artists in America from slavery to 1860.

103B. Black People's Theater in America, 1930 to the Present. Lecture, three hours. An exploration of all extant materials on the history and literature of the theater as developed and performed by black artists in America from 1930 to the present.

M103C. M103D. The Origins and Evolution of Chicano Theater. (Same as Chicano Studies M103C.) Lecture, three hours. Prerequisite: upper division standing. An exploration of the development of Chicano theater from its beginnings in the legends and rituals of ancient Mexico to the work of Luis Valdez (late 1960s).

M103D. Contemporary Chicano Theater. (Same as Chicano Studies M103D.) Lecture, three hours. Prerequisite: upper division standing. A study of recent trends in Chicano theater as reflected in the works of contemporary Chicano dramatists and theater artists.

104D. History of the American Theater. (Formerly numbered 104A.) Lecture, three hours. Not open for credit to students with credit for former course 104A prior to Fall Quarter 1981. The history of the American theater from the Revolutionary War to the Civil War.

104E. History of the American Theater. Lecture, three hours. Not open for credit to students with credit for former course 104A prior to Fall Quarter 1981. The history of the American theater from the Civil War to WWI.

104F. History of the American Theater. (Formerly numbered 104B.) Lecture, three hours. Not open for credit to students with credit for former course 104B prior to Fall Quarter 1981. The history of the American theater from WWI to the present.

105. Main Currents in Theater. Lecture, three hours. Critical examination of the leading theories of theater from the ancients to the present. Study and discussion of modern styles of production.
C117. The Puppet Theater (2 units). (Formerly numbered 117.) Lecture/laboratory, four hours. Prerequisite: consent of instructor. Not open for credit to students with credit for former course 117. Study of the history and practice of the art of puppetry. An examination of the materials and methods of construction. Staging of puppet productions as laboratory practice. May be repeated twice for credit. Concurrently scheduled with course C217A.

118A. Creative Dramatics. Lecture/laboratory. Students are exposed to a number of improvisational techniques through the drama of the improvisational approach to drama as done with children from nursery school to junior high.

118B. Advanced Creative Dramatics (2 units). Discussion and technique development. One hour; laboratory, two hours. Prerequisite: course 118A or consent of instructor. Practical application of the theory and exercises developed in course 118A. May be repeated twice for credit.

119A. Theater for the Child Audience: Theory and Criticism. (Formerly numbered 119.) Lecture/laboratory. Not open for credit to students with credit for former course 119. Principles of production and performance for the child audience.

119B. Theater for the Child Audience: Performance. Lecture, two hours; laboratory, four hours. Prerequisites: audition and consent of instructor prior to the first class meeting. Designed to provide an opportunity for students to work together as an ensemble, creating through improvisation a theater presentation for a young audience. Class sessions focus on testing theoretical concepts through the ensemble work, rehearsing, pretesting, and evaluation of an original production for possible presentation outside the classroom.

121. Acting Workshop (2 units). Laboratory, to be arranged. Prerequisites: course 20, consent of instructor. Students study and practice the art of acting through the perfection of acting boats. Students are given opportunities to rehearse, perform, and criticize scenes. May be repeated once for credit.

122. Makeup for the Stage (2 units). Prerequisite: consent of instructor. The art of makeup and its relation to the production as a whole. History, aesthetics, materials, and procedures of makeup.

123. Intermediate Acting for the Stage. Lecture/laboratory. Prerequisites: course 20, consent of instructor. Study and practice of the art of acting through the perfection of acting boats and application of those techniques to acting problems.

124A. Voice for the Stage. (Formerly numbered 124.) Lecture/laboratory. Prerequisites: course 20, consent of instructor. Not open for credit to students with credit for former course 124. Development of voice techniques for the stage. Includes work in relaxation, limbering, breathing, and resonance.

124B. Speech for the Stage. Lecture, four hours; laboratory, two hours. Prerequisites: courses 20, 123, 124A (with demonstration of high skills level), 125A, consent of instructor. Open for credit to students with credit for former course 124. Designed to acquaint the student with the international phonetic alphabet and its uses and to exercise the student's skills in pronunciation, enunciation, and the development of dialogue oration.

125A. Movement for the Actor. Lecture/laboratory. Prerequisites: course 20, consent of instructor. Physical awareness of the actor, concentrating on warming up the body, relaxation, control, and gymnastics.

125B. Advanced Movement for the Actor. Lecture/laboratory. Prerequisites: course 125A, consent of instructor. Advanced study of classical and modern movement for the stage actor.

130A. Fundamentals of Playwriting I. Lecture, three hours. Prerequisite: consent of instructor. Required of theater majors. Designed to stimulate the student's critical and creative faculties through the preparation of original material for the introduction of a one-act play.

130B. Fundamentals of Playwriting II. Lecture, three hours plus conference. Prerequisites: course 130A, consent of instructor. Study in original material for the theater, its preparation and development. Designed to give further insight into the critical and creative aspects of the short and full-length play and guidance in the completion of the one-act and full-length play. May be repeated twice for credit.

130C. Writing for the American Musical Theater. Lecture/laboratory, three hours. Prerequisites: consent of instructor. Study of the practice and techniques used in writing a libretto for musical theater: opening numbers, romance, subsplots, and comedy. May be repeated once for credit.

132. Manuscript Evaluation for Theater. Lecture, three hours. Prerequisites: course 130A, consent of instructor. Prinving and preparation practices in the evaluation of manuscripts for theater. May be repeated once for credit.

136. Advanced Acting for the Stage. Lecture/laboratory. Prerequisites: courses 123, 124A, 125A, consent of instructor. Study and practice of the art of acting through a progression to more advanced acting problems. May be repeated twice for credit. Concurrent enrollment with the same instructor is not permitted. The total units for courses 126, 127A-127B-127C, and former course 120 may not exceed twelve units.

137A-137B-137C. Continuum Study in Acting for the Stage. Lecture/laboratory. Prerequisites: courses 123, 124A, 125A, consent of instructor. The technique of acting through the relationship of the actor to the audience and complex acting styles. The total units for courses 136, 137A-137B-137C, and former course 120 may not exceed twelve units.

138. Special Problems in Performance Techniques. Lecture/laboratory. Prerequisites: courses 123, 124A, 125A, consent of instructor. Study of complex problems in voice, movement, and acting. May be repeated twice for credit.

140A. Scenic Techniques for the Stage. Lecture, three hours; laboratory, six hours. Prerequisites: course 10, consent of instructor. Required of theater majors. An intensive study of scenic techniques, with an emphasis on the relationship of lighting instruments and control equipment to lighting design. Courses 140A, 141A, and 142A may be taken in any sequence, but not concurrently.

140B. Advanced Scenery for the Stage. Lecture/laboratory. Prerequisite: course 140A. Advanced study of scenic problems in staging theater productions. Includes discussions, analysis and planning related to rigging, shifting, and construction techniques.

141A. Lighting Techniques for the Stage. Lecture, three hours; laboratory, six hours. Prerequisites: course 10, consent of instructor. Required of theater majors. An intensive study of the technical problems in the design of sets and properties for theater. May be repeated once for credit.

141B. Advanced Lighting for the Stage. Lecture/laboratory. Prerequisite: course 141A. The detailed study of stage lighting as an art, with emphasis on design concepts. The interpretation of a script or score through the control of light and color in relation to actor and audience.

142A. Theater Costuming Techniques. Lecture, three hours; laboratory, six hours. Prerequisites: course 10, consent of instructor. Required of theater majors. The study of costume design and the interpretation and application of costumes used in theatrical productions.

142B. Advanced Costuming for the Stage. Lecture, three hours; laboratory, four hours. Prerequisites: course 142A or consent of instructor. Study of costume design as a basis for director-actor communication and effective staging. The student works in proscenium configuration with scenes drawn from plays of American realism. May be applied toward the major requirement in directing.

143. Scenic Design for the Theater. Prerequisites: course 10, consent of instructor. Required of theater majors. Basic principles of design as applied to the interpretation and presentation of the visual aspects of the director-actor relationship. Study of styles, techniques, and methods of design for the theater arts. The translation of ideas into visual forms.

144A. Theater Sound Techniques (2 units). Lecture, two hours; laboratory, two hours. Prerequisite: course 10 or an approved equivalent. A study of the elements of sound design and techniques in the recording and reproduction of sound for the theater.

144B. Advanced Theater Sound. Lecture, three hours; laboratory, four hours. Prerequisite: course 144A or consent of instructor. A detailed study of theater sound, with emphasis on the composition and execution of theater sound tracks, recording techniques, and acoustic reinforcement.

145. Costume Design for the Theater. Lecture/laboratory. Prerequisite: consent of instructor. Design of costumes for theatrical presentations. The study of the use of silhouette, fabrics, color, and decoration as related to theatrical characterizations.

146. Scene Painting Techniques (2 units). (Formerly numbered 146.) Lecture/laboratory, three hours. Prerequisite: consent of instructor. Not open for credit to students with credit for former course 146. The study of scenic painting techniques and materials and their relation to the realization of color design and elevations. May be repeated once for credit. Concurrently scheduled with course C446.

147. Special Courses in Design and Technical Theater. Lecture, three hours. Prerequisite: consent of instructor. Group study of selected subjects in design and technical theater. May be repeated twice for credit.

149. Basic Drafting for the Stage (2 units). Lecture/laboratory, four hours. Prerequisite: course 10 or consent of instructor. Studies of the basic skills and techniques of drafting for the stage through the execution of floor plans and elevation drawings.

149B. Advanced Drafting for Theater Arts. Lecture/laboratory. Prerequisite: course 149A or consent of instructor. An advanced course in the technical sketching and drafting of working drawings essential in the development of the design sets and properties for theater, television, and motion picture productions.

150. Fundamentals of Play Direction. Lecture/laboratory. Prerequisite: consent of instructor. Required of theater majors. Course 161A may be substituted for this requirement (if substituted, an additional two upper division units are required). Course 121 may be taken concurrently. Basic theories of play direction and their application through the preparation of scenes under rehearsal conditions.

161A. Continuum in Directing for the Stage (2 units). Lecture/laboratory, six hours. Prerequisite: consent of instructor. Course 121 may be taken concurrently. The intensive development of primary directing skills and processes, including text analysis and the development of the director's design as a basis for director-actor communication and effective staging. The student works in proscenium configuration with scenes drawn from plays of American realism. May be applied toward the major requirement in directing.

161B. Continuum in Directing for the Stage. Lecture/laboratory, six hours. Prerequisites: courses 160 or 161A, consent of instructor. Course 121 may be taken concurrently. The further development of craft elements and techniques of design for the theater; additional emphasis on the psychological aspects of director-actor communication. The student works in arena and proscenium configurations with scenes drawn from the period of early realism through expressionism.
161C. Continuum in Directing for the Stage (6 units). Lecture/laboratory, six hours. Prerequisites: course 161B, consent of instructor. Course 121 may be taken concurrently. Working in three-quarter and one-hour sessions, the student director explores problems of style in production by staging scenes drawn from period plays (Greek through Romanic eras) and from contemporary, nonrealistic plays.

162A. Intermediate Play Direction. Lecture/discussion, two hours; laboratory, eight hours. Prerequisites: course 160 or 161A, consent of instructor. A course in the application of stage direction technique to the production. Each student director will direct aplay to be performed under rehearsal conditions. Material is drawn from published sources.

162B. Advanced Play Direction. Lecture, four hours; laboratory, six hours. Prerequisites: courses 160 or 161A, consent of instructor. Special problems in the direction of original one-act plays under production conditions. May be repeated once for credit by departmental consent with topic change.

170. Theater Laboratory. Lecture, four hours; laboratory, eight hours. Prerequisites: courses 140A, 142A, or 143A, consent of instructor. Laboratory in production of theater majors. Laboratory in theater production under supervision. The translation of ideas and concepts into the dramatic form.

171A. Advanced Theater Laboratory (2 or 4 units). Hours to be arranged. Prerequisite: consent of instructor. Creative participation as an actor or stage manager in the public presentation of departmental productions. May be taken for a maximum of four units.

171B. Advanced Theater Laboratory (2 or 4 units). Hours to be arranged. Prerequisite: consent of instructor. Creative participation in the realization of production elements related to the public presentation of departmental productions. May be taken for a maximum of four units.

C172. Technical Theater Laboratory (2 units). Hours to be arranged. Prerequisite: consent of instructor. Required of theater majors. A laboratory in various aspects of theater production. Must be repeated for a maximum of eight units, but no assign- ment may be repeated more than once. Concurrently scheduled with courses C272 and C472.


C190A. The Role of the Producer in the Professional Theater (2 units). (Formerly numbered 190A.) Not open for credit to students with credit for former course 190B. A study of the structure governing the economic and artistic decision-making processes in the professional theater of America. Concurrently scheduled with course C294A.

C190B. The Role of Management in the Educational and Community Theater (2 units). (Formerly numbered 190B.) Not open for credit to students with credit for former course 190B. A study of the artistic, social, and economic criteria in the administration of educational and community theater. Concurrently scheduled with course C294B.

191. The Touring Company (8 or 12 units). Lecture, twenty hours; laboratory, twenty-two hours. Prerequisite: consent of instructor. Rehearsal and technical preparation of a theatrical work for touring and the performance of that work on tour.

Motion Picture/Television Areas

106A. History of the American Motion Picture. Lecture/screenings, eight hours; discussion, one hour. A historical and critical survey, with examples, of the American motion picture both as a developing art form and as a medium of mass communication. May be repeated once for credit by departmental consent and with topic change.

106B. History of the European Motion Picture. Lecture/screenings, eight hours; discussion, one hour. A historical and critical survey, with examples, of the European motion picture both as a developing art form and as a medium of mass communication. May be repeated once for credit by departmental consent and with topic change.

106C. History of African, Asian, and Latin American Film. Lecture/screenings, eight hours; discussion, one hour. A critical, historical, aesthetic, and social study — together with an exploration of the ethnic significance — of Asian, African, Latin American, and Mexican films.

106D. The Development of Film in Europe and the United States from the Silent Era to the Present. Lecture/screenings, eight hours; discussion, one hour. An interdisciplinary and comparative approach to the development of film in Europe and the United States from the silent era through the Depression. Particular emphasis on the interrelationship of film with its historical context and the social dimensions of film structure, aesthetics, and language.

105E. The Development of Film in Europe and the United States from World War II to the Present. Lecture/screenings, eight hours; discussion, one hour. A study of film in the postwar period. Course 106D is not prerequisite to 106E. An interdisciplinary and comparative approach to the development of film in Europe and the United States from the end of World War II to the present. Particular emphasis on the interrelationship of film with its historical context and the social dimensions of film structure, aesthetics, and language.

107. Experimental Film. Lecture/screenings, eight hours; discussion, one hour. A study and analysis of unconventional developments in the motion picture.

108. History of Documentary Film. Lecture/screenings, eight hours; discussion, one hour. Prerequisite: consent of instructor. The philosophy of the documentary approach in the motion picture. The development of the film form and an examination of the techniques of teaching and persuasion used in selected documentary, educational, and propaganda films.

109. Introduction to Film and Television Study. Lecture, three hours; discussion, one hour. Prerequisite: consent of instructor. Required of motion picture/television majors in the first quarter in residence and recommended as a prerequisite to other motion picture/television history and criticism courses. Introduction to the major principles and concepts that organize the development of film. Course 106D is not prerequisite to 106E. An interdisciplinary and comparative approach to the development of film in Europe and the United States from the end of World War II to the present. Particular emphasis on the interrelationship of film with its historical context and the social dimensions of film structure, aesthetics, and language.

110A. History of Broadcasting. Lecture/viewing, six hours; discussion, one hour. Prerequisite: consent of instructor. Critical survey of broadcasting here and abroad. Consideration of the social responsibilities and educational implications of broadcasting.

110B. Problems and Issues in Broadcast Media. Lecture, four hours; discussion, two hours; laboratory, to be arranged. Prerequisite: consent of instructor. Study of the current issues and problems related to public and commercial broadcast programming and management, including analysis of contemporary criticism of the broadcast media.

111. Film Distribution and Exhibition. Lecture, three hours; laboratory, to be arranged. Prerequisite: consent of instructor. History and theory of organization and operation of the film distribution and exhibition of motion pictures and analysis of their interrelationships with production practices.

112. Film and Social Change. Lecture/screenings, eight hours; discussion, one hour. The development of documentary and dramatic films in relation to and as a reflection of social change.

113. Film Authors. Lecture/screenings, eight hours; discussion, one hour. An in-depth study of a specific film author (director or writer). May be repeated once for credit by departmental consent and with topic change.

114. Film Genres. Lecture/screenings, eight hours; discussion, one hour. A study of a specific film genre (e.g., the Western, the gangster cycle, the musical, the silent epic, the comedy, the social drama). May be repeated once for credit by departmental consent and with topic change.

115. Producers and Their Films. Lecture/screenings, eight hours; discussion, one hour. A consideration of the individual or corporate producers as they have affected the art and industry of the motion picture. Content varies and considers the work of a studio such as Paramount, Metro-Goldwyn-Mayer, Warner Bros., etc. or an individual such as Samuel Goldwyn, Stanley Kramer, Hal Wallis, etc. May be repeated once for credit.

116. Criticism. Lecture, four hours; laboratory, to be arranged. Study of and practice in criticism for the theater, motion pictures, and television. May be repeated once for credit by departmental consent and with topic change.

126A. Advanced Acting for Television and Motion Pictures. Laboratory, six hours. Prerequisite: course 20 or consent of instructor. Projects in acting for television and motion pictures. Videotape recording of selected television and film scenes and readings. May be repeated twice for credit.

126C. Sportscasting. Lecture, two hours; laboratory, four hours. Prerequisite: consent of instructor. Intensive study of sportscasting. Laboratory emphasis on students conducting interviews and writing and producing live and straight sportscasts, play by play, color, interviews, commentary, and editorials. Students are required to write original material for all exercises. Extensive training re hand field equipment; use of the remote truck; field exercises. Students rotate in production positions. May be repeated twice for credit.

127. The Film Image. Lecture, one hour; discussion, two hours; laboratory, one hour. Prerequisite: consent of instructor. Proseminar in the craft of film aesthetics. The visual revolution. Biophysical nature of production. Lenses, perspective, graphic styles. Principles of composition, screenwriting, sound, editing. Problems of time and movement. How a director views his work and his world.

128. Media and Ethnicity. Prerequisite: consent of instructor. Utilizing the Asian American experience, the course explores the impact and uses of media on contemporary American ethnic communities. Role and techniques of media influence besides community communication. May be repeated twice for credit.

131. Nontheatrical Motion Picture/Television Writing. Discussion, three hours. Prerequisite: consent of instructor. A course in the research and writing of documentary, technical, educational, industrial, and propaganda scripts. May be repeated twice for credit.

133. Script Analysis. Lecture, three hours; discussion, one hour. Prerequisite: consent of instructor. Limited to motion picture/television majors. The considerations and practices in the evaluation of scripts written for motion picture or television production.

134A. Motion Picture/Television Writing. (Formerly numbered 134.) Discussion, three hours. Prerequisite: consent of instructor. Not open for credit to students with credit for former course 134. Introduces students to problems in motion picture/television writing.

134B. Fundamentals for Motion Picture/Television Writing (2 units). Lecture, one hour. Corequisite for graduate students enrolled in course 134A. An examination of screenwriting fundamentals: structure, character, and scene development, conflict, locale, theme, history of drama. Required of authors such as Aristotle, Egri, Bentley.

135. Advanced Motion Picture/Television Writing (8 units). Discussion, three hours. Prerequisites: courses 131 and consent of instructor. A course in motion picture/television writing. Original motion picture/television material to be developed. May be repeated twice for credit.
150. Basic Motion Picture Photography. (Formerly numbered 150A.) Lecture, three hours; laboratory, four hours. Prerequisites: course 166, consent of instructor. Limited to motion picture/television majors. Not open for credit to students with credit for former course 150A. Introduction to image control in motion picture photography: exposure, lighting, and selection of film, camera, and lens. Supervised projects in photography to complement material covered in the lecture.

151. Design for Motion Pictures and Television. Lecture, three hours; laboratory, to be arranged. Prerequisite: consent of instructor. Limited to motion picture/television majors. The techniques of art direction. May be repeated twice for credit (if repeated, the student is required to design and complete a short film).

152. Motion Picture/Television Sound Recording. (Formerly numbered 152A.) Lecture, three hours; laboratory, to be arranged. Prerequisite: course 166. Limited to motion picture/television majors. Not open for credit to students with credit for former course 152A. Introduction to principles and practices of motion picture and television sound recording, including supervised exercises.

153C. Color Cinematography. Lecture, three hours. Prerequisite: consent of instructor. History and theories of color photography, with emphasis on present-day methods in motion picture and television production. A comparative study of additive and subtractive processes of color photography, with emphasis on present-day methods in motion picture and television production.

154. Motion Picture Editing. (Formerly numbered 154A.) Lecture, three hours; laboratory, to be arranged. Prerequisites: course 166, consent of instructor. Limited to motion picture/television majors. Not open for credit to students with credit for former course 154A. Introduction to the artistic and technical problems of film editing, with practical experience in the editing of image and synchronous sound.

156. Undergraduate Production I (8 units). Lecture/discussion, four hours; laboratory, eight hours; other, four hours. Prerequisite: consent of instructor. Limited to and required of motion picture/television majors. Not open for credit to students with credit for former course 179A. The completion of one or more short films, including their writing, production, and editing. May not be repeated.

176A-176B. Undergraduate Production II (8 units each). Discussion, three hours; laboratory, to be arranged. Prerequisites: course 166, consent of production faculty. Limited to motion picture/television majors. Not open for credit to students with credit for former courses 179B, 179D, or 179E. The completion of a motion picture, television, or video production, including its writing, production, and editing. May not be repeated.

177. Motion Picture/Television Acting Workshop (2 or 4 units). Laboratory, to be arranged. Prerequisite: consent of instructor. A workshop providing opportunities for students to rehearse, perform, and evaluate their scenes under the supervision and criticism of the instructor.

178. Technical Motion Picture/Television Laboratory (2 or 4 units). Laboratory, to be arranged. Prerequisite: consent of instructor. Limited to motion picture/television majors. A laboratory of various aspects of motion picture/television production. May be repeated for a maximum of twelve units, but only eight units may be applied toward the motion picture/television major.

180A-180B-180C. Workshop in Broadcast News and Documentary. Discussion, three hours; laboratory, five hours. Prerequisite: consent of instructor. Instruction and supervised exercises in writing, reporting, editing, and producing radio and television news, public affairs, and documentary programs.

181A. Animation Design in Theater Arts. Lecture, three hours; laboratory, three hours. Prerequisite: consent of instructor. History and use of speech, rhythm, and graphic design to form effective communication on film.

181B. Writing for Animation (4 or 8 units). Lecture, six hours; laboratory, to be arranged. Prerequisites: course 181A, consent of instructor, a storyboard at the first class meeting. Research and practice in creative writing and planning for the animated film. May be repeated for a maximum of sixteen units.

181C. Animation Workshop (4 or 8 units). Lecture, six hours; laboratory, to be arranged. Prerequisites: consent of instructor. A comparative study of additive and subtractive processes of color photography, with emphasis on present-day methods in motion picture and television production. A comparative study of additive and subtractive processes of color photography, with emphasis on present-day methods in motion picture and television production.

182. Introduction to Video Production (8 units). Lecture, four hours; discussion, four hours; laboratory, to be arranged. Prerequisite: consent of instructor. Limited to motion picture/television majors. An introduction to the techniques, processes, and equipment used in video production, culminating in a short project each student originates.

185. Beginning Television and Video Production (8 units). Laboratory, sixteen hours. Prerequisite: consent of instructor. Limited to and required of motion picture/television majors. Not open for credit to students with credit for former course 185. Instruction and exercises in the basic techniques of television and video production, including class participation in camera operation.

187A-187B-187C. Remote Television Broadcasting. Laboratory, three hours (additional hours to be arranged). Prerequisites: course 185, consent of instructor. Instruction and supervised exercises in the planning and production of remote on-location television programs.

189. Overview of the Motion Picture Industry. Discussion, three hours. Prerequisite: consent of instructor. Evolution of economic and business structure of motion pictures from early beginnings to present, stressing methods of operation and the influence of social and economic pressures that contributed to the changing financial, distribution, and exhibition practices.

192. Motion Picture, Television, and Theater Interpretative Workshop (4 units). Field experience, eight six-hour, or twenty-four hour; individual conferences, to be arranged. Prerequisite: consent of instructor. Limited to senior Department of Theater Arts majors. An internship at various studios or theaters acquainting the creative contribution, organization, and work of professionals in their various specialties. May be repeated for a maximum of eight units.

193A. Film Curatorship. Lecture, two hours; discussion, two hours; laboratory, four hours. Prerequisite: consent of instructor. A study of the principles and techniques of film curatorship and research, including but not limited to acquisitions, cataloging, storage, and retrieval systems. Special attention to the application of new technology, equipment, and program materials to television archival-library design for research and teaching.

193B. Television Curatorship. Lecture, two hours; discussion, two hours; laboratory, four hours. Prerequisite: consent of instructor. Study of the principles and techniques of television curatorship and research, including but not limited to acquisitions, cataloging, storage, and retrieval systems. Special attention to the application of new technology, equipment, and program materials to television archival-library design for research and teaching.

195A-195B-195C. Independent Production of Feature Films and/or Television Programming. (Formerly numbered 179E.) Lecture, discussion, three hours; laboratory, four hours. Prerequisites: course 189, consent of instructor. Survey of financial and business aspects involved in packaging, distributing, and exhibiting motion pictures and/or television programming, and the various perspectives of prominent industry leaders. May be taken in any sequence for a maximum of eight units with different letter designations and different instructors.

196. Senior Colloquium. Lecture, three hours. Prerequisites: consent of instructor; senior standing. An advanced seminar investigating special topics in film and television studies (i.e., style, modes of adaptation, media and social effects, etc.).

Special Studies

199. Special Studies in Theater Arts (2 to 8 units). Hours to be arranged. Prerequisites: senior standing, 3.0 GPA in major, consent of instructor. May be taken for a maximum of eight units.

Graduate Courses

Certain graduate courses concerned with individual student projects may be repeated for credit on recommendation of the departmental graduate adviser. Graduate courses are not open to undergraduate students.

200. Bibliography and Methods of Research in Theater Arts:
Section 1. Theater
Section 2. Motion Pictures
Section 3. Television/Radio

202A. Seminar in Western Classical Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. An examination of theatrical production and dramatic form in the Greek and Roman periods. May be repeated twice for credit.

202B. Seminar in Medieval Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected studies of theatrical production and dramatic form in the Middle Ages. May be repeated twice for credit.

202C. Seminar in Renaissance and Baroque Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected studies of theatrical production and dramatic form in the early 18th century. May be repeated twice for credit.

202D. Seminar in Bourgeois and Romantic Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. A study of the French and English drama from the 17th to the early 19th century. May be repeated twice for credit.

202E. Seminar in the Modern Consciousness in Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected studies of the changing experience of the theater and its evolution as an art form. May be repeated twice for credit.

202F. Seminar in Modern Realism. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected studies of the theater's response to science and technology, politics, and revolution. May be repeated twice for credit.
202G. Seminar in Modern Theatricalism. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected studies in symbolism and the development of the dream experience and the private psyche, the religious experience, and the revitalization of myth and ritual. May be repeated twice for credit.

202M. Seminar in American Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected studies in the development of theatrical production and dramatic writing in the American theater. May be repeated twice for credit.

202N. Seminar in Theater Architecture and Scenic Design. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected studies of the playhouse and scenic environment, relating historic and contemporary concepts. May be repeated twice for credit.

202P. Seminar in Traditions of African Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected studies of traditional theater forms such as those indigenous to Ghana, Nigeria, and other African nations and their diaspora. May be repeated twice for credit.

202R. Seminar in East Asian Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected topics in the theater forms of East Asia, including dramatic literature, costume, theater spaces, and critical writings. May be repeated twice for credit.

202S. Seminar in Southeast Asian Theater. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Selected topics in the theater forms of Southeast Asia, including dramatic literature, costume, theater spaces, and critical writings. May be repeated twice for credit.

202T. Seminar in Film and the Other Arts. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. Studies in the interrelationships between film and the fine arts, performance, or literature, with emphasis on the ways these other arts have influenced film. May be repeated twice for credit.

202A. Seminar in Film Structure. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. An examination of various film conventions, both fictional and nonfictional, and of the role of structure in the motion picture.

202B. Seminar in Classical Film Theory. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. A study of the principal topics and lines of inquiry that characterize the theoretical writings of Arnheim, Eisenstein, Bazin, Mitry, etc.

202C. Seminar in Contemporary Film Theory. Discussion, three hours (additional hours as required). Prerequisites: consent of instructor. A study of the redefinition of the aims and methods of film theory through contemporary writings.

202A. Seminar in Documentary Film. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. The nonfictional film and its relation to contemporary culture.

202B. Seminar in Fictional Film. Discussion, three hours (additional hours as required). Prerequisites: consent of instructor. An analysis of major plays, commentaries, and historical materials from the classical and medieval periods.

202B. The Background of Theatrical Art. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. An analysis of major plays, commentaries, and historical materials from the classical and medieval periods.

202C. The Background of Theatrical Art. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. An analysis of major plays, commentaries, and historical materials from the Renaissance, baroque, and rococo periods.

202A. Seminar in European Motion Picture History. Discussion, three hours (additional hours as required). Prerequisites: course 106B, graduate standing, consent of instructor. An examination of the major historical movements such as expressionism, socialist realism, surrealism, neorealism, New Wave, etc. May be repeated twice for credit.

202C. Seminar in American Motion Picture History. Discussion, three hours (additional hours as required). Prerequisites: course 106A, graduate standing, consent of instructor. Study of the principal topics and lines of inquiry that characterize the theoretical writings of Arnheim, Eisenstein, Bazin, Mitry, etc.

202B. Seminar in Classical Film Theory. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. A study of the principal topics and lines of inquiry that characterize the theoretical writings of Arnheim, Eisenstein, Bazin, Mitry, etc.

202C. Seminar in Contemporary Film Theory. Discussion, three hours (additional hours as required). Prerequisites: consent of instructor. A study of the redefinition of the aims and methods of film theory through contemporary writings.

202A. Seminar in Documentary Film. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. The nonfictional film and its relation to contemporary culture.

202B. Seminar in Fictional Film. Discussion, three hours (additional hours as required). Prerequisites: consent of instructor. An analysis of major plays, commentaries, and historical materials from the classical and medieval periods.

202C. Seminar in Contemporary Film Theory. Discussion, three hours (additional hours as required). Prerequisites: consent of instructor. A study of the redefinition of the aims and methods of film theory through contemporary writings.

209. Seminar in Film and Society. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. Study of the ways film affects and is affected by social behavior, belief, and value systems; in relation to the role of media in society. May be repeated once for credit.

220. Seminar in Television and Society. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. Film as fiction or reality, myth or nonfictional, and of the role of structure in the motion picture. May be repeated twice for credit.

222. Seminar in Film Genres. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. Study of the technological and economic aspects of the medium. May be repeated once for credit.

223. Seminar in Visual Perception. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. Intensive study of the works of outstanding creators of films. May be repeated twice for credit.

224A-230B-230C. Advanced Playwriting. Lecture, three hours. Prerequisites: course 130A, graduate standing, consent of instructor. Guided completion of a full-length play, or study and preparation for the writing of a thesis play.
244A. Advanced Theater Laboratory (2 or 4 units). Lab, to be arranged. Prerequisites: graduate standing, consent of instructor. Creative participation as an assistant director, stage manager, or performer in the public presentation of departmental productions. May be taken for a total of four units.

244B. Advanced Theater Laboratory (2 or 4 units). Lab, to be arranged. Prerequisites: graduate standing, consent of instructor. Creative participation in the realization of production elements related to the public presentation of departmental productions. May be taken for a maximum of four units.

245A-245B. Production Planning in Theater. Lecture, two hours; laboratory, two hours. Prerequisites: graduate standing, consent of instructor. Development of planning procedures through the execution of a complete plan for producing a multi-scene production. Course must be taken in sequence.

247. Production Planning in Motion Pictures/Television. Discussion, three hours. Prerequisite: consent of instructor. Analysis of procedures and problems in preparing a script for film or television production, with emphasis on role of production manager in breaking down scripts, setting up shooting schedule, planning postproduction, and preparing budgets.

M265A-M265B. Ethnic and Film Direction (4 or 8 units each). Ethnic and film direction. Lecture, four hours; laboratory, to be arranged. Prerequisites: course M209C, graduate standing, consent of instructor. Further consideration of the methods and criteria for the use of film as a medium for the preservation of communication of human cultures. Production of films and videocassettes on topics selected by students.

(W, M265A, Sp, M265B)

268. Seminar in the Short Film. Lecture, two hours; discussion, two hours. Prerequisites: four units of university theater, consent of instructor. A study of the problems presented by the conceptualization of the form and structure of the short film, with classical and student examples.

270. Seminar in Film Criticism. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. A study of key aesthetic questions of analysis and evaluation in relation to central works of motion picture criticism.

271. Seminar in Television Criticism. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. An analysis of major forms of television production and television criticism it has elicited. May be repeated once for credit.

C272. Production and Performance Laboratory (2 units). (Formerly numbered C272A-C272B-C272C.) Lecture, three hours; laboratory, to be arranged. Prerequisites: graduate standing, consent of instructor. Credit for creative production assignments required of all M.A. students during the first three quarters in residence. May be repeated twice for credit. Concurrently scheduled with courses C172 and C472.

273. Seminar in Contemporary Film and Television. Discussion, four hours (additional hours as required). Limited to motion picture/television Ph.D. candidates. Study and practice of the analysis of film and television programs.

274. Seminar in Research Design. Discussion, three hours. Prerequisite: second-year standing in the motion picture/television Ph.D. program. An examination of the general principles that govern the formulation of major research projects and the preparation of a prospectus for the Ph.D. dissertation.

276. Seminar in Non-Western Films. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. Study of the aesthetic and ideological impulses of selected films from Asia, Africa, and Latin America.

277. Seminar in Narrative Studies. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. A study of the writings on the theory of narrative structure and their significance for analysis of film forms.

283. Seminar in Instructional Television. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. A historical survey and critical analysis of public, educational, and instructional television. A laboratory course requiring the preparation of a program plan.

289. Seminar in Business Practices in Motion Pictures/Television (2 units). (Formerly numbered 289.) Prerequisites: course 247, graduate standing, consent of instructor. Examination of current status of financing-production-distribution agreements, union agreements, copyright, etc., and their role in the entertainment industry.

290A. The Role of Management in Artistic Decision Making in the Theater. Prerequisite: consent of instructor. A descriptive study of the criteria for decision making in arts institutions, including the role of the institution in society, the economic environment of the arts, and the artistic value systems of art organizations.

290B. Programming and Planning Policies in the Theater. Prerequisite: consent of instructor. An analysis of the social, artistic, and economic roles of the arts as reflected in programming policy. An examination of the social goals pursued in establishing relationships between the arts and society.

291A-291B-291C. The Role of Management in the Entertainment Industry. (Formerly numbered 291.) Prerequisites: course 247, graduate standing, consent of instructor. A study of the artistic, social, and economic criteria currently utilized by network television management. May be repeated once for credit.

292. Network Television Management and Decision Making. Discussion, three hours. Prerequisites: course 247, graduate standing, consent of instructor. A study of the history and development of network television, and the criteria currently utilized by network television management. May be repeated once for credit.

293. Seminar in Film and Television Anthropology. Discussion, three hours (additional hours as required). Prerequisites: graduate standing, consent of instructor. Study and practice of issues in archival research and administration.


295. Advanced Techniques in Acting (4 or 8 units). Lecture/laboratory, six hours. Prerequisite: consent of instructor. Extended work in improvisations and exercises in order to apply these techniques to a role. Beginning with monologues, the work progresses to two-person scenes and monologues. Students are encouraged to utilize sensory work and “objectives” on a more refined basis. Students are to be able to write the similarities and differences between themselves and the character in their ability to play these elements truthfully and spontaneously.

296. Extended Work in Improvisation (2 to 4 units). Lecture/laboratory, six hours. Prerequisite: consent of instructor. Limited to M.F.A. acting candidates in theater. Class exercises in acting. Preparation and presentation of roles under performance conditions.
Student and professor are dwarfed by pipes of giant baroque organ in Schoenberg Hall Annex.
429A-429B-429C. Special Problems in Movement for the Actor, laboratory. Prerequisites: consent of instructor. Limited to M.F.A. acting candidates in theater. Physical awareness for the actor, concentrating on individual problems in terms of space, movement, and time. Special emphasis on natural rhythms, relaxation, and balance.

430A-430B-430C. Advanced Studies in Playwriting (4 units, 3 units, 3 units). Seminar, to be arranged. Prerequisites: courses 240A-240B-240C, consent of instructor. Guidance in the completion of thesis plays.

432. Manuscript Evaluation. Lecture, four hours; laboratory, to be arranged. Prerequisites: course 135 and consent of instructor, or candidate in M.F.A. writing program and consent of instructor. Evaluation of manuscripts of beginning writers, including but not limited to those produced in course 134A. May be taken twice for credit (once each year if M.F.A. residence).

433. Advanced Motion Picture/Television Writing (8 units). Discussion, three hours. Prerequisites: course 135, consent of instructor. Advanced problems in the writing of original motion picture/television material. May be repeated twice for credit.

433A. Writing Scenes for Production. Discussion, three hours; laboratory, six hours. Prerequisites: graduate standing, consent of instructor. Study in relationship between direction and photography, courses, students write, cast, rehearse, and produce scenes on videotape.

437B. Writing for the Short Film. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. The writing and revisions of a script, or scripts, for a short film (approximately 10 to 60 minutes in length).

438. Script to Film. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Examination of all written material involved in creating a script of a major production and comparing these with the completed film.

439. Nontheatrical Writing for Motion Pictures/Television. Discussion, three hours. Prerequisites: graduate standing, consent of instructor. Advanced problems in the field of documentary and special feature programs, with emphasis on research and preproduction.

442A-442B-442C. Advanced Problems in Costume Design. Lecture/discussion. Prerequisite: consent of instructor. Limited to M.F.A. candidates. Study of costume design for theatrical productions. Development of costume designs from theatrical scripts, with emphasis on production styles and character revelation. The scripts vary in period and style to give designers practice in the major costume periods and artistic styles.

443. Problems in Design (2 or 4 units). Lecture/laboratory, four hours (additional hours as required). Prerequisite: consent of instructor. Study and practice in design techniques for the theater. May be repeated for a maximum of twelve units.

444. The Development of Costume Design Construction Technologies for Theater. Discussion, two hours; laboratory, two hours. Prerequisite: consent of instructor. Limited to M.F.A. candidates. A study of the effect of artistic and stylistic ideas on the mode and dress of men and women. May be repeated twice for credit.

446. Research and Practice in Scene Painting Techniques (2 units). Lecture/laboratory, three hours. Prerequisites: graduate standing, consent of instructor. Not open for credit to students with credit for former course 146. The study of scenic painting techniques and materials and their relation to the realization of color design and elevations. Concurrently scheduled with course C446. Each graduate student (1) researches a new painting method or technique and (2) solves a specific scenic problem or examines a particular period. The result is a theatrical scene painting project relating to that research.

450A. Cinematography. Lecture, two hours; discussion, one hour; laboratory, eight hours. Prerequisite: consent of instructor. Not open for credit to students with credit for course 450A prior to Fall Quarter 1983. Advanced study of the principles of cinematography, with emphasis on exposure, lighting, and selection of film, cameras, and lenses.

450B. Lighting for Motion Pictures and Television. Formerly numbered 450A. Lecture, three hours; discussion, one hour; laboratory, four hours. Prerequisites: graduate standing, consent of instructor. Not open for credit to students with credit for course 450A prior to Fall Quarter 1983. Supervised exercises in studio and location film photography to develop skill in lighting and management of the photographic process as applied to motion pictures and films for television. May be repeated twice for credit.

450C. Advanced Motion Picture/Television Directing and Photography (8 units). Formerly numbered 450B. Lecture, three hours; discussion, two hours; laboratory, eight hours. Prerequisites: graduate standing, consent of instructor. Not open for credit to students with credit for course 450B prior to Fall Quarter 1983. Supervised filming of a short dramatic project on locations that explore the complexity of the process, emphasizing balance essential to both directing and photographing in its varied technical and production aspects.

451. Advanced Design for Motion Pictures (2 to 4 units). Laboratory, to be arranged. Prerequisite: consent of instructor. 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 twelve units.

452A. Motion Picture/Television Sound Recording. Lecture, three hours; laboratory, four hours. Prerequisites: graduate standing, consent of instructor. Principles and practices of motion picture and television sound recording, including supervised exercises.

452B. Music Recording Workshop. Lecture, four hours; laboratory, eight hours. Prerequisites: course 452A and/or consent of instructor. Supervised exercises in studio music recording techniques, with emphasis on special requirements for motion pictures and television.

452C. Motion Picture/Television Sound Rerecording. Laboratory, eight hours. Prerequisites: course 152 or 452A, graduate standing, consent of instructor. Techniques of preparation and execution of rerecording using multitrack pickup recording technology, including sound effects and dialogue editing.

454A. Motion Picture Editing. Lecture, three hours; laboratory, to be arranged. Prerequisites: graduate standing, consent of instructor. Limited to motion picture/television majors. A study of the role of editing the fictional and nonfictional production, including emphasis on the techniques and procedures used in manipulating the sound track in sync dialogue cutting, post syncing, and music and sound effects cutting, including onscreen narration, dialogue substitution, and playback tracks.

454B. Motion Picture Editing. Lecture, three hours; laboratory, to be arranged. Prerequisites: graduate standing, consent of instructor. Limited to motion picture/television majors. A study of the role of editing the fictional and nonfictional production, including emphasis on the finishing stages, including title preparation. The use of optical effects and blowups, preparation for the supervision of the mix, and the cutting of originals for single strand and A&B printing.

456A-456B. Advanced Problems in Direction for the Stage. Lecture, to be arranged. Prerequisite: consent of instructor. Limited to M.F.A. candidates. Preparation and presentation of a published one-act play or equivalent under rehearsal conditions. Discussion and critique of work in progress.

457A-457B-457C. Film Production (4 or 8 units each). Hours to be arranged. Prerequisite: consent of instructor. Limited to M.F.A. candidates. Preparation and presentation of an original play under minimal production conditions. Discussion and critique of work in progress.

458. Production Project in Direction for the Stage (4 or 8 units). Lecture, to be arranged. Prerequisite: consent of instructor. Limited to M.F.A. candidates. Preparation and presentation of a play under fully produced theater conditions.

459A-459B-459C. Motion Picture Production (4 or 8 units each). Prerequisites: courses 450A and 452A, graduate standing, consent of instructor. Limited to M.F.A. candidates. Study and practice of techniques and methods of design for motion pictures and television. May be repeated for a maximum of twelve units. Concurrently scheduled with courses C472 and C472.

463. Production Project In Direction for the Stage (2 or 8 units). Lecture, to be arranged. Prerequisites: courses 450A and 452A, graduate standing, consent of instructor. Special problems in the direction of dramatic and documentary television programs.

472. Motion Picture and Television Laboratory (2 or 4 units). Laboratory, to be arranged. Prerequisites: M.F.A. candidate, consent of instructor. Credit for creative production projects required of all M.F.A. students. May be repeated for a maximum of twelve units. Concurrently scheduled with courses C472 and C472.

472C. Film Production (4 or 8 units each). Laboratory, to be arranged. Prerequisites: courses 450A and 452A, graduate standing, consent of instructor. Group experience in film production with each member rotating on crew work in the production of individual or collective projects.

473. Video Production (4 or 8 units each). Discussion, three hours; laboratory, to be arranged. Prerequisites: courses 450A and 452A, graduate standing, consent of instructor. Limited to M.F.A. candidates. Group experience in video production with each member rotating on crew work in the production of individual or collective projects.

473A-473B-473C. Film 11 (4 or 8 units each). Formerly numbered C479A-C479B-C479C. Laboratory, to be arranged. Prerequisites: courses 475 or 452A, graduate standing, consent of instructor. Limited to M.F.A. candidates. Group experience in film production with each member rotating on crew work in the production of individual or collective projects.

477. Film II (8 units). Discussion, three hours; laboratory, to be arranged. Prerequisites: courses 166 or 475, graduate standing, consent of instructor. Group experience in film production with each member rotating on crew work in the production of individual or collective projects.

482A-482B. Advanced Animation Workshop (4 or 8 units each). Prerequisites: courses 181A, 181B, 181C, consent of instructor. Organization and integration of various creative arts used in animation, resulting in the production of a complete animated film.
483. Video Editing (4 or 8 units). Discussion, four hours; laboratory, to be arranged. Prerequisites: course 476, graduate standing, consent of instructor. Individual instruction in electronic editing.

485A-485B-485C. Video III (4 or 8 units each). (Formerly numbered C485A-C485B-C485C.) Laboratory, sixteen hours. Prerequisites: course 478, graduate standing, consent of instructor. Creation, preparation, and production each quarter of one advanced television program (no longer than ten minutes).

486A-486B-486C. Educational Television Workshop. Laboratory, eight hours. Prerequisite: consent of instructor. Instruction and supervised exercises in directing and producing television programs for educational purposes.

489A. Production (4 units). Lecture, three hours; laboratory, eight hours; other, to be arranged. Prerequisites: courses 181A, 181C, a complete animated film, consent of instructor. Instruction in and supervised production of computer animation. May be repeated once.

490. Shakespeare. Two hours. Lecture. Prerequisite: graduate standing. Consent of instructor. An internship at various film, television, or theater arts programs. Advanced standing in M.F.A. program, consent of instructor. May not be applied toward the M.A., M.F.A., or Ph.D. May be repeated for a maximum of twelve units.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of graduate adviser and Graduate Dean, and host campus instructor, department chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

594F. Directed Individual Studies: Production (2 to 12 units). Hours to be arranged. Prerequisite: graduate standing. May be repeated by consent of instructor.

597. Preparation for Ph.D. Qualifying Examinations in Theater Arts (2 to 8 units). May be repeated for a maximum of twelve units.

598. M.A. Thesis in Theater Arts (2 to 8 units). Prerequisite: advancement to M.A. candidacy. Research and writing for M.A. thesis. May be repeated for a maximum of twelve units.

599. Ph.D. Dissertation in Theater Arts (2 to 8 units). Prerequisite: advancement to Ph.D. candidacy. Research and writing for Ph.D. dissertation. May be repeated for a maximum of twelve units.

Related Courses in Other Departments

Classics 142. Ancient Drama

Dance 141. Lighting Design for Dance Theater

144. Costume and Scenic Design Concepts for Dance Theater

English 10A, 10B, 10C. English Literature

90. Shakespeare

112. Children's Literature

135A-135B-135C. Creative Writing: Drama

167. The Drama, 1842-1945

Humanities 1A, 1B, 1C. World Literature

Italian 46. Italian Cinema and Culture

121. Italian Cinema

122. The Italian Theater

Music 135A-135B-135C. History of the Opera

World Arts and Cultures (Interdepartmental)

118 Men's Gym, 206-1342

Professors

Elise Dunin, M.A. (Dance)

Robert A. Georges, Ph.D. (English, Folklore and Mythology)

Melvin B. Heiltsun, Ph.D. (Theater Arts)

William R. Hutchinson, Ph.D. (Music)

Michael O. Jones, Ph.D. (History, Folklore and Mythology)

Jacques Maquet, Ph.D. (Anthropology)

James W. Porter, M.A. (Music, Folklore and Mythology)

Allegra Snyder, M.A. (Dance)

Associate Professors

Judy Miloma, M.A. (Dance), Coordinator

Joseph F. Nagy, Ph.D. (English, Folklore and Mythology)

Philip L. Newman, Ph.D. (Anthropology)

Martin J. Powers, Ph.D. (Art History)

A. Jihad Racy, Ph.D. (Music)

Arnold Reim, Ph.D. (Art History)

Assistant Professors

Patricia M. Harter, Ph.D. (Theater Arts)

Beverly J. Robinson, Ph.D. (Theater Arts, Folklore and Mythology)

Carol J. Sorgenfrei, Ph.D. (Theater Arts)

Visiting Lecturers

Stephen Stern, Ph.D. (Folklore and Mythology, Library and Information Science)

Romulus E. Zamora, M.F.A. (Theater Arts)

Scope and Objectives

The interdisciplinary major in world arts and cultures (formerly ethnic arts) is available to students in both the College of Fine Arts and the College of Letters and Science. It facilitates the cultural and cross-cultural investigation of man's artistic expression by focusing on six disciplines: anthropology, art, dance, folklore and mythololgy, music, and theater arts.

The flexibility of the program allows students to focus on a particular medium of expressive behavior after having been exposed to general problems and perspectives in the study of art forms of peoples throughout the world. The program leads to a Bachelor of Arts degree in World Arts and Cultures.

Bachelor of Arts Degree

The major includes a core of seven courses (28 units) from anthropology, art, dance, folklore and mythololgy, music, and theater arts; a concentration consisting of 36 units in one of these six disciplines; a senior colloquium; and three upper division elective courses (12 units).

Foreign Language Requirement

One year of a college-level foreign language is required. All courses in foreign language, except foreign literature in English translation, may be applied toward this requirement.

If you plan to take the music concentration, you are advised to select French, German, or Italian.

General College Requirements

You must satisfy the general college requirements (other than foreign language) of your college (Fine Arts or Letters and Science) regardless of the department in which your concentration is located.

If you wish to confer with a counselor regarding program planning and major requirements, contact Wendy Urfing at 825-8537 or 825-3951.

The Major

The following courses are required:

1. A core of seven interdepartmental courses (28 units): Dance 70, 80A-80B, Folklore 15 or 101, Music 5A-5B-5C (5C is not required for the music concentration; two additional units are added within the concentration), Theater Arts 102E, Anthropology 5, and Art History 55 or 56.

2. A concentration of nine courses in one of the following areas (you must declare a concentration by the beginning of your junior year):
Anthropology: Courses 44 or 133R, 130, 150, 160, and any five upper division courses from 110 through 186B, including one area course from 171 through 177.


Dance: Courses 25B, 134A, 134B, 180A-180B; group A: two courses from 181A, 182A, 187A; group B: one course from 181B, 181C, 181D, 183A, 184B; group C: three two-unit courses from 171B through 176B (including one course each from Western and non-Western cultures; note that courses 71B through 76B are prerequisites for 171B through 176B).

Folklore and Mythology: Course 172; group A: one course from M111, 118, M180; group B: two courses from CM106, M123B, 124, M181, Classics 161, 166; group C: five courses from Folklore M112, M121, M122, M123A, M125, M126, M127, M128, M129, 130, 131, M149, M150, 190, German 134.


Students considering graduate study in ethnomusicology are strongly advised to select the theory option.


(3) World Arts and Cultures 190A-190B.

(4) Three elective courses which may be selected from the list below (other courses might also be appropriate). In order to meet degree requirements, the electives must be related to the major and approved by the concentration adviser. The three courses selected to meet this requirement must be upper division courses from three areas outside the area of concentration.
### Upper Division Courses

#### 190A-190B. Senior Colloquium
Limited to senior world arts and cultures majors. Comparative and integrative studies in world arts and cultures, with application of concepts and content from the six disciplines of the major. The first quarter features a lecture/seminar format with the World Arts and Cultures faculty; topics include the arts in a societal context, ethnicity and the individual, and problems and approaches to fieldwork. The second quarter consists of faculty-directed research of individual projects. Fieldwork focuses on some aspect of the various arts/expressive behaviors found in the ethnic communities of Los Angeles. In Progress grading. (W,Sp)

### Upper Division Electives

#### Anthropology
- **118A, 118B. Museum Studies**
- **133R. Aesthetic Anthropology**
- **135Q. The Individual in Culture**
- **137. Ethnography on Film**
- **154. Principles of Social Structure**
- **185. History of Social Anthropology**
- **137. Ethnography on Film**
- **172. Introduction to Buddhism**
- **173. Chinese Buddhism**
- **174. Japanese Buddhism**
- **183. Introduction to Chinese Thought**
- **185. History of Social Anthropology**
- **140A-140B-140C. Chinese Literature in Translation**
- **141A-141B. Japanese Literature in Translation**
- **170A-170B. Archaeology in Early and Modern China**

#### Art History (Art, Design, and Art History)
- **101A, 101B, 101C. Egyptian Art and Archaeology**
- **102. Art of the Ancient Near East**
- **103A. Greek Art**
- **103B. Hellenistic Art**
- **103C. Roman Art**
- **103D. Etruscan Art**
- **103E. Late Roman Art**
- **104A. Western Islamic Art**
- **104B. Eastern Islamic Art**
- **104C. Problems in Islamic Art**
- **114A. The Early Art of India**
- **114B. Chinese Art**
- **114C. Japanese Art**
- **114D. The Later Art of India**
- **115A. Advanced Indian Art**
- **115B. Advanced Chinese Art**
- **115C. Advanced Japanese Art**

#### C117A, C117B, C117C. Advanced Studies in Pre-Columbian Art
- **118A. The Arts of Oceania**
- **118B. The Arts of Pre-Columbian America**
- **118C. The Arts of Sub-Saharan Africa**
- **118D. The Arts of Native North America**

#### Classics
- **161. Introduction to Classical Mythology**
- **168. Introduction to Comparative Mythology**
- **123A. Anatomy for the Dancer**
- **123B. Applied Principles of Conditioning and Correctives for the Dancer**
- **123C. Projects in Dance Kinesiology**
- **126. Advanced Labanotation**
- **132A-132B. Philosophical Bases and Trends in Dance**
- **133A. History of Dance in Western Culture, Origins to 1600**
- **134B. History of Dance in Western Culture, 1600 to the Present**
- **152. Dance as Culture in Education**
- **171B. Dance of Indonesia**
- **171D. Dance of India**
- **172B. Dance of Ghana**
- **173B. Dance of Mexico**
- **174B. Dance of Yugoslavia**
- **174C. Dance of Spain**

#### East Asian Languages and Cultures
**190A-190B. Selected Topics in Folklore and Mythology Studies**

#### English
- **M104A. Early Afro-American Literature**
- **M104B. Afro-American Literature since the 1920s**
- **M122. Celtic Mythology**
- **M123A. Finnish Folklore and Mythology**
- **M123B. Finnish Folk Song and Ballad**
- **M124. Finnish Folk Art and Technology**
- **M125. Folklore and Mythology of the Lapps**
- **M126. Baltic and Slavic Folklore and Mythology**
- **M127. Celtic Folklore**
- **M128. Hungarian Folklore and Mythology**
- **M129. Hungarian Folklore and Mythology of the Ugric Peoples**

#### Folklore and Mythology
- **CM106. Anglo-American Folk Song**
- **M108. Afro-American Folklore and Culture**
- **M111. The Literature of Myth and Oral Tradition**
- **M112. Survey of Medieval Celtic Literature**
- **M118. Folk Art and Technology**
- **M121. British Folklore and Mythology**
- **M122. Celtic Mythology**
- **M123A. Finnish Folklore and Mythology**
- **M123B. Finnish Folk Song and Ballad**
- **M124. Finnish Folk Art and Technology**
- **M125. Folklore and Mythology of the Lapps**
- **M126. Baltic and Slavic Folklore and Mythology**
- **M127. Celtic Folklore**
- **M128. Hungarian Folklore and Mythology**
- **M129. Hungarian Folklore and Mythology of the Ugric Peoples**
- **M130. North American Indian Folklore and Mythology Studies**
- **M131. Folklore of India**
- **M149. Folk Literature of the Hispanic World**
- **M150. Russian Folk Literature**
- **M154A-M154B. The Afro-American Musical Heritage**
- **M180. Analytical Approaches to Folk Music**
- **M181. Folk Music of Western Europe**
- **M182. Folk Music of the Middle East**
- **M183. History of African, Asian, and Latin American Film**
- **M110A. History of Broadcasting**
- **M117. The Puppet Theater**
- **M118. Creative Dramatics**
- **M119. Theater for the Child Audience: Theory and Criticism**
- **M119B. Theater for the Child Audience: Performance**
- **M121. Acting Workshop**
- **M122. Makeup for the Stage**
- **M128. Media and Ethnicity**
- **M140A. Scenic Techniques for the Stage**
- **M140B. Advanced Scenery for the Stage**
- **M141A. Lighting Techniques for the Stage**
- **M141B. Advanced Lighting for the Stage**
- **M142A. Theater Costume Design**
- **M142B. Advanced Costume Design**
- **M143. Scenic Design for the Theater**
- **M144A. Theater Sound Techniques**
- **M144B. Advanced Theater Sound**
- **C146. Scene Painting Techniques**
- **C149A. Basic Drafting Techniques for the Stage**
- **C160. Fundamentals of Play Direction**
- **C190B. The Role of Management in the Educational and Community Theater**
An engineering education provides unusual opportunities for solving problems whose solutions can improve our society. Technology is now a dominant cause of change, including social change, and modern engineering is more than an identifiable body of subject matter; it is a cogent point of view and approach to problem solving, as well. Engineering courses contribute significantly to an understanding of the overall process of action.

The UCLA School of Engineering and Applied Science, although young by University standards, now ranks among the top engineering schools in the country in terms of the quality of instruction and the research contributions of its faculty. Its goal is an education that will allow graduates to enter the well established branches of engineering and to move into new and still to be discovered technical areas with confidence and ability. Included in this goal is preparation for graduate study; by the year 2000, it is anticipated that the majority of practicing engineers will have advanced degrees in engineering, and that many more individuals with an undergraduate education in engineering will be practicing medicine, dentistry, and law.

There are six departments within the school which serve as centers of activity for courses, graduate study, and research. By utilizing the resources of one or more departments, all students, undergraduate and graduate alike, are able to prepare for a wide range of professional careers in a number of industries, such as aerospace, computers, electrical and electronics, metal products, mining, machinery and manufacturing, chemicals and petroleum, utilities, and construction.

Photo: Civil engineering professor works with student at the "shaking table," a device for testing how well structures will withstand earthquake conditions.
School of Engineering and Applied Science

Office of Student Affairs:
6426 Boelter Hall
Graduate: 825-2682
Undergraduate: 825-2826

Bachelor of Science

Degrees

Students in the School of Engineering and Applied Science may elect one of the five four-year curricula listed below.

1. Bachelor of Science in Chemical Engineering
2. Bachelor of Science in Civil Engineering
3. Bachelor of Science in Computer Science and Engineering
4. Bachelor of Science in Electrical Engineering
5. Bachelor of Science in Engineering with the following specializations: aerospace engineering, bioengineering*, materials science and engineering, mechanical engineering.

*This is an interdepartmental program described under "Schoolwide Engineering" at the end of the departmental listings.

The school offers instruction in acoustical engineering, aerospace engineering, applied plasma physics and fusion engineering, bioengineering, ceramic engineering, chemical engineering, civil engineering, computer engineering, control systems engineering, earthquake engineering, electrical and electronics engineering, general engineering, environmental engineering, fluid mechanics, geotechnical engineering, information and communications theory, manufacturing engineering, materials science, mechanical engineering, metallurgy, nuclear engineering, soil mechanics, solid mechanics, structural engineering, systems science, and water resources.

Admission

Applicants for admission to the school must satisfy the general admission requirements of the University as outlined in the section entitled "Undergraduate Admission" in Chapter 2. In the future, entrance to the school may be based on the results of a further examination of grades and test scores.

Applicants are encouraged to apply either at the freshman or junior level. 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, mathematics, physics, and the recommended engineering courses before transferring to the University. Experience indicates that transfer students who have completed the recommended lower division program in engineering at California community colleges are able to complete the remaining requirements for one of the B.S. degrees in six quarters (two academic years) of normal full-time study. Some students who select certain majors, such as computer science and engineering or chemical engineering, may be required to complete additional lower division courses as prerequisites for the major sequence.

Admission as a Freshman

While many students take their first two years in engineering at a community college, an applicant may qualify for admission to the school in freshman standing. It is anticipated that admission will require that the following subjects be taken when satisfying the University admission requirements:

- Algebra .......................... 2 years
- Plane geometry .................. 1 year
- Trigonometry .................... 1/2 year
- Chemistry and physics with laboratory .................. 2 years
- It is also highly recommended that you take a course in technical drafting while in high school.

Freshman applicants whose entire secondary schooling was outside the United States must pass, with satisfactory scores, the College Board Scholastic Aptitude Test (verbal and mathematics sections) and Achievement Examinations in English composition, physics, and mathematics before a letter of admission to engineering can be issued. Arrangements to take the tests in another country should be made directly with the College Board, 1474 Center Street, Berkeley, CA 94704. Test scores should be forwarded to UCLA.

Admission as a Junior

Applicants for admission to the school in junior standing should have completed 21 to 23 courses (84 to 92 quarter units) in good standing, including the following minimum subject requirements:

1. Two and one-fourth courses in chemistry, equivalent to UCLA’s Chemistry 11A, 11B/11BL (chemistry is not a requirement for the computer science and engineering degree; the chemical engineering curriculum also requires Chemistry 11C/11CL, 21, 23, 25); (2) six courses in mathematics, equivalent to UCLA’s Mathematics 31A, 31B, 32A, 32B, 33A, 33B; (3) four courses in physics, equivalent to UCLA’s Physics 8A, 8B, 8C, 8D, and physics laboratory courses (8AL, 8BL, 8CL, 8DL), depending on curriculum selected.

Students transferring to the school from institutions which offer instruction in engineering subjects in the first two years, particularly California community colleges, will be given credit for certain engineering core requirements.

Students who have been admitted to senior standing in the school on the basis of credit
from another institution, from University Extension, or from another college or school of the University must complete, after admission, eight upper division courses which will satisfy part of their approved major field sequence.

**Degree Requirements**
The requirements for the Bachelor of Science degrees in Chemical Engineering, Civil Engineering, Computer Science and Engineering, Electrical Engineering, and Engineering consist of completing the minimum number of required units (from 186 to 201 units, depending on the curriculum selected), the general University requirements, and the school requirements for scholarship and senior residence. You must also satisfy the curricular requirements for the curriculum you choose to follow.

**University Requirements**
University requirements in scholarship, Subject A, and American History and Institutions are discussed in detail in the "Undergraduate Degree Requirements" section in Chapter 2.

**Scholarship Requirements**
At least a 2.0 grade-point average must be achieved in all upper division University courses offered in satisfaction of the subject and elective requirements of the curriculum. In addition, a 2.0 minimum grade-point average in upper division mathematics, upper division core courses, and the major field is required for graduation.

**Senior Residence Requirement**
Of the last 48 units completed for the bachelor's degree, 36 must be earned in residence in the School of Engineering and Applied Science on this campus. No more than 16 of the 36 units may be completed in Summer Sessions on the Los Angeles campus.

**Study Lists and Credit Limitations**
Study Lists require approval of the Dean of the school or a designated representative. It is your responsibility to present Study Lists which reflect satisfactory progress toward the Bachelor of Science degree, according to standards set by the faculty; advisers in the Office of Student Affairs are available to help you. Study Lists or programs of study which do not comply with these standards may result in enforced withdrawal from the University or other disciplinary action. You may not enroll in more than 18 units per quarter unless an Excess Unit Petition is approved in advance by the Dean.

You must maintain a minimum grade of C in all courses required for the degree. This regulation does not apply to Departmental Scholars.

After you have completed 105 quarter units (regardless of where these units have been completed), you will not receive unit credit or subject credit for courses completed at a community college.

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

No credit may be applied toward the bachelor's degree for Chemistry 2 or its equivalent after one year of high school chemistry has been completed with a grade of C or better.

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.

**Credit for Transfer Students**
A course in digital computer programming, using a higher-level language such as Fortran IV, Pascal, or PL/1, satisfies the Computer Science 10 requirement. Many sophomore courses in circuit analysis, strength of materials, and properties of materials may satisfy Electrical Engineering 100, Civil Engineering 108, and Materials Science and Engineering 14 requirements respectively. Check with the Office of Student Affairs.

**Curricular Requirements**
The curricula for the bachelor's degrees include the following categories, depending on curriculum selected:

1. Three free elective courses (12 units) may be selected in some major/major field pro-
The chemical engineering, civil engineering, electrical engineering, and engineering curriculum are accredited by the Accreditation Board for Engineering and Technology, Inc. (ABET), the nationally recognized accrediting body for engineering programs.

Advising and Program Planning
As a new undergraduate, you must have your course of study approved by an engineering adviser. After the first quarter, curricular and career advising are accomplished on a formal basis. You are urged to select a faculty adviser as soon as possible, preferably at the beginning of your sophomore year.

You may use the curriculum in effect when you begin full-time continuous study in engineering at UCLA, or you may select the curriculum in the UCLA General Catalog in effect at graduation. Community college transfers may also choose the curriculum in the catalog in effect at the time they began community college work in an engineering program, providing attendance has been continuous since that time.

Attend the Junior Conference conducted by the School of Engineering and Applied Science to help you plan your curriculum. The conference usually is held during the fourth week of each quarter. For time and place, consult the Office of Student Affairs.

The Elective Selection form approved by the faculty adviser must be submitted for approval by the Assistant Dean, Undergraduate Students, Office of Student Affairs, during the first quarter of the junior year (third quarter of the sophomore year for computer science and engineering and electrical engineering majors).

The deadline is announced each term in the school's Undergraduate Enrollment Instructions brochure.

Members of the Office of Student Affairs staff are available to assist you with University procedures and to answer any questions you may have in regard to general requirements. Pay them a visit.

Passed/Not Passed Grading
You may take one course per quarter on a Passed/Not Passed basis if you are in good academic standing and are enrolled in at least three and one-half courses (14 units) for the quarter. Only humanities-social sciences-fine arts and free electives may be taken on a Passed/Not Passed basis. For more details on P/NP grading, see "Units and Grading Policy" in Chapter 4.

Honors

Departmental Scholars
If you are an exceptionally promising junior or senior, you may be nominated as a Departmental Scholar to pursue bachelor's and master's degree programs simultaneously. See "Academic Excellence" in Chapter 2 and the Announcement of the UCLA School of Engineering and Applied Science for details.

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 16 units (12 units of letter grade) with a grade-point average equal to or greater than 3.7.

Honors with the Bachelor's Degree
Students who have achieved scholastic distinction may be awarded the bachelor's degree with honors. Students eligible for honors at graduation must have completed 90 or more units (for a letter grade) at the University of California and must have attained a grade-point average which places them in the top five percent of the school for Summa cum laude, the next five percent for Magna cum laude, and the next ten percent for Cum laude.

Based on grades achieved in upper division courses, an engineering student should have a 3.8 grade-point average for Summa cum laude, a 3.6 for Magna cum laude, and a 3.4 for Cum laude. For all designations of honors, you must have a minimum 3.25 grade-point average in your major field elective courses. To be eligible for an award, you 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."

Extracurricular Activities
The faculty strongly encourages students to participate in the many extracurricular activities available on campus, especially those of most relevance to engineering. Among these are the student engineering society (the Engineering Society, University of California), student publications, and programs of the many 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, two for each of the faculty's three major policy committees.

Women in Engineering
Women make up 22 percent of the undergraduate and 11 percent of the graduate enrollment in the School of Engineering and Applied Science. 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) has established a UCLA student chapter which sponsors field trips and engineering-related speakers (often professional women) to intro-
duce the various options available to engineers. The UCLA chapter of SWE, in conjunction with other Los Angeles schools, also publishes an annual resume book to aid women students in finding jobs.

Continuing Education
Continuing Education in Engineering is under the academic leadership of the School of Engineering and Applied Science and is managed by UCLA Extension. The department offers evening classes, short courses, special programs, and in-plant training in education. The Extension Office (637 UNEX, 10995 Le Conte Avenue, 825-4100) is open Monday through Friday.

Graduate Study
Admission
In addition to meeting the requirements of the Graduate Division, applicants for the graduate engineering programs are required to take the General Test and Subject Test of the Graduate Record Examination (GRE) in Engineering, Mathematics, or a related area. Applicants for the graduate computer science programs are required to take the GRE General Test and Subject Test in Mathematics or Computer Science.

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. Exceptional students with research experience and strong evidence of creativity may petition to proceed to candidacy for the Ph.D. degree without the M.S. degree.

Graduate students without adequate preparation may be admitted provisionally and may be required to take certain remedial coursework which may not be applied toward the degree. On arrival at UCLA, the adviser will help students plan a program which will remedy any such deficiencies.

Admission forms, including a departmental supplement to the application, may be obtained by writing to the department in which you are interested, School of Engineering and Applied Science, UCLA, Los Angeles, CA 90024.

Undergraduate Courses

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

Master of Science Degrees
Major Fields or Subdisciplines
The M.S. program is centered around one major field. The major fields and subdisciplines offered at the M.S. level parallel those listed below for the Ph.D. program. You are free, however, to propose to the school any other field of study, with the support of your adviser.

Course Requirements
A total of nine courses is required for the M.S. degree, including a minimum of five graduate courses. No specific courses are required, but the majority of the total formal course requirement and a majority of the graduate course requirement must consist of courses in the School of Engineering. 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 units of 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 you have done, usually but not necessarily under the supervision of the thesis committee, or else provide a critical exposition of some topic lying in your major field of study. You 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 quarter, is required in written form only. Your comprehensive examining committee may conduct an oral query after review of the written examination. In case of failure, you may be reexamined once with the consent of your departmental graduate adviser.

Cooperative Degree Programs
The School of Engineering and Applied Science has established two joint degree programs with other schools and departments on campus which allow you to earn two master’s degrees simultaneously: the M.B.A./M.S.-Computer Science and the M.A.-Latin American Studies/M.S.-Engineering. Contact the Office of Student Affairs for details.

Master of Engineering Degree
Admission
In addition to the University minimum requirements, the following are required for the M.Engr. degree: (1) five years of responsible full-time professional experience in engineering; (2) some formal study in statistics; (3) the Graduate Management Admission Test (GMAT) or the Aptitude and Advanced Tests of the Graduate Record Examination (GRE) in Engineering, Mathematics, or a related field. A screening interview with the coordinator of the Engineering Executive Program may be required.

The School of Engineering and Applied Science has a supplement to the Application for Admission which may be obtained from the Engineering Executive Program, School of Engineering and Applied Science, 6722 Boelter Hall, UCLA, Los Angeles, CA 90024.

Major Field or Subdiscipline
Engineering management.

Course Requirements
A total of 12 graduate courses are required: Engineering 470A-470D, 471A-471B-471C (half course), 472A-472D (half course), 473A-473B.

Comprehensive Examination Plan
The comprehensive examination, which is offered once a year and is general in scope, is given in written and oral form. Students who fail this examination may be reexamined once.

Engineer Degree
The School of Engineering and Applied Science 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 and orientation 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, at least six courses in the major field (minimum of four graduate courses) and at least three in each minor field (minimum of two graduate courses in each).
The Ph.D. and Engineer degree programs are administered interchangably in the sense that a student in the Ph.D. program may exit with an Engineer degree or even pick up the Engineer degree on the way to the Ph.D. degree; similarly, a student in the Engineer degree program may continue for 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**

Major Fields or Subdisciplines*

*May propose to the school any other field of study with the support of your advisor. Instructions on the definition of acceptable ad hoc fields and procedures for their approval are available in each department office.*

**Chemical Engineering Department:** Chemical engineering.

**Civil Engineering Department:** Earthquake engineering, mechanics of solids, soil mechanics, structures, water resources engineering.

**Computer Science Department:** Computer methodology (biological systems, machine intelligence, physical systems), computer network modeling and analysis, computer programming (languages and systems), computer science theory, system architecture.

**Electrical Engineering Department:** Applied plasma physics and fusion engineering, circuits, communications and telecommunications engineering, control systems, electromagnetics, operations research, quantum electronics, solid-state electronics.

**Materials Science and Engineering Department:** Ceramics and ceramic processing, mechanical metallurgy and deformation processing, physical metallurgy and metal processing, science of materials.

**Mechanical, Aerospace, and Nuclear Engineering Department:** Applied dynamic systems control, applied plasma physics and fusion engineering, dynamics, fluid mechanics, heat and mass transfer, manufacturing engineering, mechanics of solids, nuclear science and engineering, and structures.

**Schoolwide Fields:** Applied mathematics**, biocybernetics, man-machine-environment systems.

**Schoolwide Program:** Bioengineering.

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*You may propose to the school any other field of study with the support of your advisor. Instructions on the definition of acceptable ad hoc fields and procedures for their approval are available in each department office.*

**Computer science majors may pursue additional relevant minor fields of study offered by the School of Engineering and Applied Science.**

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Course Requirements

There is no formal course requirement for the Ph.D. degree, and you may, theoretically, substitute coursework by examinations. Normally, however, you take courses to acquire the knowledge needed for the written and oral preliminary examinations. The basic program of study for the Ph.D. degrees is built around one major field and two minor fields. The major field has a scope corresponding to a body of knowledge contained in six courses, at least four of which are graduate courses, plus the current literature in your area of specialization. Each minor field normally embraces a body of knowledge equivalent to three courses, at least two of which are graduate courses. Grades of B− or better, with a grade-point average of at least 3.33 in all courses included in the minor field, are required. If you fail to satisfy the minor field requirements through coursework, a minor field examination may be taken (once only).

### Qualifying Examinations

When you have mastered the body of knowledge defined in the three fields, you take a written preliminary examination in the major field. When this examination is passed and all coursework completed, you proceed to take an oral preliminary examination which encompasses the major and minor fields. Both preliminary examinations should be completed within the first two years of full-time enrollment in the Ph.D. program. You may not take an examination more than twice.

After passing both preliminary examinations, you are ready to take the University Oral Qualifying Examination. The details of the examination are at the discretion of the doctoral committee but ordinarily include a broad inquiry into your preparation for research. The doctoral committee also reviews the prospectus of the dissertation at the oral qualifying examination.

### Final Oral Examination

A final oral examination may be required of Ph.D. candidates.

### Graduate Certificate of Specialization

A certificate of specialization is available in all areas, except computer science, offered by the School of Engineering and Applied Science. 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 quarters 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 for a Certificate of Specialization in Engineering and Applied Science may subsequently be applied toward master's and/or doctoral degrees.

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**Chemical Engineering**

5405 Boelter Hall, 825-5423

**Professors**

Traugott H.K. Frederking, Ph.D.
Sheldon K. Friedlander, Ph.D. (Ralph M. Parsons Professor of Chemical Engineering), Chair
Eldon L. Knuth, Ph.D.
Ken Nobe, Ph.D.
Lawrence B. Robinson, Ph.D.
William D. Van Vorst, Ph.D.
Ahmed R. Wazzan, Ph.D., Associate Dean
F. Eugene Yates, M.D. (Crump Professor of Medical Engineering)

**Associate Professors**

Owen I. Smith, Ph.D.
Vincent L. Vilker, Ph.D.

**Assistant Professors**

David T. Allen, Ph.D.
Yoram Cohen, Ph.D.
Robert F. Hicks, Ph.D.

**Adjunct Professors**

Manuel M. Baizer, Ph.D.
W. Kenneth Davis, M.S.
C. Pierre Zaleski, Ph.D.

**Adjunct Lecturer**

Dwight A. Landis, M.S.

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**Scope and Objectives**

The Department of Chemical Engineering conducts active undergraduate and graduate programs of teaching and research in the areas of thermodynamics, mass transfer, chemical reaction engineering and catalysis, electrochemistry and corrosion, combustion science, cryogenics and low temperature processes, biochemical and biomedical engineering, computer-aided design, pollution control, and polymer engineering. Students are trained in the fundamental principles of these fields while learning a sensitivity to society's needs — a crucial combination in addressing the question of how industry can grow and innovate in an era of economic, environmental, and energy constraints. Faculty members in the department are active in the Crump Institute for Medical Engineering and the National Center for Intermedia Transport Research, sponsored at UCLA by the Environmental Protection Agency.

The undergraduate curriculum leads to a B.S. in Chemical Engineering and is accredited by ABET and AIChE. The department also offers graduate training and research leading to M.S.
Bachelor of Science in Chemical Engineering

The goal of the chemical engineering curriculum is to provide a high quality, professionally oriented education in modern chemical engineering. Balance is sought between design and science.

The Major

Course requirements are as follows (186 minimum units required):

1. Six core courses: Chemical Engineering M105A, M105D, Civil Engineering 108, Electrical Engineering 100, 124A, Mechanical, Aero-

2. Chemical Engineering 137, 137A, 137B, 137C, 137D, 137E (satisfies the engineering economics requirement), 137F, 138; 139AC,

3. Two elective courses from Chemical Engineering 130A, 138A, 138B, 138C, 138E (other courses in engineering, mathematics, and the sciences may be selected in consultation with your adviser), and one upper division chemistry elective course (except Chemistry 110A) selected in consultation with your adviser.

4. English 3: Chemistry 11A, 11B/11BL, 11C/11CL, 21, 23, 25 (satisfies the life science requirement);

5. Six courses from the humanities, social sciences, and/or fine arts approved list (at least three must be upper division; at least three — with two upper division — must be in the same academic department or otherwise reflect coherency with respect to subject matter; and one must satisfy the engineering and science in society requirement).

Graduate Study

For information on graduate admission to the chemical engineering program and requirements for the M.S. and Ph.D. degrees, see “Graduate Study” at the beginning of this chapter.

Upper Division Courses

M105A. Introduction to Engineering Thermodynam-

M105D. Transport Phenomena. (Formerly numbered Engineering 105D.1) (Same as Mechanical, Aerospace, and Nuclear Engineering M105D.) Lecture, four hours; recitation, one hour. Prerequisites: Physics 8B, Mathematics 32B.

130A. Introduction to Statistical Thermodynamics. (Formerly numbered Engineering 130A.) Prereq-

137B. Chemical Engineering Diffusional Processes. (Formerly numbered Engineering 137B.) Prereq-

137C. Chemical Engineering Separation Operations. (Formerly numbered Engineering 137C.) Prereq-

137D. Chemical Engineering Kinetics. (Formerly numbered Engineering 137D.) Prerequisites: courses M105D, 137, 137A. Brownian motion, fluxes according to irreversible thermodynamics; one-dimensional theory: membrane transport, facilitated transport; convective diffusion, concentration boundary layers, turbulent diffusion. The fundamental relation of chemical kinetics and separation processes. Calculations of gas and liquid cleanings, and blood oxygenation.

137E. Chemical Process Economics and Synthesis. (Formerly numbered Engineering 137E.) Prereq-

137F. Chemical Process Computer-Aided Design and Analysis. Prerequisites: courses 137C, 137D, 137E, Computer Science 10F. An introduction to the application of some of the mathematical and computing methods to chemical engineering design problems; the use of simulation programs as an automated method of performing steady state material and energy balance calculations.

138A. Introduction to Cryogenics and Low Temperature Engineering. (Formerly numbered Engineering 138A.) Prerequisite: course 105A.

138B. Chemical Engineering Polymer Processes. (Formerly numbered Engineering 138B.) Prereq-

138C. Chemical Engineering Pollution Technology. Prerequisites: courses 137C, 137D, or equiva-

139A. Introductory Chemical, Nuclear, and Thermal Engineering Laboratory. (Formerly numbered Engineering 139A.) Laboratory, eight hours. Prerequisites: courses M105A, M105D, Mechanical, Aerospace, and Nuclear Engineering 103. Basic introductory laboratory experiments illustrating the equilibrium state properties and transport response to applied driving forces in energy transformation and rate processes. Experiments include examples from thermodynamics, chemical engineering, and environmental problems.

139B. Chemical and Thermal Engineering Laboratory. (Formerly numbered Engineering 139B.) Lab-

139C. Chemical and Thermal Engineering Laboratory. (Formerly numbered Engineering 139C.) Lab-

SCHOOL OF ENGINEERING AND APPLIED SCIENCE / Chemical Engineering / 343

and Ph.D. degrees. Both graduate and undergraduate programs closely relate teaching and research to important industrial problems.
Graduate Courses

230A. Advanced Engineering Thermodynamics. Prerequisites: courses 130A, 137A, or equivalent. Phenomenological and statistical thermodynamics of chemical and physical systems with engineering applications. Presentation of the role of atomic and molecular spectra and intermolecular forces in the interpretation of thermodynamic properties of gases, liquids, and plasmas. Mr. Robinson (F, W, Sp).

230B. Nonequilibrium Thermodynamics. Prerequisite: course 230A. Interpretation of nonequilibrium phenomena in terms of the fourth law of thermodynamics, namely (1) linear interdependence of fluxes and driving forces and (2) Onsager reciprocal relations. Boltzmann transport equation; diffusion; electrical and heat currents; numerical calculation of parameters. Mr. Robinson (Sp).

230C. Cryogenics. Prerequisite: course 137A. The study of basic phenomena in low temperature systems, including the third law, various cooling methods, and superfluid systems; Meissner state, type I and type II systems; applied superconductivity cryogenics. Mr. Frederking (Sp).


237B. Molecular Dynamics. Prerequisite: course 130A or 137C. Analysis and design of molecular-beam systems. Molecular-beam sampling of reactive mixtures, combustion chambers, or gas jets. Molecular-beam studies of gas-surface interactions, including energy accommodation and heterogeneous reactions. Applications to air pollution control and catalysis. Mr. Knuth (W).

237C. Combustion Processes. Prerequisite: course 137C or Mechanical, Aerospace, and Nuclear Engineering 132A. Fundamentals: change equations for multicomponent reactive mixtures, rate laws. Applications: combustion, including burning of (1) premixed gases or (2) combustion fuels. Detonation. Sound absorption and dispersion. Mr. Knuth, Mr. Smith (Sp).

238. Advanced Mass Transfer. Prerequisite: course M105D, 137E, or consent of instructor. Advanced treatment of mass transfer with applications to industrial separation processes, gas cleaning, and mechanical, aerospace, and nuclear engineering. Mr. Nobe (Sp).

238D. Biochemical Engineering. Prerequisites: courses 137C and 137D, or consent of instructor. Theoretical models and experimental techniques for describing the thermodynamics and transport behavior of solutions of biological macromolecules. Non-ideal solution behavior emphasized. Applications to mass transfer problems in natural and man-made systems. Elementary theory of biochemical reactions. Mr. Vilker (W).

239A-239AZ. Special Topics in Chemical Engineering (2 to 4 units each). Prerequisites: consent of instructor, additional prerequisites for each offering as announced in advance by the 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.

239CA-239CZ. Seminar: Current Topics in Energy Utilization. Prerequisite: consent of instructor. Review of current literature in an area of energy utilization in which the instructor has developed special proficiency as a consequence of research interests. S/U grading. Mr. Nobe (F, W, F). Mr. Nobe (F, W, F).

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading. Mr. Nobe (F, W, Sp).

596. Directed Individual or Tutorial Studies (2 to 8 units). Prerequisites: graduate standing in chemical engineering, consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. Supervised investigation of advanced technical problems. S/U grading.

597B. Preparation for Ph.D. Preliminary Examinations (2 to 16 units). Prerequisites: graduate standing in chemical engineering, consent of instructor. SU grading.

597C. Preparation for Ph.D. Oral Qualifying Examination (2 to 16 units). Prerequisites: graduate standing in chemical engineering, consent of instructor. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

599. Research for and Preparation of M.S. Thesis (2 to 12 units). Prerequisites: graduate standing in chemical engineering, consent of instructor. 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 units). Prerequisites: graduate standing in chemical engineering, consent of instructor. Usually taken after student has been advanced to candidacy. S/U grading.

Chemistry/ Materials Science

(Interdepartmental)

For details on this undergraduate program, see Chapter 5 on the College of Letters and Science.
Lower Division Course

15. Introduction to Programming. Lecture, four hours; laboratory, two hours. Introduction to programming using structured Fortran. Selected topics in programming, with emphasis on numerical techniques as applied to engineering problems.
Mr. Dong, Mr. Stenstrom (F,W,Sp)

Upper Division Courses

106A. Principles of Engineering Economy. (Formerly numbered Engineering 106A.) Prerequisite: upper division standing. Economic analysis of engineering projects; value systems; economic decisions on capital investment and choice of engineering alternatives; new projects, replacement and abandonment policies; risky decisions including make/buy policies and research investment; corporate financial practices and accounting.
Mr. Dracup (F,W,Sp)

Mr. Nelson (F,W,Sp)

M109A. Engineering and Policy: Resources and Risk. (Same as Mechanical, Aerospace, and Nuclear Engineering M109A.) Lecture, two hours; recitation, three hours. Prerequisite: sophomore or higher standing in engineering. The philosophical, sociological, and institutional implications of engineering-based risk and decision making. Emphasis on opportunities for the useful development of resources, inherent risks, and the responsibilities of engineers in the decision process. Thoughtful student discussion is also emphasized.
Mr. Perrine (W)

M134A. New Energy Technology: Resources, Conversion, Constraints. (Formerly numbered 134A.) (Same as Mechanical, Aerospace, and Nuclear Engineering M134A.) Prerequisite: Chemical Engineering M105A or equivalent in physics or chemistry or consent of instructor. Energy resources: fossil fuels, nuclear fuels, hydro, solar, wind, geothermal, and biomass sources. Conversion methods for power production and other energy uses. Consideration of thermodynamic, economic, and environmental constraints.
Mr. Perrine (F)

157B. Experimental Fracture Mechanics. (Formerly numbered Engineering 157B.) Lecture, two hours; laboratory, four hours. Prerequisite: Mechanical, Aerospace, and Nuclear Engineering 157 or equivalent. Elementary introduction to fracture mechanics and experimental techniques used in fracture, crack tip stress fields, strain energy release rate, fracture characterization, compliance calibration, surface flaws, fatigue crack growth and fatigue life of structural components, mixture, mode fracture, and individual projects.
Mr. Fourney (W)

Mr. Roberts (Sp)

165A. Elementary Structural Analysis. (Formerly numbered Engineering 165A.) Prerequisite: course 106. Equilibrium of structures; deformation analysis of structures by differential equation method, moment-area method, and the principle of virtual work; influence lines; analysis of statically determinate and indeterminate structures such as beams, frames, arches, and trusses; introduction to slope-deflection equations.
Mr. Schmit (F,Sp)
156B. Intermediate Structural Analysis. (Formerly numbered Engineering 156B.) Prerequisite: course 156A. Classical force, displacement methods of structural analysis; three moment equation, slope-deflection equations, moment distribution; virtual work, minimum work, complementary potential energy theorems; Castigliano’s theorems, generalized displacements, forces; Rayleigh-Ritz method; introduction to matrix methods; stiffness, flexibility matrices for bars, beams. Mr. Nelson (F, W)

156C. Computer Analysis of Structures. (Formerly numbered Engineering 156C.) Prerequisite: course 156A. Development of algorithms and Fortran coding for matrix manipulation, inversion; solution of the linear algebraic equations, eigenvalue problems; structural applications; matrix displacement method for planar trusses, frames, direct assembly of system stiffness; matrix force method for planar frames. Mr. Dong (Sp)

156L. Structural Design and Testing Laboratory (2 units). (Formerly numbered Engineering 156L.) Lecture, one hour; laboratory, four hours. Prerequisites: course 156A. Mechanical, Aerospace, and Nuclear Engineering 157. Design, construction, instrumentation, and test of a small-scale model of a structure for the course 156A, Mechanical, Aerospace, and Nuclear Engineering 102. Recommended: Electrical Engineering 121C. Fundamentals of vibration theory and applications. Free, forced, and transient vibration of one and two degrees of freedom systems; including damping and nonlinear behavior. Normal modes, coupling, and non-linear coordinates. Elements of vibration and wave propagation in continuous systems. Mr. Hart (F)


174A. Introduction to Elements of Decision Making. (Formerly numbered Engineering 174A.) Prerequisite: Mechanical, Aerospace, and Nuclear Engineering 153A or equivalent mathematics course. Elements of decision making and the decision process. Decision and utility theory. Formulation of utility functions and objective functions. Subjective probabilities. Decision approaches to value of information, risk sharing and group decisions. Methods of eliciting judgments; bias and scoring rules.

181A. Air Pollution Control. (Formerly numbered Engineering 181A.) Prerequisite: senior standing or consent of instructor. Principles of air pollution control, their atmospheric transport, dispersion, and photochemical reactions. Design and operational basis for stationary and mobile source control systems. An overview of current regulatory trends.

181B. Waste and Hazardous Waste Management. Prerequisite: senior standing or consent of instructor. Waste sources and handling. Resource recovery processes and system design. Site selection, design, and operation for landfill disposal. Leachate transportation, monitoring, and design for groundwater protection.

184A. Engineering Hydrology. (Formerly numbered Engineering 184A.) Prerequisite: senior standing or consent of instructor. Hydrologic and statistical probability. Precipitation, climatology, stream flow analysis, flood frequency analysis, groundwater, snow hydrology, hydrologic simulation. Possible field trips.

184B. Introduction to Water Resources Engineering. (Formerly numbered Engineering 184B.) Prerequisite: Mechanical, Aerospace, and Nuclear Engineering 103 or consent of instructor. Principles of hydraulics, the flow of water in open channels and pressure conduits, reservoirs and dams, hydraulic machinery, hydroelectric power, introduction to system analysis and design applied to water resources engineering.

184D. Water Quality Control Systems. (Formerly numbered Engineering 184D.) Prerequisite: Mechanical, Aerospace, and Nuclear Engineering 103 and upper division standing in engineering, or consent of instructor. Biological, chemical, and physical bases of water quality and pollution; potability and chemical aspects of treatment and reclamation; analysis and design of water and wastewater treatment systems; field trip.

184E. Water Quality Control Laboratory. (Formerly numbered Engineering 184E.) Laboratory, two hours. Prerequisites: course 184D (may be taken concurrently). Chemistry 11A, 11B. Basic laboratory techniques and practice for the characterization and analysis of waters and wastewaters. Selected experiments include measurement of biochemical oxygen demand, suspended solids, dissolved oxygen, hardness, and other parameters used in water quality control.

184F. Water Quality Control Laboratory. (Formerly numbered Engineering 184F.) Laboratory, two hours. Prerequisites: course 184E. Laboratory techniques for the characterization and analysis of waters and wastewaters. Selected experiments include measurement of biochemical oxygen demand, suspended solids, dissolved oxygen, hardness, and other parameters used in water quality control.
286A. Stabilization of Structures I. (Formerly numbered Mechanics and Structures 266.) Prerequisites: courses 165B, 166, or equivalent. Elastic buckling of bars. Different approaches to stability problems. Inelastic buckling of columns and beam columns. Column and beam columns with linear, nonlinear creep. Combined torsional and flexural buckling of columns. Buckling of plates. Mr. Schmitt (W)

286B. Advanced Reinfoced Concrete Design. (Formerly numbered Mechanics and Structures 267.) Prerequisite: course 167B. Principles of concrete mechanics, structural synthesis, strength of concrete, and application to aerospace and civil structures. Mr. Schmit (W)

286C. Advanced Reinforced Steel Design. (Formerly numbered Mechanics and Structures 267C.) Prerequisite: course 167B. Euler buckling, strength of concrete, and application to aerospace and civil structures. Mr. Schmit (W)

286C. Structural Loads and Safety for Civil Structures. (Formerly numbered Mechanics and Structures 267C.) Prerequisite: course 167B. Load combinations, load factors, and economic loadings. Mr. Selina (Sp)

286D. Experimental Structural Analysis. (Formerly numbered Mechanics and Structures 268A.) Prerequisite: consent of instructor. Study of modern techniques in experimental mechanics, including dimensional analysis, measurement theory, and measurement techniques. Emphasis on techniques of modern optics (e.g., holography). Moiré analysis, photoelasticity and speckle interferometry. Mr. Fourney (W)

286E. Advanced Structural Dynamics. (Same as Mechanical, Aerospace, and Nuclear Engineering 269A.) Prerequisite: course 169A. Study of dynamic systems. Emphasis on solution and derivation of governing equations using matrix formulation. Mr. Dong (F)

286F. Advanced Structural Analysis. (Same as Mechanical, Aerospace, and Nuclear Engineering 269B.) Prerequisite: course 169B. Study of dynamic systems. Emphasis on solution and derivation of governing equations using matrix formulation. Mr. Dong (F)

286G. Advanced Structural Analysis. (Same as Mechanical, Aerospace, and Nuclear Engineering 269C.) Prerequisite: course 169C. Study of dynamic systems. Emphasis on solution and derivation of governing equations using matrix formulation. Mr. Dong (F)

286H. Advanced Mechanical Engineering Systems. (Formerly numbered Engineering Systems 284D.) Prerequisite: course 184D. Study of advanced mechanical engineering systems. Emphasis on solution and derivation of governing equations using matrix formulation. Mr. Dong (F)

286I. Advanced Water Quality Control Systems. (Formerly numbered Engineering Systems 284I.) Prerequisite: course 184I. Study of advanced water quality control systems. Emphasis on solution and derivation of governing equations using matrix formulation. Mr. Dong (F)

286J. Advanced Fluid Mechanics. (Formerly numbered Engineering Systems 284J.) Prerequisite: course 184J. Study of advanced fluid mechanics. Emphasis on solution and derivation of governing equations using matrix formulation. Mr. Dong (F)

286K. Advanced Thermodynamics. (Formerly numbered Engineering Systems 284K.) Prerequisite: course 184K. Study of advanced thermodynamics. Emphasis on solution and derivation of governing equations using matrix formulation. Mr. Dong (F)

286L. Advanced Fluid Dynamics. (Formerly numbered Engineering Systems 284L.) Prerequisite: course 184L. Study of advanced fluid dynamics. Emphasis on solution and derivation of governing equations using matrix formulation. Mr. Dong (F)

285D. Earth Pressures and Earth Retaining Structures. (Formerly numbered Mechanics and Structures 285D.) Prerequisites: course 185A, graduate standing. The basic concepts of the theory of earth pressures behind retaining structures are presented, with special application to the design of retaining walls, bulkheads, and excavation bracing; the effects of flexibility of bulkheads, creep in soils, and construction techniques are also discussed in detail. Mr. Lade (W)

285E. Seminar on Advanced Topics in Soil Mechanics. (Formerly numbered Mechanics and Structures 285E.) Prerequisites: graduate standing in engineering. The seminar is quarter to cover subjects such as earth dam design, seepage through soils, consolidation, constitutive laws, finite difference and finite element methods with special application in soil mechanics, theories of elasticity and plasticity, and case histories. Mr. Lade

285L. Advanced Soil Mechanics Laboratory. (Formerly numbered Mechanics and Structures 285L) Lecture, one hour; laboratory, six hours. Prerequisites: courses 185A, 185B, 285A, 285B. Lectures and laboratory studies of advanced aspects of soil properties and their application to design. Permeability, consolidation, strength testing, pore water pressure measurements, advanced instrumentation and measurement techniques. Preparation of laboratory reports. Mr. Lade (Sp)

286A. Earthquake Engineering. (Formerly numbered Mechanics and Structures 286A.) Prerequisite: course M185A or 285A or 285B or Mechanical, Aerospace, and Nuclear Engineering 285A. Engineering seismology: strong earthquake motion, microtremors, wave velocity and damping, induced vibrations, spectral analysis. Risk of earthquakes and fault breaks. Site evaluations: structure-earth system response. Introduction to earthquake resistant design of buildings, bridges, and dams. Theory and field experiments. Mr. Selna (W)

286B. Structural Response to Ground Motions. (Formerly numbered Mechanics and Structures 286B.) Prerequisite: course M286A or consent of instructor. Spectral analysis of ground motions; response, time, and Fourier spectra. Response of structures to ground motions due to earthquakes and nuclear explosions. Computational methods to evaluate structural response. Response analysis, including evaluation of contemporary design standards. Limitations due to idealizations. (Sp)

289AA-289ZZ. Seminar: Current Topics in Civil Engineering (2 to 4 units). (Formerly numbered Mechanics and Structures 289AA-289ZZ) Prerequisite: consent of instructor. Lectures, discussions, and student presentations and projects in areas of current interest in civil engineering. May be repeated for credit. S/U grading. Mr. Nelson (F,W,Sp)

M292A. Asymptotic and Perturbation Methods I. (Formerly numbered Mechanics and Structures M292A) (Same as Mathematics M274A.) Prerequisites: Chemical Engineering M192A or Mechanical, Aerospace, and Nuclear Engineering M192A, Mathematics 132, or equivalent. The fundamental mathematics of asymptotic analysis, asymptotic expansions of Fourier integrals, method of stationary phase, Watson's lemma, method of steepest descent, uniform asymptotic expansions, elementary perturbation problems. Mr. Muki (F)


298. Seminar in Engineering (2 to 4 units). Prerequisites: graduate standing in civil engineering, consent of instructor. Seminar may be organized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change.

575. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

596. Directed Individual or Tutorial Studies (2 to 8 units). Prerequisites: graduate standing in civil engineering, consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. Supervised investigation of advanced technical problems. S/U grading.

597A. Preparation for M.S. Comprehensive Examination (2 to 12 units). Prerequisite: graduate standing in civil engineering, consent of instructor. Reading preparation for M.S. comprehensive examination. S/U grading.

597B. Preparation for Ph.D. Preliminary Examinations (2 to 16 units). Prerequisite: graduate standing in civil engineering, consent of instructor. Reading preparation for Ph.D. comprehensive examination. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination (2 to 16 units). Prerequisite: graduate standing in civil engineering, consent of instructor. 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 units). Prerequisites: graduate standing in civil engineering, consent of instructor. 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 units). Prerequisites: graduate standing in civil engineering, consent of instructor. Usually taken after student has been advanced to candidacy. S/U grading.

Scope and Objectives

Computer science is concerned with computer-related information processing, systems, and applications. 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 strongly related studies of subjects in computer science theory, computer system architecture, network modeling and analysis, and methodology of applications of computers.

The undergraduate and graduate studies and research projects in computer science are supported by extensive computing resources. The Center for Experimental Computer Science (CECS) is comprised of nearly a dozen laboratories specializing in areas such as computer communications, VLSI design, and artificial intelligence. The Cognitive Systems Laboratory is engaged in studying computer systems which emulate or support human reasoning. The Biocybernetics Laboratory is devoted to

Computer Science

3731 Boelter Hall, 825-6396

Professors
Masanao Aoki, Ph.D.
Aligrida A. Arziania, Ph.D., Chair
Daniel M. Berry, Ph.D.
Bertram Russel, Ph.D.
David G. Cantor, Ph.D.
Alfonso F. Cardenas, Ph.D.
Jack W. Carlyle, Ph.D.
Wesley W. Chu, Ph.D.
Joseph J. DiStefano, III, Ph.D.
Milos D. Ercegovac, Ph.D.
Gerald Estrin, Ph.D.
Thelma Estrin, Ph.D., in Residence, Assistant Dean
Sheila A. Greibach, Ph.D.
Walter J. Karpplus, Ph.D.
Leonard Kleinrock, Ph.D.
Allen Klinger, Ph.D.
David F. Martin, Ph.D.
Lawrence P. McNamee, Ph.D.
Michae! A. Melkanoff, Ph.D.
Richard R. Muniz, Ph.D.
Judea Pearl, Ph.D.
Gerald J. Popke, Ph.D.
George L. Turin, Sc.D., Dean
Jacques J. Vidal, Ph.D.
Chand R. Viswanathan, Ph.D.
Thomas A. Rogers, Ph.D., Emeritus

Associate Professors
Mario Gerla, Ph.D.
Stoti Parker, Jr., Ph.D.
David A. Rennels, Ph.D.

Assistant Professors
Michael G. Dyer, Ph.D.
Margot Flowers, Ph.D.
Elizer M. Gafni, Ph.D.
David R. Jefferson, Ph.D.

Senior Lecturer
Leon Levine, M.S.

Adjunct Professors
Barry W. Boehm, Ph.D.
Norman C. Dalkey, Ph.D.

Adjunct Associate Professors
Emily P. Friedman, Ph.D.
Tomas Lang, Ph.D.

Adjunct Assistant Professor
Terrence E. Gray, Ph.D.

Adjunct and Visiting Lecturers
David G. Kay, M.S., J.D., Visiting
William B. Kehl, A.M., Adjunct
Thomas M. Simundich, Ph.D., Visiting
Vance C. Tyree, M.S., Visiting Senior
multidisciplinary research involving the application of engineering and computer science methods to problems in biology and medicine. The Bachelor of Science degree may be attained through either the computer science and engineering program or the interdepartmental mathematics/computer science program described in Chapter 5 on the College of Letters and Science.

The School of Engineering and Applied Science offers M.S. and Ph.D. degrees in Computer Science, as well as minor fields for graduate students seeking engineering degrees. The Graduate School of Management and the Computer Science Department offer a concurrent degree program which enables students to obtain the M.S. in Computer Science and the M.B.A. (Master of Business Administration).

Bachelor of Science in Computer Science and Engineering

The computer science and engineering curriculum at UCLA provides the education and training necessary to design, implement, test, and utilize the hardware and software of digital computers and digital systems. This curriculum has major components from the Computer Science and Electrical Engineering Departments. Within the curriculum students study all aspects of computer systems from the electronic design, based on solid-state physics concepts, through logic design, integrated circuit selection and design, MSI, LSI, and VLSI concepts and device utilization, machine language design, implementation and programming, operating system concepts, system programming, higher-level language skills, and application of these systems. Students are prepared for employment in the high-technology industries which interface with information and digital systems.

The Major

Course requirements are as follows (186 minimum units required):

1. Four core courses: Computer Science 10C*, 20*, 30, Electrical Engineering 124A.
2. Computer Science 130, 131, 141, 151A, 151B, 181, Electrical Engineering 110A, 116A, 116B, 116C; eight laboratory units (Computer Science 152A, 152B, 171L, and Electrical Engineering 100L or 116N); Civil Engineering 106A (satisfies the engineering economics requirement); Chemical Engineering M192A or Mechanical, Aerospace, and Nuclear Engineering M192A; one course in probability and statistics selected from Mathematics 152A, Electrical Engineering 120A, or Computer Science 112.
3. Three elective courses from Computer Science 111 through 199 or Electrical Engineering 115A, 115D, or 116D.
4. English 3; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61; Physics 8A/BAL, 8B/8BL, 8C/8CL, 8D/8DL; one life science course.
5. Seven courses from the humanities, social sciences, and/or fine arts approved list (at least three must be upper division; at least three — with two upper division — must be in the same academic department or otherwise reflect coherence with respect to subject matter; and one must satisfy the engineering and science in society requirement).
6. Free elective courses.

Graduate Study

For information on graduate admission to the computer science program and requirements for the M.S. and Ph.D. degrees, see “Graduate Study” at the beginning of this chapter.

Computer Science Breadth Requirement

Candidates for the M.S. or Ph.D. degree in Computer Science must satisfy the computer science breadth requirement by the end of the fourth quarter in graduate residence at UCLA. This requirement is satisfied by mastering the contents of six undergraduate courses in computer science or related subjects selected from the following two groups:

Group 1 (four required courses or equivalent):
- Computer Science 141, 151A, 151B, 181.

Group 2 (two required courses or equivalent):
- Computer Science 111, 112, 130 or 131 or 132, 161 or 163, 171 or 174, 172 or 173 or 270A.

Competence in any or all courses may be demonstrated in one of three ways:
1. Satisfactory completion of the course at UCLA with a grade of B or better.
2. Satisfactory completion of an equivalent course at another university with a grade of B or better.
3. Satisfactory completion of a final examination in the courses at UCLA.

In addition, students must complete Computer Science 201 with a grade of Satisfactory.

Students in the Computer Science Department who wish to receive a degree in engineering rather than in computer science should check with the department for details of the breadth requirement for engineering majors.

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

The Department of Computer Science in the School of Engineering and Applied Science and the Graduate School of Management offer a concurrent degree program which enables students to complete requirements for the M.S. in Computer Science and the M.B.A. (Master of Business Administration) in three academic years. Students should request all application materials from the M.B.A. Admissions Office, Graduate School of Management.

Lower Division Courses

- 5. Computer Literacy and Appreciation. (Formerly numbered Engineering 5.) Lecture, three hours; laboratory, one hour. An introduction to computers for students without prior experience. The course surveys computer technology, computer applications, and how machines represent and process information. Students gain insight into the development, power, limitations, and social impact of modern computer systems. Mr. Bussell
- 10C. Introduction to Programming. (Formerly numbered Engineering 10C.) Lecture, four hours; recitation, two hours. Recommended for mathematics/computer science and engineering majors (emphasis on numerical problems). Open to graduate students on S/U grading basis only. Not open to students with credit for course 10F or 10S. Exposure to computer organization and capabilities. Basic principles of programming (using Pascal as the example language): algorithmic, procedural problem solving. Program design and development. Control structures and data structures. Human factors in programming and program design. Mr. Levine (F, W, S, Sp)

- 10F. Introduction to Programming/ForTran. (Formerly numbered Engineering 10F.) Lecture, four hours; recitation, two hours. Recommended for Chemical Engineering, Electrical Engineering, and Mechanical, Aerospace, and Nuclear Engineering Department majors (emphasis on numerical problems). Open to graduate students on S/U grading basis only. Not open to students with credit for course 10C or 10S. Description and use of Fortran programming language. Selected topics in programming techniques and programming and running of several numerical problems.

- 105. Introduction to Programming. (Formerly numbered Engineering 105.) Lecture, four hours; recitation, two hours. Recommended for all majors except mathematics/computer science and engineering (emphasis on nonnumerical problems). Open to graduate students on S/U grading basis only. Not open to students with credit for course 10C or 10F. Exposure to computer organization and capabilities. Basic principles of programming (using Pascal as the example language): algorithmic, procedural problem solving. Program design and development. Control structures and data structures. Human factors in programming. Mr. Levine (F, W, S, Sp)

- 20. Programming and Problem Solving (6 units). Lecture, four hours; laboratory, four hours. Prerequisite: course 10C or consent of instructor. Open to graduate students on S/U grading basis only. Students design and develop programs solving several problems of intermediate complexity drawn from various disciplines, using an assembly language and a high-level language. Machine organization, programming techniques, algorithm analysis, and data structures. Students develop programming sophistication through intensive individual laboratory work. Mr. Berry (F, W, S, Sp)
30. Introduction to Computer Operating Systems. Lecture, four hours; laboratory, two hours. Prerequisite: course 20. Open to graduate students on S/U grading basis. Course covers design principles, and use of modern computer systems. Overview of batch and time-sharing systems. Functional description of assemblers, compilers, link- age editors, loaders. Job control language, overlays, file structures, buffering, protection. Assignments include problems on the computer and the design of simple O/S functions.

Mr. McNamee, Mr. Munitz (F,Sp)

99. Individual Programming Projects (2 to 4 units). Prerequisite: course 10C or consent of instructor. Intended for students wishing to learn individually new programming languages and for students wishing to make up deficiencies so as to bring them to the level of course 20. Students design, check-out, and run programs in various programming languages.

Mr. Melkanoff

Upper Division Courses

110. Systems Programming. Lecture, four hours; laboratory, two hours. Prerequisites: courses 30, 141. Introduction to the design and performance evaluations of modern operating systems. Mapping and binding of addresses. The organization of multipro- gramming and multiprocessing systems; interrupts, processes, process model, and interlocks. Resource allocation models and the problem of deadlocks. Job control and system management.

Mr. Gerla, Mr. Munitz (F,Sp)

112. Computer System Modeling Fundamentals. Prerequisite: upper division standing. Basic tools for performance evaluation and design of distributed computer systems, including probability; transforms; Markov chains; queuing theory; counting; graphs; network flows; computational graph models. Examples are drawn from the computer systems field.

Mr. Kleinrock (F,Sp)

130. Software Engineering. (Formerly numbered 234B) Lecture, four hours; laboratory, two hours. Prerequisite: course 20. Structured programming, program proving, modularity, abstract data types, composite design, program testing, team programming.

Mr. Berry (Sp)

131. Programming Languages. Lecture, four hours; laboratory, two hours. Prerequisite: course 20. The main objective is to study, compare, and evaluate programming languages, in particular commercially available languages: Fortran, Algol 60, Cobol, PL/1, and Algol 68. Additional topics as set by instructor.

Mr. Berry, Mr. Cardenas (F,WSp)

132. Compiler Construction. Lecture, four hours; laboratory, two hours. Prerequisite: course 131 or consent of instructor. Modern compiler structure; design of syntax and lexical analyzers; semantic analysis and run-time environment; program and data structure; code optimization.

Mr. Martin (Sp)

141. Basic Methods of Data Organization. Lecture, four hours; laboratory, two hours. Prerequisite: course 20. Fundamental techniques for organizing and manipu- lating data, stressing relationships to performance, time/storage trade-offs. Sequential and linked storage allocation for linear lists, multilinked structures. Trees: implementation, traversals, mathematical properties. Dynamic storage management. Topics include sorting-searching, algorithmic analy- sis, graph theory, concepts underlying file management.

Mr. Gerla, Mr. Klinger (F,WSp)

151A. Computer System Architecture I (Introductory). Lecture, four hours; recitation, two hours. Prerequisites: course 10C, college-level physics (electric circuit theory). Course covers basic concepts of computer science majors and engineering undergraduates specializing in computer science and engineering: course 152A. Introduction to computer architecture. Description of machine organization and operation: instruction set representation and instruction execution. Combinational logic design with ICs and MSI devices. Sequential circuits, storage elements, and MSI packages. Arithmetic and arithmetic-logic units.

Mr. Bussell, Mr. Ercogovac (F,WSp)

151B. Computer System Architecture II (Intermediate). Lecture, four hours; recitation, two hours. Prerequisite: course 151A. Corequisite for mathematics/computer science majors and engineering undergraduates specializing in computer science and engineering: course 152B. Formal description of machine organization. Effects on machine organization of instruction sets and formats; addressing structures; memory management and organization; control sequence generator; I/O processing and interrupts; reliability aspects.

Mr. Bussell, Mr. Ercogovac (F,WSp)

152A. Introductory Digital Circuits Laboratory (2 units). Prerequisite: course 10C. Corequisite: course 152B. Laboratory work on digital design and implementation of logic circuits and networks through implementation and debugging procedures, including experience with printed circuit design.

Mr. Bussell, Mr. Rennels (F,WSp)

152B. Digital Systems Laboratory (2 units). Corequisite: course 151B. A computer-based laboratory which probes computer architecture through construction simulation and measurement of digital sub-systems.

Mr. Bussell, Mr. Rennels (F,WSp)

161. Fundamentals of Artificial Intelligence. Lecture, four hours; laboratory, two hours. Prerequisites: courses 130 or 131, and 141, consent of instructor. Introduction to artificial intelligence. Knowledge representation, functional and logic programming, machine learning, survey of topics in robot microworlds, vision, automatic programming, expert systems, and cognitive modeling.

Mr. Dyer, Ms. Flowers (Sp)

163. Introduction to Natural Language Processing. Lecture, four hours; laboratory, two hours. Prerequisites: courses 130 or 131, and 141, consent of instructor. Basic concepts of natural language processing by computers. Natural language generators and parsers, inference, and conceptual analysis. Modeling conceptual processes and representing semantic knowledge by means of computer programs. Mr. Dyer, Ms. Flowers (W)

170. Basic Methodologies for Computer Modeling and Analysis of Dynamic Systems. Prerequisites: Mathematics 33A, 33B. An introduction to computer-oriented techniques for modeling and analysis of systems which evolve with time, with emphasis on examples from social and life sciences. Linearity, impulse responses, stability, state variables, algorithms for filtering and control systems.

Mr. Aoki (W)

171. On-Line Computer Systems. Prerequisite: senior standing or consent of instructor. A survey of fundamentals, with emphasis on hardware and systems concepts. Adapting digital computers to inter- faces, including multiprogramming, interrupt, and time-sharing considerations. Digital communication, remote consoles, sampling, quantizing, multiplexing, analog-digital conversation, and data reconstruction.

Mr. Karplus, Mr. Levine (F,Sp)

171L. Real-Time Systems Laboratory (2 to 4 units). Prerequisites: computer science majors and engineering undergraduates: senior standing, consent of instructor. Recommended courses: 171L (may be taken concurrently), 152A. Tests and measurements of digital and analog sig- nal systems and networks as encountered in data acquisition, on-line computer control systems, computercontrolled terminals, modems, interfaces, and standards (e.g., RS 232, IEEE488). May be repeated for credit by consent of instructor. Mr. Carlyle (F,WSp)

172. Simulation and Models. Prerequisite: course 20. Model formulation and programming for discrete event systems in simulation languages (e.g., GPSS, SIMSCRIPT I). The simulation data base and consider- ations for data language development. Statistical con- siderations: design of experiments, random number generation, analysis of model results. Computer ex- ercises. Mr. Karplus, Mr. McNamee (F)

173. Random Data Analysis and Measurement Programs. Prerequisites: Computer Engineering 121C. Provides practical aspects of random data analysis and measurement procedures. Includes statistical properties of random data, correlation, spect- tral density, noise, communication relationships, statistical errors, coherence functions, data acquisition, and processing techniques.

Mr. McNamee

174. Elements of Computer Graphics. Lecture, three hours; laboratory, one hour. Prerequisites: courses 131, 141, and 171, or consent of instructor. Hardware and software elements of computer graphics, including problems of intelligent termin- al points, communications, and graphics languages. Ap- plication areas and cost effective uses of interactive graphics. Design and development of interactive graphics programs to solve representative problems in various application areas.

Mr. Vidal (F,WSp)


Ms. Greibach, Mr. Parker (W,Sp)

183. Discrete Systems and Automata. Prere- quisite: two quarters of lower division mathematics or computer science. Introduction to mathematical ideas, such as in linguistics or basic courses in logic or com- puter programming. An introductory course empha- sizing finite-state systems: graphs, machines, lan- guages, regular expressions, coding, computing; memory, system identification, diagnosis; design considerations.

Mr. Carlyle


Mr. DiStefano (F,WSp)

M196B. Modeling and Simulation of Biological Systems. (Formerly numbered Engineering M196B.) (Same as Medicine M196B.) Lecture, four hours; labor- oratories, two hours. Prerequisite: calculus. Introduc- tion to classical and modern systems and modeling and simulation methods for studying biological sys- tems. Includes multicompartamental modeling, multi- exponential curve fitting, and simulation laboratory projects. Applications in physiology and medicine. Life science and medical students are encouraged to enroll.

Mr. DiStefano (F,WSp)

199. Special Studies (2 to 8 units). Prerequisites: upper division standing, consent of instructor. Individ- ual investigation, and languages. Prerequisite: to be arranged in consultation with a faculty member. Enrollment request forms are available in department office. Occasional field trips may be arranged. May be repeated for credit.

Mr. Carlyle (F,WSp)

Graduate Courses

201. Computer Science Seminar (2 units). Prereq- uisite: graduate standing in computer science. Lec- tures on current research topics in computer science. May be repeated for credit. S/U grading.

Mr. Carlyle (F,WSp)
202. Advanced Computer Science Seminar. Prerequisite: completion of major field examination in computer science or consent of instructor. Current computer science research in theory of, analysis and synthesis of, and applications of information processing systems. Each member completes one tutorial and one or more original pieces of work in the specialized area. May be repeated for credit.

Mr. Estrin


Mr. Kleinrock, Mr. Muntz (W)

214. Data Transmission in Computer Communications. Prerequisites: course 112, graduate standing in computer science. Discrete data streams, formats, rates, and transmission techniques. Digital data transmission and analog signaling in computer communication; media characteristics, systems methodologies, performance analysis; modern designs; physical interfaces in computer communication links; national/international standards; tests and measurements.

Mr. Carlyle

215. Computer Communications and Networks. Prerequisite: course 112. Resource sharing; computing traffic characteristics; multiplexing; network structure; packet switching and other switching techniques; the ARPANET and other computer network examples; network delay and analysis; network design and operation; network protocols; routing and flow control; satellite and ground radio packet switching; local networks, commercial networks, and computer interconnections and architectures. Optional topics include extended error control techniques; modems; SDLC, HDLC, X.25, etc.; protocol verification; network simulation and measurement; integrated networks; communication processors.

Mr. Chu, Mr. Kleinrock (F, Sp)

216. Distributed Multiaccess Control in Networks. Prerequisites: courses 212A, 215. Topics drawn from the field of distributed control and access in computer networks are discussed, including centralized and distributed computer networks; satellite packet switching; ground radio packet switching; local network architecture and control.

Mr. Kleinrock (W, Sp)


Mr. Geria (W)

219. Current Topics in Computer System Modeling Analysis (2 to 12 units). Prerequisite: consent of instructor. Review of current literature in an area of computer systems modeling. Students attend a seminar or have the instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. May be repeated for credit by consent of instructor.

Mr. Cardenas, Mr. Muntz, Mr. Popek (F, Sp)

M222. Control and Coordination in Economics. (Formerly numbered System Science M222.) (Same as Economics M222.) Prerequisite: standing in economics or engineering, consent of instructor. Recommended: appropriate mathematics course. Stabilization policies, short- and long-run dynamics, levels of one or more economic variables, policy coordination in teams; certainty equivalence and separation theorems; stochastic and learning models. Bayesian approach to price and output rate adjustment.

Mr. Aoki (W)

231A. Advanced Topics in Programming Languages. Prerequisite: course 131. Presentation, analysis, and discussion of specialized programming languages, new higher-level languages, and new and advanced features of programming languages.

Mr. Melkanoff (Sp)

231B. Advanced Topics in Computer Language Design. Prerequisites: courses 132, 141, 181, 232A, 232B. Treatment of current topics in computer language design, including design goals of modern languages, levels of abstraction, methodologies for standardization, and proposals for new problem-oriented and extendable languages. Enrollment limited to allow individual application of language design principles.

Mr. Berry (F)

232A. Operational Semantics of Programming Languages. Prerequisites: courses 131, 181 (may be taken concurrently). Interpreter models of programming language semantics: information structure models, Vienna definition language, lambda calculus, LISP definition, interpreter equivalence and correctness.

Mr. Berry (F)

232B. Semantics of Programming Languages. Prerequisite: course 181 or equivalent or consent of instructor. Syntax-directed semantics of context-free languages. Results and applications. Operational interpretations and their mathematical formulation. K-system formulation of programming language semantics: transational and denotational semantics. Properties of K-systems; equivalence of K-systems. Applications of current research interest.

Mr. Martin (F)


Mr. Martin (Sp)

234C. High-Level Language Computer Architecture. Prerequisite: course 131 or equivalent. A study of machine architectures to facilitate direct or nearly direct execution of high-level languages: Algol-like machines, including Burroughs B6700, microprogramming and microprogrammable machines, measurement and their use in architecture design.

Mr. Berry (D)

239. Current Topics in Computer Science Programming Languages and Systems (2 to 16 units). Prerequisite: consent of instructor. Review of current literature in an area of computer science programming languages and systems in which the instructor has developed special proficiency as a consequence of research interests. May be repeated for credit by consent of instructor.

241AL. Data Management Systems (6 units). Formerly numbered 241A.) Lecture, four hours; laboratory, two hours. Prerequisites: courses 131, 141, or equivalent. File management in programming languages, storage devices, and operating systems. Secondary index organizations. Database systems architecture, design, and models (network, hierarchical, and relational). Logical and physical structures. Query languages. Commercial data base systems. Data base applications: data base architecture, data base design.

Mr. Cardenas, Mr. Muntz, Mr. Popek (F, Sp)


Mr. Cardenas (W)

242A. Security and Incentives in Computer System Organizations. Prerequisites: course 111 or consent of instructor. Analysis of the technical difficulties of producing secure computer information systems that provide guaranteed protected sharing, with emphasis on software models and design. Examination and critique of current systems and practices. Possible certifiability of such systems. Relevant social issues.

Mr. Popek (W)

243A. Relational Data Bases. Prerequisites: courses 131, 141. The relational model of data: definition and operations; relational languages. Relational data bases: experimental and commercial; design methodology.

Mr. Parker (W)

243B. Abstract Data Types and Program Specification. Prerequisite: course 131, 141, or equivalent. The abstract data type and abstract program specification permit one to understand how programs manipulate data, independently of their implementations. These notions also give powerful techniques for program verification and specification. The class includes programming exercises.

249. Current Topics in Data Structures (2 to 12 units). Prerequisite: consent of instructor. Review of current literature in an area of data structures in which the instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. May be repeated for credit by consent of instructor.

251A. Advanced Computer Architecture. Prerequisites: courses 111, 131, 181, or consent of instructor. Functional and structural models of computer systems. Architecture and organization at microprogramming, machine language, and operating system level. Processor organization and system control. Arithmetic and data structures and algorithms and implementation. Storage system organization: hierarchy and management. Communication organization and control.

Mr. Ercegovac, Mr. Rennels (F, W)

252A. Computer Science Design: Arithmetic Processes. Prerequisites: courses 131, 181. Analysis and logic design of computer systems. Concepts of number systems, digital numbers, algorithms; logic and organization of digital arithmetic processors; conventional arithmetic; algorithm acceleration; floating-point and significance arithmetic; redundant, signed-digit, residue number systems; error detecting codes for digital arithmetic; algorithm evaluation by analysis and simulation.

Mr. Avizienis, Mr. Ercegovac (W)


Mr. Avizienis, Mr. Rennels (W)

253B. Advanced Topics in Fault-Tolerant Computing. Prerequisite: course 253A. Analysis and discussion of the modeling, design, and evaluation of fault-tolerant computer systems. Emphasis on current research results and new systems in the stages of design and development. May be repeated for credit with topic change.

Mr. Avizienis, Mr. Rennels (Sp)

254A. Computer Memories and Memory Systems. Prerequisites: courses 131, 141, or consent of instructor. Generic types of memory systems; control, access modes, hierarchies, and allocation algorithms. Characteristic, system organization, and device considerations of ferrie memories, thin film memories, and semiconductor memories.

Mr. Chu, Mr. Rennels (F)
255A. Interactive Computer Graphics. Prerequisite: course 174 or equivalent. Current topics in interactive computer graphics system design, development, and applications. Mr. Bussell (Sp)

257A. Computer System Design: Comparative Architecture and Synthesis Methods. Prerequisite: course 252A. Advanced topics in computer system architecture. Important properties of computer systems and methods for modeling, evaluating, and synthesizing them. Mr. Estrin (W)

M258A. LSI in Computer System Design. (Formerly numbered M258A-M258B-M258C.) (Same as Electrical Engineering M258A.) Lecture, four hours; laboratory, four hours. Prerequisites: graduate standing in computer science or electrical engineering, consent of instructor. LSI/LSI design and application in computer systems. Students learn fundamental design techniques that can be used to implement complex integrated systems on a chip. Mr. Viswanathan; Mr. Flowers (F or W)

M258B-M258C. LSI in Computer System Design. (Formerly numbered M258A-M258B-M258C.) (Same as Electrical Engineering M258B-M258C.) Lecture, four hours; laboratory, four hours. Prerequisite: course 252A. LSI/LSI design and application in computer systems. In-depth studies of LS1 architecture and LSI design tools. In Progress grading.

Mr. Arzeni; Mr. Viswanathan (W, M258B; Sp, M258C)

259. Current Topics in Computer Science. System Design/Architecture (2 to 15 units). Prerequisite: consent of instructor. Review of current literature in an area of computer science system design in which the instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. May be repeated for credit with topic change.

263A. Language and Thought. Prerequisite: consent of instructor. Recommended: understanding of LISP. Introduction to linguistics, syntax, semantics, and language processing. Representation and manipulation of conceptualizations underlying processes of thought for natural language comprehension and generation. Process models of story comprehension, question answering, part-whole relationships, machine translation. Foundation in the trade-offs between the computational complexity of language understanding and the expressiveness of natural language. Mr. Dyer, Ms. Flowers (F or W)


Mr. Dyer, Ms. Flowers (W or Sp)

264A. Artificial Intelligence Programming I. Prerequisite: consent of instructor. Recommended: knowledge of LISP or PROLOG. Introduction to tools, techniques, and issues in artificial intelligence programming. Functional programming for artificial intelligence applications. Review of LISP and introduction to lexically scoped LISP's (e.g., T, Scheme). Lambda calculus, closures, data-driven and object-oriented programming, flavors, d-nets, resolution-based deductive systems. Mr. Dyer, Ms. Flowers (F or W)

264B. Artificial Intelligence Programming II. Prerequisite: course 264A or consent of instructor. Techniques of logic programming. Artificial intelligence programming languages (e.g., PROLOG, AMORPH, DUCK, CONVIER, PLANNER, QA4, KRL, ACTORS, etc.) and artificial intelligence features (e.g., nonmonotonic logics, data-dependencies for truth maintenance, meta-rules, semantic networks, frame-based systems).

Mr. Dyer, Ms. Flowers (W or Sp)


Mr. Dyer, Ms. Flowers (W or Sp)

270A. Computer Methodology: Advanced Numerical Methods. Prerequisites: graduate standing in computer science or electrical engineering, consent of instructor. Numerical analysis courses 254A or 259A or 141B comparable experience with numerical computing. Principles of computer treatment of selected numerical problems in algebraic and differential systems, and applications. Review of acquisition; foundations on concepts pertinent to modeling and simulation and the applicability of contemporary developments in numerical software. Computer exercises.

Mr. Karpilus, Mr. Levine (W)


Mr. Karpilus, Mr. Levine (W)

271B. Computer Methodology: Distributed Parameter Systems. Prerequisite: Electrical Engineering 124A. A survey of the mathematical background and computer solution of engineering field problems governed by partial differential equations. Emphasis on digital simulation methods, including finite difference and analog methods and applications of modern numerical techniques. Mr. Karpilus (F or Sp)

271C. Seminar in Advanced Simulation Methods (2 units). Prerequisite: course 271A or equivalent. Design of advanced simulation systems. Research and development of systems characterized by partial and differential equations. Topics include (among others) simulation languages, dataflow machines, array processors, and advanced mathematical modeling techniques. Topics vary each quarter. May be taken for credit by consent of instructor. S/U grading.

Mr. Karpilus (F, W or Sp)

273A. Digital Processing of Engineering and Statistical Data. Prerequisite: course 173. Computer methods for processing engineering and statistical data. Introduction to effective filtering algorithms, Fourier series, power spectral, analysis correlation computations, and statistical testing.

Mr. McNamee (W)


Mr. Kutter (F)

274B. Knowledge-Based Systems. (Formerly numbered M274B.) Prerequisite: course 274A or 277A or consent of instructor. Machine representation of judgmental knowledge and uncertain relationships. Inference in knowledge bases. Rule-based systems principles, advantages, and limitations. Signal understanding. Automated planning systems. Knowledge acquisition and explanation producing techniques.

Mr. Pearl (W)

274C. Computer Methods of Data Analysis and Model Formation. (Formerly numbered M274C.) Prerequisite: Mechanical, Aerospace, and Nuclear Engineering 193A or Electrical Engineering 120A or equivalent consent of instructor. Techniques for manipulating computers to interpret, summarize, and form theories of empirical observations. Mathematical analyses of trade-offs between the computational complexity, storage requirements, and precision of computational models.

Mr. Pearl (W)

274Z. Current Topics in Cognitive Systems. (Formerly numbered M274Z.) Prerequisites: consent of instructor. Additional prerequisites for each offering as announced in advance by the 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.

Mr. Pearl (W)

275A. Information Processes in Nervous Systems. Prerequisite: consent of instructor. Conceptual discussion of acquisition and transfer of information in the nervous system. Principles of computation on the analysis and interpretation of neurophysiological data.

Mr. Vidal (W)

276A. Pattern Analysis and Machine Intelligence. Prerequisites: graduate standing, consent of instructor. Fundamentals of pattern recognition, feature extraction and selection, autonomous learning, clustering, and machine intelligence.

Mr. Klinger (W)

276B. Structured Computer Vision. Prerequisites: graduate standing, consent of instructor. Methods for computer processing of image data. Systems, concepts, and algorithms for image analysis, radiologic and robotic applications.

Mr. Klinger (W)

276C. Speech and Language Communication in Artificial Intelligence. Prerequisite: course 276A or 276B or consent of instructor. 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.

Mr. Klinger (W)

277A. Heuristic Programming and Artificial Intelligence. Prerequisite: course 131 or 131A or consent of instructor. Principles underlying the use of computer to perform tasks generally agreed to require intelligent behavior. The objective is to develop an understanding of current research regarding the possibilities and limitations of existing experiments in automating intelligent behavior.

Mr. Klinger, Mr. Pearl (F)

279. Current Topics in Computer Science Methodology (1 to 16 units). Prerequisite: consent of instructor. Review of current literature in an area of computer science methodology in which the instructor has developed special proficiency as a consequence of research interests. Students report on selected topics. May be repeated for credit with topic change.

280A-280Z. Algorithms. Prerequisites: consent of instructor. Additional prerequisites for each offering as announced in advance by the department. Selections from design, analysis, optimization, and implementation of algorithms; computational complexity and the general theory of algorithms; algorithms for particular application areas. Subtopics of some current sections: Principles of Design and Analysis (280A); Graphs and Networks (280G). May be repeated for credit by consent of instructor and with topic change.

Ms. Greibach (Sp)
281A. Computability and Complexity. Prerequisite: course 181 or compatible background. Concepts fundamental to the study of discrete information systems and theory of computing, with emphasis on regular sets of strings, Turing-recognizable (recursively enumerable) sets, closure properties, machine characterizations, nondeterminism, decidability, undecidable problems, "easy" and "hard" problems, PTIME/NPTIME.

Ms. Greibach, Mr. Parker (F)

281D. Discrete State Systems. Prerequisite: consent of instructor. Recommended: course 181. Finite-state machines, transducers, and their generalizations; regular expressions, transduction expressions, state machines, transducers, and their generalizations; sets of strings, Turing-recognizable (recursively enumerable) problems, "easy" and "hard" problems, PTIME/NPTIME.

Ms. Greibach, Mr. Parker (F)

281F. Topics in Automata and Languages. (Formerly numbered 284A-284Z.) Prerequisites: courses 280A, 281A, consent of instructor. Recommended: course 181. Models of computer programs and their syntax and semantics; emphasis on programs and recursion schemes; equivalence, optimization, correctness, and translatability of programs; expressive power of program constructs and data structures; selected current topics.

Ms. Greibach (F)

288S. Seminar in Theoretical Computer Science (2 units). Prerequisite: consent of instructor. Review of current literature in an area of computer theory in which the instructor has developed special proficiency as a consequence of research interests. Students report on selected topics.

M289A. Modeling Methodology for Biological and Engineering Systems I. (Formerly numbered Engineering Systems M289A.) (Same as Medicine M289A.) Prerequisite: intermediate linear algebra, such as Electrical Engineering 128A, Mechanical, Aerospace, and Nuclear Engineering 171C, or Mathematics 115A. Development of modern systems methods for modeling dynamic systems, kinetic processes, and experimental time-series data in engineering and life sciences. Emphasis on model quantification, parameter estimation, convolution/deconvolution, and experiment design algorithms. Optimal sampling schedule and optimal input designs for practical dynamic system experiments.

Mr. DiStefano (W)

M289C. Seminar: Advanced Topics in Biocybernetics. (Formerly numbered Engineering Systems M296C.) (Same as Medicine M296C.) Prerequisite: consent of instructor. Interactive seminar on current research topics in biocybernetics. Dynamic systems modeling of physiological processes, with emphasis on specific applications in physiology and clinical medicine. Students are involved in one or more class projects.

Mr. DiStefano (Sp)

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

Mr. Arzienis (F,W,Sp)

497D-497E. Field Projects in Computer Science. Prerequisite: consent of instructor. Students are divided into teams led by the instructor; each team is assigned an external company or organization which they investigate as a candidate for possible computer internship. They submit a report of their findings and recommendations. In Progress grading.

Mr. Cardenas, Mr. Melkanoff

596. Directed Individual or Tutorial Studies (2 to 8 units). Prerequisites: graduate standing in computer science, consent of instructor. Permission to request enrollment may be obtained from the Assistant Dean, Graduate Studies. Supervised investigation of advanced technical problems. S/U grading.

Mr. Carlyle, Mr. DiStefano, Mr. Parker (F)

597A. Preparation for M.S. Comprehensive Examination (2 to 12 units). Prerequisites: graduate standing in computer science, consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. Reading and preparation for M.S. comprehensive examination. S/U grading.

597B. Preparation for Ph.D. Preliminary Examinations (2 to 16 units). Prerequisites: graduate standing in computer science, consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination (2 to 16 units). Prerequisites: graduate standing in computer science, consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. S/U grading.

598. Research for and Preparation of M.S. Thesis (2 to 12 units). Prerequisites: graduate standing in computer science, consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. 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 units). Prerequisites: graduate standing in computer science, consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. S/U grading.

Economics/System Science (Interdepartmental)

For details on this undergraduate program, see Chapter 5 on the College of Letters and Science.
communication and information theory, power electronics, and applied plasma physics. The department is organized into six major fields of study. Undergraduate students receive a B.S. degree in Electrical Engineering. Graduate research and training programs leading to the M.S. and Ph.D. degrees are also offered.

Currently there are more than 30 research laboratories in the department in the above areas of study. The department has also established a center for high-speed and high-frequency electronics which integrates research in electronic materials, solid-state devices, integrated circuits, millimeter wave devices and detectors, integrated antennas, computer and communication systems. The center has already been equipped with $3 million worth of equipment.

Bachelor of Science in Electrical Engineering

The electrical engineering curriculum gives an excellent background for either graduate study or employment. The two main objectives are (1) to provide a deep and fundamental education in electrical engineering as well as in basic sciences and mathematics and (2) to provide specialized education in one branch of the electrical engineering field so that the student develops expertise in that branch.

The Major

Course requirements are as follows (188 minimum units required):

1. Six core courses: Electrical Engineering 100B, 121C, 124A, Materials Science and Engineering 14, Mechanical, Aerospace, and Nuclear Engineering 102, and one course from Civil Engineering 108, Mechanical, Aerospace, and Nuclear Engineering 103, M105A or Chemical Engineering M105A.

2. Electrical Engineering 110A, 110B, 115D, 116A, 117A, and one course from 110C, 116B, 117B, 117Y, 195A; four two-unit courses selected from the laboratory courses offered by the Electrical Engineering Department, Computer Science 152B and, by petition only, Electrical Engineering 199; Civil Engineering 106A satisfies the mathematics requirement; Mechanical, Aerospace, and Nuclear Engineering 191A or Mathematics 132 (satisfies the mathematics requirement).

3. At least three elective courses (12 units) selected from Electrical Engineering 100L, 110C, 116B, 116C, 116E, 116L, 116M, 116N, 195A (circuits); 111A, 111B (electrical energy); 113A, 113L (quantum electronics); 115A, 115B, 115C, 115E, 115F (solid-state); 116D, 198A, 198B (communication engineering); 117B, 117D, 117E, 117L, 117X (electromagnetics); M118 (plasma); 120A, 120B, 122A, 128A (systems). The remaining three elective courses (12 units) may be selected either from the list above or, with approval of your adviser, from related electrical engineering courses: Computer Science 151A, 151B, 171, 183, Mechanical, Aerospace, and Nuclear Engineering 171A, 171C.

4. English 3; Chemistry 11A, 11B/11BL; Computer Science 10C or 10F; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 8A, 8B/8BL, 8C/8CL, 8D/8DL; one life science elective course.

5. Six courses from the humanities, social sciences, and/or fine arts approved list (at least three must be upper division; at least three with two upper division — must be in the same academic department or otherwise reflect coherence with respect to subject matter; and one must satisfy the engineering and science in society requirement).

6. Three free elective courses from any department, selected by the student in consultation with the adviser to supplement and strengthen the major field electives.

Graduate Study

For information on graduate admission to the electrical engineering program and requirements for the M.S. and Ph.D. degrees, see “Graduate Study” at the beginning of this chapter.

Upper Division Courses

100. Electrical and Electronic Circuits. (Formerly numbered Engineering 100.) Lecture, four hours; recitation, one hour. Prerequisites: Mathematics 31A, 31B, 32A, 33A, 33B, Physics 8C. Electrical quantities, circuit principles, signal wave-forms, AC circuits, semiconductor devices, small signal models, amplifiers, electrical and electronic instruments.

100B. Engineering Electromagnetics. (Formerly numbered Engineering 100B.) Lecture, four hours; recitation, one hour. Prerequisites: Mathematics 31A, 31B, 32A or 32B, or 33A and 33B. Electromagnetic field concepts; Maxwell’s equations; static and quasi-static fields; field energy; energy flow and the Poynting vector; electromechanical interactions; waves in unbounded media and on two-ways transmission lines; reflection and refraction; lossy media; skin effect; analogs to electromagnetic fields.

100L. Circuit Analysis Laboratory (2 units). (Formerly numbered Engineering 100L.) Laboratory, four hours. Prerequisite or corequisite: course 100 or 110A. Experiments with circuits containing linear and nonlinear devices; transient and steady state behavior of circuits.


110C. Passive Network Synthesis. (Formerly numbered Engineering 110C.) Lecture, four hours; recitation, one hour. Prerequisite: course 110B or equivalent.

111A. Power Systems. (Formerly numbered Engineering 111A.) Lecture, four hours; recitation, one hour. Prerequisites: course 110A (100 for nonelectrical engineering majors). Overall electric power system requirements; typical systems; one-line diagrams. Per-unit quantities; characteristics of machines, transformers, overhead lines, and cables; steady state analysis of systems. Power limits and stability; fault calculations; relays and relay systems.

111B. Electromechanical Energy Conversion. (Formerly numbered Engineering 111B.) Lecture, four hours; recitation, one hour. Prerequisite: course 110A (100 for nonelectrical engineering majors). Energy conversion and power flow in electromagnetic interactions; electromechanics of actuators and rotating AC synchronous and induction machines and DC machines. Linear machines.

113A. Introduction to Lasers and Quantum Electronics. (Formerly numbered Engineering 113A.) Lecture, four hours; recitation, one hour. Prerequisites: courses 110A or 110B or consent of instructor. Physical principles and applications of lasers and other quantum electronic devices. Interferometers, crystal optics, gain and saturation phenomena, and gas discharges.

113L. Laser Laboratory (2 units). (Formerly numbered Engineering 113L.) Laboratory, four hours. Prerequisite or corequisite: course 113A or consent of instructor. Properties of lasers, including saturation, mode-locking, and relaxation effects. Laser applications, including optics, modulation, communication, holography, interferometry, and nonlinear effects.

115A. Fundamentals of Solid-State I. (Formerly numbered Engineering 115A.) Lecture, four hours; recitation, one hour. Prerequisite: course 111B (100 for nonelectrical engineering majors). Overall solid-state concepts, quantum mechanical principles, energy level in complex atoms, quantum statistics, crystal structure, energy levels in solids, band theory.

115B. Fundamentals of Solid-State II. (Formerly numbered Engineering 115B.) Lecture, four hours; recitation, one hour. Prerequisite: course 115A. A discussion of the solid-state properties, lattice vibrations, band theory, photovoltaic, electric, magnetic, and superconducting properties.

115C. Semiconductor Physical Electronics. (Formerly numbered Engineering 115C.) Lecture, four hours; recitation, one hour. Prerequisite: course 115B. Band structure of semiconductors, homogeneous semiconductors, excess carriers in semiconductors, semiconductor surfaces, optical and thermal properties; application to design of devices.

115D. Principles of Design of Semiconductor Devices. (Formerly numbered Engineering 115D.) Lecture, four hours; recitation, one hour. Prerequisite: senior standing in engineering. Semiconductor technology. Schottky barrier, p-n junction, MOS capacitance, transistor fundamentals, drift transistor, high-frequency properties, field effect transistors, integrated electronics, applications and design of devices.

115E. Solid-State Electronics Laboratory (2 units). (Formerly numbered Engineering 115E.) Prerequisite: course 115C. Experimental measurement of electronic, magnetic, thermal, and optical properties of p- and n-type semiconductors as used in the design of devices.

Mr. Allen (W)

Mr. Fetterman, Mr. Viswanathan (F,Sp)

Mr. Stafudd (W)

Mr. Allen, Mr. Pan (Sp)

Mr. Allen, Mr. Wang (F,Sp)

Mr. Stafudd (W)

Mr. Temes (F)
115F. Semiconductor Devices Laboratory (2 units). (Formerly numbered Engineering 115F.) Prerequisite: course 115D. Design, fabrication, and characterization of junction, field effect, and other semiconductor devices. In particular the student performs various processing tasks such as wafer preparation, oxidation, impurity diffusion, metallization, sintering, and photolithography. Mr. K. Wang (F,Sp).

116A. Electronics I (Formerly numbered Engineering 116A.) Lecture, four hours; recitation, one hour. Prerequisite: course 110A. Equivalent circuit modeling of electron devices. Device-circuit-environment interactions. Design of single-stage amplifiers. Introduction to cascaded stages, coupling problems, and frequency responses. Mr. Abidi, Mr. Green (F, W,Sp).

116B. Electronics II. (Formerly numbered Engineering 116B.) Lecture, four hours; recitation, one hour. Prerequisite: course 116A. Linear and nonlinear device characteristics, active and passive device modeling, and computer-aided circuit design. Application of op-amps to feedback circuits and operational amplifiers. Emphasis on design techniques and noise. Mr. Martin (Sp).


116D. Communication Circuits. (Formerly numbered Engineering 116D.) Lecture, four hours; recitation, one hour. Prerequisites: courses 115D, 116B. Realization of active and passive components in integrated circuit design. Active components: resistors, capacitors, metal interconnections. Active devices: NPN and PNP BJTs, design rules; FET devices. Device interactions and layout rules. Mr. Martin, Mr. K. Wang (W).

116E. Introduction to Complex Systems. (Formerly numbered Engineering 116F.) Lecture, four hours; recitation, one hour. Prerequisite: courses 115D, 116B. Realization of active and passive components in integrated circuit design. Active components: resistors, capacitors, metal interconnections. Active devices: NPN and PNP BJTs, design rules; FET devices. Device interactions and layout rules. Mr. Martin, Mr. K. Wang (W).

1156. Pulse and Digital Methods Laboratory (2 units). (Formerly numbered Engineering 116N.) Laboratory, four hours. Corequisite: course 115C. Digital circuits and systems, with emphasis on characterization (PL, TTL, and CMOS). Synchronous machines for example are used for building simple circuits, in which a 4-bit successive approximation A/D converter. Mr. Martin (F, Sp).

116U. Design Laboratory In Microcomputer Hardware and Interfacing. (Formerly numbered Engineering 116U.) Lecture, two hours; laboratory, six hours. Prerequisites: Computer Science 151B, 152B. A design-level design laboratory in microcomputer hardware and interfacing. Address, data, and control busses, I/O devices including serial interfaces, parallel interfaces, and timers. Assembly language programming. Advanced concepts such as interrupts, DMA, interprocessor communication, and industrial control applications are dealt with in major design projects where practical digital systems are designed and realized. Mr. Martin (Sp).

117A. Electromagnetic Waves I. (Formerly numbered Engineering 117A.) Lecture, four hours; recitation, one hour. Prerequisite: course 100B. Review of transmission line theory; guided waves in enclosed waveguide and on surfaces; Smith chart; excitation of guided waves, phase and group velocity; cavity resonance and selection of theory; fields in free space and in complex media (ferrites, crystals, semiconductors, plasmas). Mr. Schott, Mr. Yeh (F, Sp).


117D. Microwave and Millimeter Wave Active Circuits. (Formerly numbered Engineering 117D.) Lecture, four hours; recitation, one hour. Prerequisite: course 117A. Analysis of Gunn devices, microwave wave tubes such as klystrons, TWT, BWO, Magnetrons, and Gyrotrons, and solid-state circuits for OMPATTS, BARSTTS, TUNNETS, Gunn effect devices, GaAs FETs, and bipolar transistors. Mr. Luhmann (W).

117E. Modern Optics. (Formerly numbered Engineering 117E.) Lecture, four hours; recitation, one hour. Prerequisite: course 117A. Analysis of dispersion curves for Gunn devices, microwave wave tubes such as klystrons, TWT, BWO, Magnetrons, and Gyrotrons, and solid-state circuits for OMPATTS, BARSTTS, TUNNETS, Gunn effect devices, GaAs FETs, and bipolar transistors. Mr. Luhmann (W).

117F. Electromagnetics Laboratory (2 units). (Formerly numbered Engineering 117L.) Prerequisite: course 117A. Course 117B may be taken concurrently. Experimental investigation of microwave and millimeter wave sources; coaxial, waveguide strip line transmission lines, and waveguide measuring devices; cavity resonator studies; antenna impedance and radiation characteristics. Mr. Luhmann (W).

117H. Active Microwave Circuit Design Laboratory (2 units). (Formerly numbered Engineering 117H.) Prerequisite: course 117A. Active microwave circuits, buffers, amplifiers, oscillators, and mixers. Mr. Luhmann (Sp).

117X. Antenna Design II. (Formerly numbered Engineering 117X.) Lecture, four hours; recitation, one hour. Prerequisite: course 117B. Radiation characteristics, radiation patterns of horns, slots, and patch antennas. Equivalent source representations. Synthesis of sum and difference patterns. Dolly-Chebychev excitation. Design of slot arrays with mutual coupling. Design of traveling wave antennas, reflectors, and lenses. Mr. Elliott (F).

117Y. Introductory Microwave Circuits. (Formerly numbered Engineering 117Y.) Lecture, four hours; recitation, one hour. Prerequisite: course 117A. Operation of microwave amplifiers and oscillators. Application of guided waves in arbitrary rectilinear structures. Design of matching obstacles, attenuators, phase shifters, directional couplers, hybrid junctions, isolators, circulators, and microwave filters. Mr. Elliot (W).

M118. Plasma Physics. (Formerly numbered Engineering M118.) (Same as Physics M122.) Prerequisite: course 100B or Physics 110A. Senior-level introductory course to physics of plasmas and ionized gases and fundamentals of controlled fusion. Particle motion in magnetic fields; fluid behavior of plasma waves; resistivity and transport; equilibrium and stability; kinetic effects. Illustrative laboratory experiments are discussed. Mr. Chen (F; even years; Sp).

120A. Probability. (Formerly numbered System Science 120A.) Prerequisites: Mathematics 32B, 32B. An introduction to the theory and application of probability, including random variables and vectors, distributions and densities, characteristic functions, limit theorems, preliminary concepts of stochastic processes. Mr. Mortensen (F, W).

120B. Introduction to Stochastic Processes. (Formerly numbered System Science 120B.) Prerequisites: courses 120A, 121C, or equivalent. Introduction to general stochastic processes, emphasizing stationary processes—properties and operations and mean-square estimation. Random and pseudorandom generation of processes with application to simulation. Elements of spectral analysis and FFT. Mr. Levan, Mr. Mortensen (Sp).

121C. Systems and Signals. (Formerly numbered System Science 121C.) Lecture, three hours; recitation, one hour. Prerequisites: Mathematics 32B, 33A or consent of instructor. An introduction to systems and signals, including complex media, parallel and serial interfaces, and coherent and incoherent imaging systems. Optical processing methods. Holography and applications. Mr. Alexopoulos (Sp).

121D. Elements of Probability and Information. (Formerly numbered System Science 121D.) Lecture, two hours. Prerequisites: Mathematics 32B, 33A or equivalent. An introduction to numerical computing techniques: matrix computations, root finding, solutions of initial and boundary value problems of ordinary differential equations, interpolation and approximation. Mr. Jacobsen, Mr. Wiber (W, Sp).

122A. Principles of Feedback Control. (Formerly numbered System Science 122A.) Prerequisite: course 121C or consent of instructor. Classical methods of analysis and design of feedback control systems. Design of linear systems based on physical and control system equations, stability margins, root loci, frequency response, Nyquist stability criterion, root finding, software of initial and boundary value problems of ordinary differential equations, interpolation and approximation. Mr. Jacobsen, Mr. Wiber (F, Sp).

124A. Applied Numerical Computing. (Formerly numbered System Science 124A.) Lecture, three hours; recitation, two hours. Prerequisites: Computer Science 10C, Mathematics 33A, 33B, or equivalent. An introduction to numerical computing techniques: matrix computations, root finding, solutions of initial and boundary value problems of ordinary differential equations, interpolation and approximation. Mr. Jacobsen, Mr. Wiber (F, Sp).

127B. Elements of Probability and Information. (Formerly numbered System Science 127B.) Prerequisite: Mathematics 33A or consent of instructor. An introduction to finite systems for coding and transmission of messages as character strings. Basic laws of probability and decision in finite systems. Information sources, entropy, noisy channels, capacity, discussion of the meaning and application of Shannon's theorems. Mr. Jacobsen, Mr. Omura (Sp).

128A. Linear Systems: The State-Space Approach. (Formerly numbered System Science 128A.) Prerequisite: course 121C. State-space methods of linear system analysis and design, with application to problems in networks, control, and system modeling. Mr. Levan, Mr. P.K.C. Wang.
129A. Introduction to Linear and Quadratic Programming. (Formerly numbered System Science 129A.) Prerequisites: Mathematics 32A and 33A, or consent of instructor. Not open for credit to students with credit for Mathematics 144. An introduction to the formulation and solution of linear and quadratic programming problems, with applications from engineering and economic systems. Linear programming: the simplex algorithm; duality theory. Optimization of quadratic functions subject to linear and quadratic constraints.

Mr. Aoki, Mr. Jacobsen (F, Sp)


Mr. Temes (Sp)

199. Special Studies (2 to 8 units). Prerequisites: senior standing, consent of instructor. Individual investigation of a selected topic to be arranged with a faculty member. May take additional topics, but they may not be applied toward the degree.

(F, W, Sp)

Graduate Courses

200A. Linear Dynamic Systems. (Formerly numbered System Science 200A.) Prerequisite: course 128A or equivalent. State-space description of dynamic systems. Deduction of state spaces from input-output data. Stability and state feedback stabilizability; state observer. Mr. Balakrishnan (F)

200B. Nonlinear Programming. (Formerly numbered System Science 200B.) Prerequisite: course 210A or consent of instructor. Convex sets and functions and their basic properties. Kuhn-Tucker points, saddle points, and nonlinear or conjugate duality theory. Development of algorithms and convergence theory. Mr. Luhmann (W)

200C. Stochastic Processes. (Formerly numbered System Science 200C.) Prerequisite: course 120B or equivalent. Fundamentals and applications of second-order theory stochastic processes; correlation and spectral density; Gaussian process, processes generated by dynamic systems, Bayes rule and conditional expectation; mean-square estimation and Kalman filtering. Mr. Mortensen, Mr. Wilberg (F)

200D. Discrete Stochastic Processes. (Formerly numbered System Science 200D.) Prerequisite: course 120A or equivalent or consent of instructor. Discrete stochastic processes in models involving Poisson counting processes, renewal point processes, discrete-time Markov chains, Markov jump processes; applications to communication systems and networks, queueing systems, information processing, control and operations research.


Mr. Green (F, W, Sp)

201A-2012Z. Seminars in System Science. (Formerly numbered System Science 201A-2012Z.) Prerequisites: consent of instructor, additional prerequisites for each offering as announced in advance by the department. Lectures, discussions, student presentations, and projects in areas of current interest. Some sections are intended for advanced students in a particular field and for students undertaking Ph.D. dissertations in the field. May be repeated for credit. S/U grading.


210D. Adaptive, Passive, and Digital Filters. Prerequisite: course 210C or consent of instructor. Approximation theory. Realization of passive filters. Electro-mechanical filters. Active filters with lumped and/or distributed elements. Switched and digital filters. Mr. Orach (Sp)


Mr. Temes, Mr. Willson (F)


Mr. Willson (W)

213A. Quantum Electronics I. Prerequisite: course 115A or consent of instructor. Review of quantum mechanics, approximation methods, interaction of radiation and matter. Mr. Stafsudd (F)

213B. Quantum Electronics II. Prerequisite: course 213A or consent of instructor. Optical beams and resonators, interaction of light with atoms (including amplification and saturation), properties of lasers (including power output and mode effects).

Mr. Stafsudd (W)

213C. Quantum Electrodynamics I. Prerequisite: course 213B or consent of instructor. Properties of laser oscillators, including transient phenomena, quantum mechanical effects, and behavior of high gain laser media.

Mr. Stafsudd (W)

213D. Quantum Electrodynamics II. Prerequisite: course 213C or consent of instructor. Quantum electronic systems, modulation, detection, acusto-optics, magneto-optics, nonlinear optics. Raman scattering, Brillouin scattering.

Mr. Stafsudd (Sp)

213S. Quantum Electronics Seminar (2 units). Prerequisite: course 213A or consent of instructor. A series of lectures and student presentations on topics of current research interest in quantum electronics, modern optics, and laser physics. May be repeated for credit. S/U grading.

Mr. Stafsudd (W, Sp)

214A. Plasma Waves and Instabilities. Prerequisites: courses 100B, M118. Wave phenomena in plasmas described by the macroscopic fluid equations. Emphasis on homogeneous plasmas in uniform magnetic fields. Microwave propagation, plasma oscillations, ion acoustic waves, cyclotron waves, hydromagnetic waves, whistlers and helicon waves, and their classification. Illustrative experiments.

Mr. Chen, Mr. Luhmann (W)

214B. Advanced Plasma Waves and Instabilities. Prerequisites: courses M118, and 214A or Physics 222A. Interaction of intense electromagnetic waves with plasmas: waves in inhomogeneous and bounded plasmas, nonlinear wave coupling and damping, parametric instabilities, anomalous resistivity in plasmas, waves, echoes, laser heating. Emphasis on experimental considerations and techniques.

Mr. Chen, Mr. Luhmann (Sp)


Mr. Chen (W)

M214E. Fusion Reactor Technology and Design. (Same as Mechanical, Aerospace, and Nuclear Engineering 2237C.) Prerequisites: courses M213A, M135A, and 214A. Advanced topics in the physics of tokamaks, stellarators, and other magnetic confinement systems. Introduction to magnetic fusion reactor design. Mr. Chen (W)


Mr. Pan (F)

215B. Solid-State Electronics II. Prerequisites: courses 215A. Techniques to solve Boltzmann transport equation, various scattering mechanisms in semiconductors, high field transport properties in semiconductors, Monte Carlo method in transport. Optical properties. Mr. Pan (W, Sp)

215C. Microwave Semiconductor Devices. Prerequisite: course 115D. Physical principles and design considerations of microwave solid-state devices: Shockley barrier mixer diodes, IMPATT diodes, transferred electron devices, tunnel diodes, microwave transistors. Mr. Fetterman, Mr. K. Wang (W)

215D. Physics of Semiconductor Devices I. Prerequisite: course 115D. Physical principles and design considerations of junction devices.

Mr. Viswanathan (F)

215E. Physics of Semiconductor Devices II. Prerequisite: course 115D. Principles and design considerations of field effect devices and charge-coupled devices.

Mr. Viswanathan (Sp)

Mr. Martin (F)

216B. Advanced Digital Integrated Circuits. Prerequisite: course 116C. Modern logic families (description, analysis, and comparison); MSI digital circuits (flipflops, registers, counters, PLAs, etc.); VLSI memories (ROMs, RAMs, CCDs, bubble memories, EPROMs, EEPROMs, and VLSI systems; microcomputers, PAs, ACAs, etc.).

Mr. Martin (W)


Mr. Martin (F)


Mr. Willis (W, odd years)

216E. Communication Feedback Circuits. (Not the same as course 216E prior to Fall Quarter 1982.) Prerequisites: courses 110B, and 116D or 120B. Analysis and applications of automatic gain control (AGC) and phase-locked loop (PLL) circuits. Emphasis on the use and design of AGCs and PLLs in communication circuits. Subject includes coherent and noncoherent AGCs, applications of PLLs, frequency synthesis, analysis of linear behavior with noise, and nonlinear behavior.

Mr. Green (Sp)


Mr. Alexopoulos, Mr. Yeh (F, 217A; W, 217B)

217C. Microwave and Millimeter Wave Circuits. Prerequisite: course 117Y or consent of instructor. Rectangular and circular waveguides, microstrip, stripline, In-line, and dielectric waveguide distributed circuits, with applications in microwave and millimeter wave integrated circuits. Substrate materials, surface wave phenomena. Analytical methods for discontinuity effects. Design of passive microwave and millimeter wave circuits.

Mr. Alexopoulos (Sp)


Mr. Elliott (W)

219A. Seminars on Advanced Topics in Electromagnetics. Prerequisites: courses 117A, 117B, or equivalent. Current topics in electromagnetics, such as wave interaction with ferries, moving media, data processing antennas, waves in statistically varying media, numerical methods applied to electromagnetics, waveguides, holographic partially coherent waves. May be repeated for credit.

219B. Seminars on Advanced Topics in Solid-State Electronics. Prerequisites: courses 215A, 215B. Current research areas, such as relaxation effects in semiconductor devices, diffusion in semiconductors, optical and microwave semiconductor devices, nonlinear optics, and electron emission.

219D. Special Topics in Electric Circuit Theory. Prerequisite: course 210B or 210C or 210D. Advanced treatment of topics selected from research areas in electric circuit theory.

219E. Special Topics in Quantum Electronics. Prerequisite: course 213A or consent of instructor. Advanced treatment of topics selected from research areas in quantum electronics, such as guided wave optics, unconventional laser, optical detection, and coherent optical imagery. May be repeated for credit.

Mr. Casperson, Mr. Stafsudd

219X. Advanced Electrical Engineering Seminar (2 units). Prerequisite: successful completion of Ph.D. major field examination or consent of instructor. Seminar on current topics in solid-state and quantum electronics (Section 1) or in electronic circuit theory and applications (Section 2). Students report on a topical topic and on a research topic in their dissertation area. May be repeated for credit.

(F,W,Sp)

220A. Stochastic Theory of Queueing Systems I. (Formerly numbered System Science 220A.) Prerequisite: course 200D or consent of instructor. Stochastic models for queueing systems; introduction to the imbedded Markov chain method; equilibrium results for multiple server queuing system; methods of analysis; applications to communication, control, and systems optimization, operations research.

220B. Stochastic Theory of Queueing Systems II. (Formerly numbered System Science 220B.) Prerequisite: course 220A. Advanced topics in queueing theory and systems; transient behavior; virtual waiting time and busy period, integral equation method, series of queues and priority queues. Inventories, communication, control, and systems problems.

220G. Graphs and Network Flows. (Formerly numbered System Science 220G.) Prerequisite: course 220A or consent of instructor. Theoretical aspects of graph theory and network flows in capacity constrained (or cost constrained) networks. Tools of network flow theory are developed using graph theoretic methods and are applied to communication, transportation, and transmission problems.

Mr. Jacobson (Sp)

221. Linear Optimal Control. (Formerly numbered System Science 221.) Prerequisites: courses 222A (may be taken concurrently) or equivalent and 128A, or consent of instructor. An introduction to optimal control theory, with emphasis on the study of linear regulator problems. May be repeated for credit with topic change.

222A. Nonlinear Control. (Formerly numbered System Science 222A.) Prerequisite: course 221. Techniques for studying nonlinear control systems, with emphasis on their stability; Liapunov's direct method; input-output stability; Popov's method; linearization.

Mr. Wilberg (W)

222B. Stochastic Control. (Formerly numbered System Science 222B.) Prerequisites: courses 221B, 221. Estimation and control of linear discrete-time and continuous-time stochastic systems; separation theorem and applications, Kalman filtering.

Mr. Balakrishnan, Mr. Mortensen (Sp)

222C. Optimal Control. (Formerly numbered System Science 222C.) Prerequisite: course 221. Applications of variational calculus; Pontryagin's maximum principle, dynamic programming and nonlinear programming to problems of optimal control theory and practical systems.

Mr. Mortensen, Mr. Wiberg (F, Sp)

222EA-222EZ. Topics in Control. (Formerly numbered System Science 222EA-222EZ.) Prerequisites: consent of instructor, additional prerequisites for each offering as announced in advance by the department. 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; differential games; applications to flight control, nuclear reactors, process control, biomedlical problems. May be repeated for credit with topic change.

222F. Biological Control Systems. (Formerly numbered System Science 222F.) Prerequisite: course 122A or equivalent. Introduction to control theory: application of control theory to the modeling and analysis of biological control systems, such as the respiratory system, cardiovascular system, and neuromuscular system. Emphasis on solving problems of current interest in biomedicine.

Mr. Wiberg

227A. Signal Detection and Digital Communication. (Formerly numbered System Science 227A.) Prerequisite: course 120B or consent of instructor. Applications of statistical decision theory to optimal detection in radar and communication; coherent and noncoherent detection of known signals in noise; detection of stochastic signals; binary and multiple-signal digital communication; sequential detection.

227B. Information Theory and Coding. (Formerly numbered System Science 227B.) Prerequisite: course 227A. Information theory and coding from the viewpoint of digital communication systems; digital transmission and block coding; linear codes; convolutional codes, maximum likelihood decoding, and sequential decoding; ensemble error performance bounds of block and convolutional codes.

227C. Estimation and Filtering. (Formerly numbered System Science 227C.) Prerequisite: course 120B. Bayesian estimation and linear Kalman filtering. Methods of determination of optimum statistical estimators applied to problems in stochastic processes, communication systems, analog modulation and demodulation.

Mr. Balakrishnan (W)

227EA-227EZ. Topics in Communication. (Formerly numbered System Science 227EA-227EZ.) Prerequisites: consent of instructor, additional prerequisites for each offering as announced in advance by the department. Topics in one or more special aspects of communication systems, such as phase coherent communication systems, optical channels, time-varying channels, feedback channels, broadcast channels, networks, coding and decoding techniques. May be repeated for credit with topic change.

227G. Automatic Coding Course. Th (Formerly numbered System Science 227G.) Prerequisite: course 227B or consent of instructor. Fundamentals of linear or parity-check codes and decoding algorithms based on the algebraic theory of finite fields and groups; cyclic codes; Hamming; Reed-Muller, Bose-Chaudhuri-Hocquenghem, and Reed-Solomon codes, and corresponding decoding algorithms.

227R. Rate Distortion Theory and Data Compression. (Formerly numbered System Science 227R.) Prerequisite: consent of instructor. Sources and distortion measures, rate distortion function and its evaluation for discrete and continuous sources, source coding theorems, block and tree source encoding techniques, and application to data compression. Student presentations of current research.
227S. Signal Processing in Communications. (Formerly numbered System Science 227S.) Prerequisites: courses 227A and 227C, or consent of instructor. Performance analysis and design of communication systems. Topics include architectures, multiplexing and multiple-access, message delays, error/flow control, switching, routing, protocols. Applications to local-area, packet-radio, local-distribution, computer and satellite communication networks.

229A. Numerical Techniques in Systems Optimization. (Formerly numbered System Science 229A.) Prerequisite: course M291A. Recommended: course 129A or 272A or similar background. Computational methods for constrained extremal of functions.

229B. Functional Analysis and Optimization. (Formerly numbered System Science 229B.) Prerequisites: course 120A or equivalent. Introduction to the mathematical analysis approach to optimization problems for dynamic systems - lumped and distributed. Emphasis on computational aspects.

229C. Stochastic Differential Systems. (Formerly numbered System Science 229C.) Prerequisites: courses 120B, 273B, M291A, or equivalent, consent of instructor. Integration with respect to continuous-parameter martingales; Radon-Nikodym derivatives in vector spaces; applications to filtering and stochastic control.

229E-229EZ. Topics in Optimization. (Formerly numbered System Science 229E-229EZ.) Prerequisites: consent of instructor. Additional prerequisites for each offering as announced in advance by the department. Comprehensive treatment of one or more selected topics in such areas as system optimization theory and numerical techniques, system identification, stochastic systems, finite graphs, networks, etc. May be repeated for credit with topic change.

229J-229KL. Public Systems Analysis. (Formerly numbered System Science 229J-229KLL.) Prerequisite: graduate standing or consent of instructor. Public service systems: scientific methodologies to research activities directed toward improvements in the systems that provide education, health care, transportation, communication, housing, environmental quality, and public safety services in urban areas.

230. Estimation and Detection in Communication and Radar Engineering. Prerequisite: course 120A or equivalent. Not open for credit to students with credit for System Science 227A. Applications of estimation and detection theory to estimation and radar engineering; random signal and noise characterization by analytical and simulation methods; mean square (MS) and maximum likelihood (ML) estimations and algorithms; detection under ML, Bayes, and Neyman-Pearson (NP) criteria; signal-to-noise ratio (SNR) and error probability evaluations.

Mr. Omura, Mr. Rubin, Mr. Yao (F)

231. Information Theory: Channel and Source Coding. Prerequisite: course 230. Not open for credit to students with credit for System Sciences 229A. Fundamentals of information theory with applications to digital communications. Block and convolutional codes analyzed from both theoretical and practical implementation viewpoints; channel coding and the theory of data compression (rate distortion theory).

Mr. Baker, Mr. Omura (W)

232. Stochastic Modeling with Applications to Telecommunication Systems. Prerequisite: course 120A or equivalent. Not open for credit to students with credit for System Sciences 229A. Emphasis on stochastic processes as applied to the study of telecommunication systems and traffic engineering. Renewal theory; discrete-time Markov chains; continuous-time Markov chains; applications to traffic and queueing analysis and optimal telecom system designs. Mr. Rubin, Mr. Yao (F)

233. Digital Communication Systems. Prerequisite: course 230. Basic concepts of digital communication systems and applications; representation of bandlimited signals; sampling, aliasing, Nyquist rate; error detection and correction; error control codes; performance analysis; discrete Fourier transform and its discrete-time counterparts; applications to digital signal processing; multiplexing and multiple-access communication systems. Mr. Rubin, Mr. Yao (Sp)


Mr. Yao (W)

235. Spread Spectrum Communications. Prerequisite: course 231. Spread spectrum digital communication systems for anti-jam and multiple-access communications. Basic design approach, models, and a general analysis for new spread spectrum systems. Direct sequence spread binary-phase-shift keying (DSSPSK) and frequency-hopped multiple-access spread- spectrum keying (MFSK) signals. Multiple access in spread spectrum digital radio networks.

Mr. Baker, Mr. Omura (Sp)

236. Error Control Codes and Cryptography. Prerequisite: course 231. Introduction to Galois fields with applications to error control codes and cryptography. Linear block codes, cyclic codes, BCH codes, Reed-Solomon codes, and Goppa codes. Digital circuit implementation of encoders, decoders, and cryptographic systems. Cryptography - both national and public key cryptosystems and key management.

Mr. Omura, Mr. Rubin, Mr. Yao (Sp)

237. Telecommunication Switching and Queueing Systems. Prerequisite: course 230. Not open for credit to students with credit for System Sciences 229A. Queue modeling and analysis with applications to space-time digital switching systems and to integrated-service telecommunication systems. Fundamentals of traffic engineering and queueing theory, the Poisson process, birth and death processes, blocking, and stochastic process analysis for Markovian and non-Markovian systems.

Mr. Omura, Mr. Rubin (W)

238. Telecommunication Architecture and Networks. Prerequisite: course 230. In-depth analysis and design of integrated-service telecommunication networks and multiple-access procedures. Stochastic analysis of priority-based queueing systems models. Queueing networks, network protocol architectures; error control; congestion, flow, and access control; applications to local-area, packet-satellite, and satellite computer communication networks.

Mr. Rubin (Sp)

M258A. LSI in Computer System Design. (Formerly numbered M258A-M258B-M258C.) Same as Computer Science M258A. Lecture, four hours; laboratory, four hours. Prerequisites: graduate standing in computer science or electrical engineering, consent of instructor. LSI/VLSI design and application in computer systems. Current topics and new developments in functional design techniques that can be used to implement complex integrated systems on a chip.

Mr. Viswanathan (F, W)

M258B-M258C. LSI in Computer System Design. (Formerly numbered M258A-M258B-M258C.) Same as Computer Science M258A. Lecture, four hours; laboratory, four hours. Prerequisite: course M258A. LSI/VLSI design and application in computer systems. In-depth studies of VLSI architectures and VLSI design techniques.

Mr. Viswanathan (W, M258B; Sp, M258C)


Mr. Jacobsen (F)

272BA-272BZ. Topics in Operations Research. (Formerly numbered System Science 272BA-272BZ.) Prerequisites: consent of instructor, additional prerequisite for each offering as announced in advance by the department. 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.

272C. Optimization Methods for Large-Scale Systems. (Formerly numbered System Science 272C.) Prerequisite: course 200B. Theory and computational procedures for decomposing large-scale mathematical programming problems. Generalized linear programming, decomposition algorithms, column generation, economic implications. Application to stochastic programming and optimal control. Topics in nonconvex programming; minimizing concave functions on convex polyhedra, reverse convex programming.

Mr. Jacobsen, Mr. Mortensen (Sp)

273A. Dynamic Programming. (Formerly numbered System Science 273A.) Prerequisite: course 200D or equivalent. Introduction to the mathematical analysis of sequential decision processes. The finite-state infinite horizon model in both the deterministic and stochastic cases. The finite-state infinite horizon model. Methods of solution. Detailed examples from inventory theory, finance, and transportation systems.

Mr. Jacobsen (W)


275B. Reliability Theory with Applications. (Formerly numbered System Science 275B.) Prerequisites: courses 120A or equivalents. Basic probability and statistical methods of course in reliability theory. Reliability models for complex systems, coherent structures, modular decomposition, reliability bounds. Constant, monotone hazard functions. Optimization problems in reliability; redundancy allocations, maintenance policies, stress-strength and safety considerations in engineering design. Statistical problems, current topics.

Mr. Jacobsen (Sp)
Environmental Science and Engineering (Interdepartmental)

This interdisciplinary graduate program, which leads to the Doctor of Environmental Science and Engineering (D. Env.) degree, provides scientific training in the enlightened management of the environment through a broad range of environmental disciplines. For details on this program, see Chapter 17 on the School of Public Health.

Materials Science and Engineering

6531 Boelter Hall, 825-5534

Professors
Alan J. Ardell, Ph.D., Chair
Roinfan Bunsah, Ph.D.
David L. Douglass, Ph.D.
William J. Knapp, Sc.D.
John H. Lyman, Ph.D.
John D. Mackenzie, Ph.D.
Kanji Ono, Ph.D.
Aly H. Shabaik, Ph.D.
George H. Sines, Ph.D.
Christian N. J. Wagner, D rer nat., Assistant Dean
Alfred S. Yue, Ph.D.
Daniel Rosenthal, Ph.D., Emeritus

Associate Professors
Bruce S. Dunn, Ph.D.
William Klement, Jr., Ph.D.
Juan M. Sanchez, Ph.D.

Adjunct Professors
Samuel B. Baldorf, Ph.D.
Ryoichi Kikuchi, Ph.D.
Frederick F. Lange, Ph.D.
Morris A. Steinberg, D.Sc.

Adjunct Associate Professor
Mr. Viswanathan (F,W,Sp)

The undergraduate program leads to the Bachelor of Science degree in Engineering. Students are introduced to the basic principles of metallurgy and ceramic 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 (College of Letters and Science). Several courses in the undergraduate curriculum also play an important role in one of the options of the manufacturing engineering program.

The graduate program allows for specialization in one of the following fields: science of materials, physical metallurgy and metal processing, mechanical metallurgy and deformation processing, and ceramics and ceramic processing.

Bachelor of Science in Engineering

Materials Science and Engineering Major Field

Materials science and engineering 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 plastics, as well as the design, fabrication, and testing of metallic and other materials such as oxides, glasses, and fiber-reinforced composites, are included in the course contents.

Course requirements for the materials science and engineering major field are as follows:


(2) Materials Science and Engineering 140E, 141, 142A, 144A, 145A, 146A, 147A; 142L and 146L, plus four additional laboratory units from 143L, 144L, 145B (one unit of lab credit), 147L;
one mathematics course from Mechanical, Aerospace, and Nuclear Engineering 191A, M192A (or Chemical Engineering M192A), 192B, 192C, 193A, 193B, or suitable courses in the Mathematics Department; Civil Engineering 106A (satisfies the engineering economics requirement).

(3) Two elective courses from Civil Engineering 165A, Electrical Engineering 115A, 115B, 115C, 115D, Materials Science and Engineering 140D, 143A, 145B, 146B, 146F, 147B, 147E, 148A, Mechanical, Aerospace, and Nuclear Engineering 136C, 158A (the design content of the elective courses, the free electives, and the elective laboratory must total six units).

(4) English 3; Chemistry 11A, 11B/11BL; Computer Science 10C or 10F; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 8A, 8B/8BL, 8C/8CL, 8D/8DL; one life science elective course.

(5) A minimum of seven courses from the humanities, social sciences, and/or fine arts approved in (at least three must be upper division; at least three — with two upper division, must be in the same academic department or otherwise reflect coherence with respect to subject matter; and one must satisfy the engineering and science in society requirement, which also may be satisfied within the free electives).

(6) Three free elective courses selected from the list of elective courses (see item 3).

Graduate Study

For information on graduate admission to the materials science and engineering program and requirements for the M.S. and Ph.D. degrees, see “Graduate Study” at the beginning of this chapter.

Lower Division Courses

14. Science of Engineering Materials. (Formerly numbered Engineering 14.) Lecture, three hours; demonstration, one hour; recitation, one hour. Pre-requisites: Chemistry 11A, 11B/11BL, Physics 8A, 8B. Physics 8C may be taken concurrently. General introduction to different types of materials used in engineering designs: metals, ceramics, plastics, and composites, relationship between structure (crystals and microstructure) and properties of technological materials. Illustration of their fundamental differences and their applications in engineering.

Mr. Douglass (F,W,Sp)

15. Introduction to Manufacturing Engineering. (Formerly numbered Engineering 15.) Manufacturing processes, materials and design in manufacturing; productivity, competitive aspects of manufacturing, manufacturing planning, production-scheduling, flexible manufacturing systems, economic and social aspects of manufacturing.

Mr. Shabaik (F)

Upper Division Courses

M107A. Principles of Biotechnology. (Formerly numbered Engineering M107A.) (Same as Psychology M153A.) Prerequisite: upper division standing. The principles of biological science are developed in an engineering design context. Emphasis on how physiological, psychological, and sociological factors affect the integration of man into environmental, institutional, and managerial systems through engineering design.

Mr. Lyman (F,W,Sp)


Mr. Yye (W)

140E. Materials Selection and Engineering Design. (Formerly numbered Engineering 140E.) Prerequisites: courses 144A, 146A, 147A. Explicit guidance among the myriad materials available for design in 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. (F,SP)

141. Phase Relations in Solids. (Formerly numbered Engineering 141.) Prerequisites: course 14, Chemical Engineering M105A or Chemical, Aerospace, and Nuclear Engineering M105A. Summary of thermodynamic laws, equilibrium criteria; solution thermodynamics, mass-action law, binary and ternary phase diagrams, glass transitions. Mr. Knapp (F)

142A. Diffusion and Diffusion-Controlled Reactions. (Formerly numbered Engineering 142A.) Prerequisite: course 141. Diffusion in metals and ionic solids, nucleation and growth theory; precipitation from solid solution, eutectoid decomposition, design of heat treatment processes of alloys, growth of intermediate phases, gas-solids reactions, design of oxidation-resistant alloys, recrystallization, and grain growth.

Mr. Douglass (F)

142L. Diffusion and Diffusion-Controlled Reactions Laboratory (2 units). (Formerly numbered Engineering 142L.) Corequisite: course 142A. Design of heating 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.

Mr. Douglass (F)

143A. Mechanical Behavior of Materials. (Formerly numbered Engineering 143A.) Prerequisite: course 14 or equivalent. Recommended: Civil Engineering 108. Plastic flow of metals under simple and combined loading, strain rate and temperature effects, dislocations, fracture, microstructural and mechanical behavior; engineering applications.

Mr. Ono, Mr. Shabaik (F,W)

143B. Failure Analysis of Metals. Prerequisite: course 142A or 147A. The analysis and prevention of failure based on design deficiencies, material selection, metallurgical defects, processing and fabrication errors, improper service conditions. Relationship to heat treatment, corrosion, joining technology, and mechanical behavior. Engineering and legal aspects. Case histories.

Mr. Douglass (Sp)

143L. Mechanical Testing Laboratory (2 units). (Formerly numbered Engineering 143L.) Prerequisites: course 14, Civil Engineering 108. Recommended: one or more of course 143A, Mechanical, Aerospace, and Nuclear Engineering 158A, M166 (or Civil Engineering M166). Experimental techniques for the determination of mechanical properties of engineering materials. Elastic constants, tensile, compression and fatigue testing, fracture toughness, fatigue and creep testing.

Mr. Ono, Mr. Shabaik (W,Sp)

144A. Polymer Science. (Formerly numbered Engineering 144A.) Prerequisite: consent of instructor. Polymerization mechanisms, molecular weight and distribution, chemical structure and bonding, structure-crystalinity, and morphology and their effects on physical properties. Glassy polymers, spring polymers, elastomers, adhesives. Fiber forming polymers, polymer processing technology, plasticization, molding, extrusion, non-linear viscoelastic behavior.

Mr. Arcell (Sp)

144L. Laboratory Experiments in Polymer Synthesis and Characterization (2 units). (Formerly numbered Engineering 144L.) Prerequisite: course 144A or consent of instructor. Synthesis of addition and condensation type polymers. Polymerization kinetics. Characterization of polymer structures and properties, molecular weights, glass transition temperature and melting temperature. Glassy polymers and elastomers. Correlation of polymer structure and molecular weight with mechanical properties. Effect of polymer additives (e.g., plasticizers).

Mr. Arrell (Sp)

145A. Introduction to Materials Characterization A (Crystal Structure and X-Ray Diffraction of Materials). (Formerly numbered Engineering 145A.) Lecture, three hours; laboratory, four hours. Introduction to course 14. Modern methods of materials characterization: fundamentals of crystallography, properties of X rays, X-raydiffraction; powder method. Laue method; determination of crystal orientation and crystal structure; phase diagram reaction; X-ray stress measurements; X-ray spectroscopy; design of materials characterization procedures.

Mr. Wagner (F)

145B. Introduction to Materials Characterization B (Electron Microscopy). (Formerly numbered Engineering 145B.) Lecture, three hours; laboratory, two hours. Prerequisites: courses 14, 145A. Characterization of microstructure and microchemistry of materials; transmission electron microscopy; reciprocal lattice, electron diffraction, stereographic projection; direct observation of defects in crystals, replicas; scanning electron microscopy: emissive and reflective modes; chemical analysis; electron optics of both instruments.

Mr. Adam (W)

146A. Introduction to Ceramics and Glasses. (Formerly numbered Engineering 146A.) Prerequisite: course 14 or equivalent. An introduction to ceramics and glasses being used as important materials of engineering, processing techniques, and unique properties. Examples of design and control of properties for certain specific applications in engineering.

Mr. Mackenzie (W)

146B. Processing of Ceramics and Glasses. (Formerly numbered Engineering 146B.) Prerequisite: course 146A or equivalent. A study of the processes used in fabrication of ceramics and glasses, relationship to structure and properties. Processing operations, including materials preparation, forming, sintering, and melting. Design of processes to achieve desired characteristics of structure, properties, and cost.

Mr. Knapp (Sp)

146F. Electronic Ceramics. (Formerly numbered Engineering 146F.) Prerequisites: course 14, Electrical Engineering 100, or equivalent. The utilization of ceramics in microelectronics; thick film and thin film resistors, capacitors, and substrates; design and processing of electronic ceramics and packaging; magnetic ceramics; ferroelectric ceramics and electro-optic devices; optical wave guide applications and designs.

Mr. Dunn (Sp)

146L. Laboratory in Ceramics (2 units). (Formerly numbered Engineering 146L.) Laboratory, four hours. Prerequisite: course 146A or equivalent. Recommended corequisite: course 146B. Processing of common ceramics and glasses. Attainment of specific properties through process control for engineering applications. Quantitative characterization and selection of raw materials. Slip casting and extrusion of clay bodies. Sintering of powders. Glass melting and fabrication. Determination of chemical and physical properties.

Mr. Knapp (Sp)
147A. Introduction to Metallurgy. (Formerly numbered Engineering 147A.) Prerequisites: course 14, a course in thermodynamics. Introduction to metallic engineering materials, solid-state phase transitions, thermodynamics, phases in metal systems, phase diagrams, metal forming, steels and cast iron, nonferrous alloys, design of metallic alloys for specific applications. Mr. Bunshah, Mr. Wagner (F)

147B. Manufacturing Processes. (Formerly numbered Engineering 147B.) Prerequisite: course 14. Theoretical basis for cold forming and hot forming processes; rolling, extrusion, and forging. Conventional metal removal. Solidification processes and casting. Powder metallurgy. Mr. Shabak (W)

147E. Modern Process Metallurgy. (Formerly numbered Engineering 147E.) Prerequisites: course 147A, and/or Chemical Engineering 150A or Mechanical, Aerospace, and Nuclear Engineering 150A. Modern process metallurgy used in extraction and refining of metals and alloys. The role of vacuum processing in modernizing and enlarging the scope of extractive metallurgy. Design of extractive and refining processes. Properties of vacuum processed materials. Mr. Bunshah (W)

147L. Manufacturing Processes Laboratory. (Formerly numbered Engineering 147L.) Laboratory, eight hours. Prerequisite: course 147B. Experimental investigation, analysis, and design of metal forming processes (forming, extrusion, drawing, and rolling). Force measurements and energy calculations in metal cutting. Experimental investigation of hot and isostatic pressing of powder. Mr. Shabak (Sp)

148A. Structure and Properties of Composite Materials. (Formerly numbered Engineering 148A.) Lecture, one course from 143A, Mechanical, Aerospace, and Nuclear Engineering 156A, 158A, or Civil Engineering 165A. Relationship between structure and mechanical properties of composite materials with fiber and particulate reinforcement. Properties of fiber, matrix, and interfaces. Selection of macrostructures and material systems. Mr. Ono (Sp)

148C. Properties of Art Ceramic Materials. (Formerly numbered Engineering 148C.) Lecture, three hours; laboratory, three hours. Composition and properties of art ceramics and glazes. Ceramic raw materials and their functions in bodies and glazes. Design of glazes and methods of expressing compositions and properties of art ceramics and glazes. Ceramic raw materials and their functions in bodies and glazes. Mr. Bunshah (W)

149E. Ceramic Materials in History and Archaeology. (Formerly numbered Engineering 149E.) Lecture, two hours; laboratory, four hours. Prerequisite: consent of instructor. A study of the origins and evolution of ceramics and related materials, with emphasis on fabrication processes and raw materials. Laboratory exercises are aimed at the development of skills necessary for analytical studies (for students in the humanities and sciences). Mr. Knapp (Sp)

180B. Machine and Systems Biotechnology. (Formerly numbered Engineering 180B.) Prerequisite: course M107A or consent of instructors. A study of advanced, innovative, and qualitative methods for assessing man as a component in engineering design applications. Limits and optimus of human psychophysiological capabilities applied to display-control design, decision-making processes, and task definition; problems of man-machine interactions in large-scale systems. Mr. Lyman (Sp)

199. Special Studies (2 to 8 units). Prerequisites: senior standing, consent of instructor. Individual investigation of a selected topic to be arranged with a faculty member. Enrollment request forms are available in department office. Occasional field trips may be arranged. May be repeated for credit. (F,W,Sp)

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**Graduate Courses**


240B. Principles of Materials Science B (Structure of Materials). Prerequisite: course 145A or equivalent. Basic concepts of atomic, electronic, and crystalline structure of materials; particles and waves, free electron model, binding in solids; crystal structure, real and reciprocal lattices; amorphous solids, kinematical theory of scattering, electrons in a periodic potential, pseudo-potentials, conduction of electrons in solids. Mr. Dunn, Mr. Wagner (W)

241. Oxidation of Metals. Prerequisite: course 141 or equivalent or consent of instructor. Absorption and phase-boundary reactions. Nuclear reaction products, defect structures of oxides, crystal structure, mechanism of oxidation. Techniques for evaluation of adherence of surface films. Mr. Douglas (W)

242A. Plasticity Theory Applied to Metalworking I. Prerequisite: Mechanical, Aerospace, and Nuclear Engineering 158A. Mechanical behavior of materials. Basic principles describing the mechanics of plastic deformation of homogeneous, polycrystalline solids. Yield criteria. Methods of solution, including slip line field, principles of plastic deformation, with examples involving plane strain and axisymmetric deformation. Fracture problem. Application of methods of solution. Mr. Shabak (F)

243A. Fracture of Structure Materials. Prerequisite: Mechanical, Aerospace, and Nuclear Engineering 158A or equivalent. The engineering and scientific aspects of crack nucleation, crack growth, fracture mechanics, dislocation models, fatigue, fracture in reactive environments, alloy development, fracture-safe design. Mr. Ono (W)

243B. Design for Fatigue Reliability. Prerequisite: one or more courses from 143A, Mechanical, Aerospace, and Nuclear Engineering 156A, or equivalent. Prediction of fatigue life of machines, structures, and vehicles with statistical confidence. Design for fatigue resistance; techniques for improving or preventing premature failure. Low-cycle, long-life, and crack growth. Effects of environment, residual stress, over-stressing, and surface treatments. Air Force specifications. Mr. Sines (Sp, odd years)

243C. Dislocations and Strengthening Mechanisms in Solids. Prerequisite: course 143A or Mechanical, Aerospace, and Nuclear Engineering 156A, or equivalent. Elastic and plastic behavior of crystals, the geometry, mechanics, and interaction of dislocations, mechanisms of yielding, work hardening, and fracture strengthening. Mr. Ono (Sp, odd years)

244. Electron Microscopy. Prerequisite: course 145B or equivalent. Essential features of the electron microscope, geometry of electron diffraction, kinematical and dynamical theories of electron diffraction, including anomalous absorption, applications of theory to defects in crystals. More fringes, direct lattice resolutions. Lorentz microscopy, laboratory applications of contrast theory. Mr. Ardell (W)

245. Diffraction Methods in Science of Materials. Prerequisite: course 145A or equivalent. Theory of the diffraction of waves (X rays, electrons, and neutrons) in crystalline and noncrystalline materials. Lorentz's work. Basic principles and general effects of plastic deformation, dislocation interactions, transformations, arrangements of atoms in liquids and amorphous solids. Mr. Wagner (Sp, odd years)

246A. Mechanical Properties of Nonmetallic Crystalline Solids. Prerequisite: course 146A. Material and environmental factors affecting the mechanical properties of composite materials. Factors affecting atomic bonding and structure, atomic-scale defects, microstructural features, residual stresses, temperature, stress state, strain rate, size, and surface conditions. Methods for evaluating mechanical properties. Mr. Mackenzie, Mr. Sines (F)

246B. Structure and Properties of Glass. Prerequisite: course 146A. Structure of amorphous solids and glasses. Conditions of glass formation and theories of glass structure. Mechanical, electrical, and optical properties of glass and relationship to structure. Mr. Mackenzie (F)

246D. Electronic and Optical Properties of Ceramics. Prerequisite: course 146A. Principles governing electronic properties of ceramic single crystals and glasses and effects of processing and microstructure of these properties. Electronic conduction, ferroelectricity, and photochromism. Magnetic ceramics. Infrared, visible, and ultraviolet transmission. Unique application of ceramics. Mr. Dunn, Mr. Mackenzie (Sp)


247C. Advanced Solidification. Prerequisites: courses 141, 147A, or equivalent. Liquid state concepts of constitutional supercooling; nucleation from the liquid phase; solute redistribution during liquid solid transformation; fluid motion; interface morphology; eutectic growth; determination of phase diagrams. Students report on current topics in solidification. Mr. Schneibel (F)

248A. Experimental Methods in Materials Synthesis. Prerequisite: bachelor's degree in chemistry, physics, or engineering. Techniques used in materials synthesis temperature measurement, vacuum techniques, methods of heating and quenching, cold solidification and refining of metals, crystal growth, thin film deposition and thick film deposition. Laboratory experiments and demonstrations. Mr. Bunshah (W)

248B. Deposition Technologies and Thin Films. Prerequisites: courses 146A, 147A, and 248A, or consent of instructor. Deposition methods used in high technology application. Theory and experimental details of physical vapor deposition (PVD), chemical vapor deposition (CVD), plasma spray, electro deposition. Applications in semiconductors, ceramic, optical, mechanical, and metallurgical industries. Mr. Bunshah (W)

280A. Advanced Biotechnology. ( Formerly numbered Engineering Systems 280A.) Prerequisite: courses 146A, or consent of instructor. Review of introductory chemical engineering parameters of environment, community, and system design. Emphasis on methodological and scientific factors underlying man-machine-environment interactions. Mr. Lyman, Mr. O'Brien (W)

280B. Advanced Biotechnology. ( Formerly numbered Engineering Systems 280B.) Prerequisites: courses 146A, 158A, Mechanical, Aerospace, and Nuclear Engineering 180A or consent of instructor. Specialized coverage of "human factors" and "human engineering," with orientation toward obtaining design optimization of the functions of humans in relation to engineering parameters of environment, communication, and control. Mr. Lyman (Sp)

299. Seminar in Engineering (2 to 4 units). Prerequisites: graduate standing in materials science and engineering, consent of instructor. Seminars may be organized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change.
Mechanical, Aerospace, and Nuclear Engineering

5732 Boelter Hall, 825-1161

Professors
Mohamed A. Abdou, Ph.D.
George E. Apostolakis, Ph.D.
Ivan Calton, Ph.D.
Andrew F. Charwat, Ph.D.
Rupert W. Conn, Ph.D.
Vijay K. Dhir, Ph.D.
Peretz Friedmann, Sc.D.
William E. Kastenberg, Ph.D., Chair
Robert E. Kley, Sc.D.
Cornelius T. Leonides, Ph.D.
Ajit K. Mal, Ph.D.
William C. Meecham, Ph.D.
Michel A. Melkanoff, Ph.D.
Anthony F. Mills, Ph.D.
D. Lewis Minori, Ph.D.
Philip F. O'Brien, M.S.
David Okrent, Ph.D.
Gerald C. Pomraning, Ph.D.
Lucien A. Schmit, Jr., M.S.
George H. Sines, Ph.D.
Russell A. Westmann, Ph.D.

Emeritus Professors
Joseph S. Beggs, Ph.D.
Harry Buehler, M.S.
Kurt Forster, Ph.D.
Walter C. Hurty, M.S.
Antony J. A. Morgan, Ph.D.
Russell R. O'Neill, Ph.D.
Richard Stern, Ph.D.
Edward H. Taylor, M.S.
William T. Thomson, Ph.D.

Associate Professors
Claude G. Fleury, D.Sc.
Nasr M. Ghoniem, Ph.D.
James S. Gibson, Ph.D.

Assistant Professors
Ann R. Karagopian, Ph.D.
Adrienne G. Lavine, Ph.D.
Vinod G. Mengle, Ph.D.
Peter A. Monkewitz, Ph.D.
Daniel C. H. Yang, Ph.D.

Adjunct Professors
Leslie Carre, B.Sc.
Robert C. Erdmann, Ph.D.
B. John Garrick, Ph.D.
Leona M. Libby, Ph.D.
Milton S. Plessel, Ph.D.
Chauncey Starr, Ph.D.
Robert J. Taylor, Ph.D.

Adjunct Associate Professor
Kenneth A. Solomon, Ph.D.

Adjunct Assistant Professor
James M. McDonough, Ph.D.

Adjunct and Visiting Lecturers
Charles Ashbaugh, M.S., Adjunct
Alexander Samson, Ph.D., Visiting Senior

Scope and Objectives

The Mechanical, Aerospace, and Nuclear Engineering Department encompasses professional disciplines that are often divided into separate departments at other engineering schools. Curricula in mechanical engineering and aerospace engineering are offered on the undergraduate and graduate levels, while nuclear engineering is primarily a graduate discipline. The recent Conference Board of Associated Research Councils' study ranked UCLA's mechanical engineering program ninth in the nation for both teaching and research. Because of the scope of the department, faculty research and teaching cover an extremely wide range of technical disciplines. Research in thermal engineering emphasizes basic heat and mass transfer processes as well as thermal hydraulics. Topics in the area of design, dynamics, and control include robotics, mechanism design, helicopter dynamics and aeromechanics, dynamics and control of large space structures. Studies in structural mechanics range from fracture mechanics and wave propagation to structural dynamics and aeroelasticity. In the area of fluid mechanics and aerodynamics, investigations are underway on combustion and thermal convection, aeroacoustics, and unsteady aerodynamics of fixed and rotary wings. Other key areas of research include fusion reactor design, experimental tokamak confinement physics, and surface physics; transport theory; light water reactor safety; reliability and risk assessment methodology and application; societal risk management; and nuclear materials. The department also has growing activity in computer-aided design and manufacturing.

At the undergraduate level, the department offers programs leading to the Bachelor of Science degree in Engineering, with specializations in aerospace engineering and mechanical engineering; the latter includes opportunity to emphasize mechanical design, dynamics, and control; thermal science and power systems; or manufacturing processes. At the graduate level, the department offers programs leading to M.S. and Ph.D. degrees in three separate areas: mechanical engineering, aerospace engineering, and nuclear engineering.

Bachelor of Science in Engineering

Aerospace Engineering Major Field

Aerospace engineering is concerned with the design and construction of various types of fixed-wing and rotary-wing (helicopters) aircraft used for air transportation and defense purposes. It is also concerned with the design and construction of spacecraft and 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.

Course requirements are as follows:

(1) Eight core courses: Civil Engineering 108, Electrical Engineering 100, 121C, Materials Science and Engineering 14, Mechanical, Aerospace, and Nuclear Engineering 102, 103, M105A, M105D.

(2) Materials Science and Engineering 147B, Mechanical, Aerospace, and Nuclear Engineering 131A, 133A, 150A, plus one course from 156A, 158A, 166A (or Civil Engineering 166), and two courses from 162A, M169A, 171A, Civil Engineering 106A; Mechanical, Aerospace, and Nuclear Engineering 162B and 162M (satisfy the design requirement); one mathematics course from Mechanical, Aerospace, and Nuclear Engineering 191A, M192A (recommended), 192B, 192C, 193A, 193B, or Electrical Engineering 124A.

Eight laboratory units: Mechanical, Aerospace, and Nuclear Engineering 157, plus four additional units from one of the following subject areas:

- Manufacturing Processes: Materials Science and Engineering 143L, 144L, 146L, 147L.
- Mechanical Design, Dynamics, and Control: Civil Engineering 157B (two units of lab credit), 169L, Materials Science and Engineering 143L, Mechanical, Aerospace, and Nuclear Engineering 162C (two units of lab credit).
- Thermal Science and Power Systems: Mechanical, Aerospace, and Nuclear Engineering 131AL.

(3) Three elective courses selected in consultation with your adviser (satisfies the mathematics requirement).

(4) English 3; Chemistry 11A, 11B/11BL; Computer Science 10F; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 8A, 8B/8BL, 8C/8CL, 8D/8DL; one life science elective course.

(5) A minimum of seven courses from the humanities, social sciences, and/or fine arts approved list (at least three must be upper division; at least three — with two upper division — must be in the same academic department or otherwise reflect coherence with respect to subject matter; and one must satisfy the engineering and science in society requirement).

### Mechanical Engineering Major Field

The mechanical engineering program is designed to provide a basic knowledge in thermodynamics, fluid mechanics, heat transfer, solid mechanics, mechanical design, dynamics, control, mechanical systems, manufacturing, and materials. The program includes fundamental subjects important to all mechanical engineers, with an option in mechanical design, dynamics, and control; thermal science and power systems; and manufacturing processes.

Course requirements are as follows:

(1) Eight core courses: Civil Engineering 108, Electrical Engineering 100, 121C, Materials Science and Engineering 14, Mechanical, Aerospace, and Nuclear Engineering 102, 103, M105A, M105D.

(2) Materials Science and Engineering 147B, Mechanical, Aerospace, and Nuclear Engineering 131A, 133A, 150A, plus one course from 156A, 158A, 166A (or Civil Engineering 166), and two courses from 162A, M169A, 171A, Civil Engineering 106A; Mechanical, Aerospace, and Nuclear Engineering 162B and 162M (satisfy the design requirement); one mathematics course from Mechanical, Aerospace, and Nuclear Engineering 191A, M192A (recommended), 192B, 192C, 193A, 193B, or Electrical Engineering 124A.

Eight laboratory units: Mechanical, Aerospace, and Nuclear Engineering 157, plus four additional units from one of the following subject areas:

- Manufacturing Processes: Materials Science and Engineering 143L, 144L, 146L, 147L.
- Mechanical Design, Dynamics, and Control: Civil Engineering 157B (two units of lab credit), 169L, Materials Science and Engineering 143L, Mechanical, Aerospace, and Nuclear Engineering 162C (two units of lab credit).
- Thermal Science and Power Systems: Mechanical, Aerospace, and Nuclear Engineering 131AL.

(3) Three elective courses approved by your adviser, to be selected from one of the subject areas listed below (at least one course in each subgrouping — a, b — within your selected subject area should be included):


*Unless taken as part of the core.

### Graduate Study

For information on graduate admission to the mechanical, aerospace, and nuclear engineering program and requirements for the M.S. and Ph.D. degrees, see "Graduate Study" at the beginning of this chapter.

### Lower Division Course

94. Introduction to Computer-Aided Design and Drafting. (Formally numbered Engineering 94.) 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 on-line computer systems to design and display various objects. Mr. Melkanoff (F,Sp).

### Upper Division Courses

102. Mechanics of Particles and Rigid Bodies. (Formerly numbered Engineering 102.) Lecture, three hours; recitation, two hours. Prerequisites: Mathematics 33A, Physics 8A. Newtonian mechanics (statics and dynamics) of particles and rigid bodies. Fundamental concepts of mechanics. Statics, kinematics, and kinetics of particles and rigid bodies. Impulse-momentum and work-energy relationships. Applications. Mr. Mongiro (F,W,S).

103. Elementary Fluid Mechanics. (Formerly numbered Engineering 103.) Lecture, three hours; recitation, two hours. Prerequisites: Mathematics 2DB, 33A, Physics 8B. An introductory course dealing with the application of the principles of mechanics to the flow of compressible and incompressible fluids. Mr. Meechan (F,W,S).

M105A. Introduction to Engineering Thermodynamics. (Formerly numbered Engineering 105A.) Lecture, four hours; recitation, one hour. Prerequisites: Physics 8B, 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 the analysis and design of closed and open systems. Mr. Dhir (F,W,S).
M109A. Engineering and Policy: Resources and Risk. (Same as Civil Engineering M109A.) Lecture, two hours; recitation, two hours. Prerequisite: sophomore standing in engineering. Social, economical, sociological, and institutional implications of engineering-based risk and decision making. Emphasis on opportunities for the useful development of resources, inherent risks, and the responsibilities of engineers in the decision process. Thoughtful student discussion is also emphasized. Mr. Kastenberg (W)


131AL. Thermal Sciences Laboratory. (Formerly numbered Engineering 131AL.) Laboratory, eight hours. Prerequisites: courses 131A, 157. Basic experimental investigations and analysis of the energy transformation and rate processes. Experiments include examples from thermodynamics and heat and mass transfer. Students are asked to record and analyze the data and discuss the physical phenomenon. Mr. Dhir (Sp)

132A. Mass Transfer. (Formerly numbered Engineering 132A.) Prerequisite: course M105D or 131A. The principles of mass transfer by diffusion. Mass transfer by convection in laminar and turbulent flows. Simultaneous heat and mass transfer. Applications including combustion of solids and volatile fuels, evaporation and condensation, ablation, and transpiration cooling, gas absorption and catalysis. Mr. Dhir (F)

133A. Engineering Thermodynamics. (Formerly numbered Engineering 133A.) Prerequisites: courses 103, M105A, M105D. Applications of thermodynamic principles to engineering processes. Energy conversion systems. Rankine cycle and other power cycles, refrigeration, psychrometry, reactive and nonreactive fluid flow systems. Mr. Dhir (F)

M134A. New Energy Technology: Resources, Conversion, Constraints. (Same as Civil Engineering M134A.) Prerequisite: course M105A or equivalent in physics or chemistry or consent of instructor. Energy resources: fossil fuels, nuclear fuels, hydro, solar, wind, geothermal, and biomass sources. Conversion methods and their productivity and other energy uses. Consideration of thermodynamic, economic, and environmental constraints. Mr. Kastenberg

134B. Solar Energy Use and Control. (Formerly numbered Engineering 134B.) Prerequisite: course M105A. The development and availability of solar radiation; review of selected heat transfer topics pertinent to solar energy collection and use; design analysis of nonfocusing solar energy collector-converter systems; thermal energy storage; selected applications. Mr. Okrent (W)

135, Fundamentals of Nuclear Power. (Formerly numbered 135A.) Prerequisite: junior standing. Introduction to nuclear engineering; nuclear physics, neutron cross sections, nuclear fission and fission products; elementary analysis and design of reactors. Criticality, one-group neutron diffusion theory, heat removal, and heterogeneous effects. Mr. Kastenberg (F)

135AL. Nuclear Analysis Laboratory (2 units). (Formerly numbered Engineering 135AL.) Laboratory, four hours. Course M135. A laboratory course in nuclear engineering comprising various experiments in reactor core physics and related fields. The experiments consist of measuring and calculating reactor core physics parameters and pertinent heat transport/flow fluid parameters. Mr. Catton

135B. Nuclear Reactor Theory II. (Formerly numbered Engineering 135B.) Prerequisite: course 135. Introduction to slowing down, thermalization, multigroup theory, heterogeneous effects, neutronics, and perturbation theory. Mr. Apostolakis

135BL. Nuclear Analysis Laboratory II (2 units). (Formerly numbered Engineering 135BL.) Laboratory, four hours. Course 135B. A laboratory course in nuclear engineering comprising various experiments in reactor core physics and evaluation of related fields. The experiments consist of measuring and calculating reactor core physics parameters and pertinent heat transfer/flow fluid parameters. Mr. Catton

135C. Introductory Nuclear Reactor Design. (Formerly numbered Engineering 135C.) Prerequisites: courses 135, 135B. Reactor physics, engineering, fuel element design for nuclear reactor cores, criticality, reactivity considerations, and effects; power distribution; differences among various power reactor systems. Introduction to the use of physics design computer codes. Mr. Pomraning

135D. Introduction to Fusion Engineering and Reactor Design. (Formerly numbered Engineering 135D.) Prerequisite: course 135BL. Reactor concepts and the next generation reactor. Fusion reactions, fuel cycle, and operating conditions. Magnetic and inertial confinement, including tokamaks, magnetic mirrors, laser fusion, and selected others. Concepts for and subs of the next generation reactors. Design of reactors and key subsystems. Application of fusion reactors for electricity, fissionable fuel, and/or chemical fuel production. Mr. Conn (F)

135E. Neutron Activation Analysis Laboratory. (Formerly numbered Engineering 135E.) Prerequisites: upper division standing in engineering, Chemistry 11A, 11B, Mathematics 31A, 31B, Physics 6A and 6B, or 8A and 8B. Application of neutron activation as a tool for research in the physical sciences. Emphasis on the nuclear reactor as a neutron source. Topics include nuclear chemistry, radiation detectors and analyzers, with computer handling of the spectral data. Mr. Conn

135F. Experimental Reactor Operations, Control, and Safety (2 units). (Formerly numbered Engineering 135F.) Laboratory, four hours. Prerequisite: course 135. Operation of the UCLA R-1 Argonaut reactor, measurements of various core parameters and control system responses. Performance of the reactor in various safe systems through experimentation. Experiments not included in courses 135B, 135C, Chemical Engineering 139A are conducted. Mr. Catton

136. Thermal Hydraulic Design of Nuclear and Other Reactor Systems (2 units). (Formerly numbered Engineering 136) Prerequisite: senior standing. Thermal hydraulic design of nuclear and other power systems, power generation and heat removal, power cycle, thermal hydraulic component design, overall plant design, steady state and transient operation. Mr. Dhir (W)

136A. Introduction to Probabilistic Risk Analysis. (Formerly numbered Engineering 136A.) Prerequisite: consent of instructor. Probabilistic models for the failure of components and systems. Redundant systems. Maintenance models. Fault and event tree analysis. Applications to nuclear reactor systems. Mr. Apostolakis (W)


150A. Intermediate Fluid Mechanics. (Formerly numbered Engineering 150A.) Prerequisite: course 103 or equivalent or consent of instructor. The basic equations and flow fundamentals of fluid motion. Basic types of flows: steady, unsteady, incompressible, and compressible. Solutions of the Navier-Stokes equations. Lubrication theory. Elementary potential flow theory. Boundary layers. Turbulent flow in pipes and boundary layers. Compressible flow: normal shocks, channel flow with friction or heat addition. Mr. Charwat, Mr. Kelly (F,W)

150B. Aerodynamics. (Formerly numbered Engineering 150B.) Prerequisites: courses 103, 150A, or equivalent. Advanced aspects of potential flow theory. Incompressible flow around thin airfoils and wings (lift, induced drag). Gas dynamics: oblique shocks, Prandtl-Meyer expansion. Linearized supersonic and subsonic flow around thin airfoils and wings. Wave drag. Transonic flow. Mr. Charwat, Mr. Kelly (Sp)

150P. Jet Propulsion Systems. (Formerly numbered Engineering 150P.) Prerequisites: courses 103, M105A. Thermodynamic properties of gases, design and analysis of aircraft jet engine components, cycle analysis, design and analysis of combustion systems, performance of rocket vehicles. Mr. Karagözian (F)

151. Performance of Vehicles. (Formerly numbered Engineering 151.) Prerequisites: courses 103, M105A. Preliminary design for propulsion of a variety of vehicles, including automobiles, trains, airplane, rocket-powered vehicles, ground effect machines, ships and sailboats; performance parameters include speed, range, payload, efficiency, energy requirements, and noise. Mr. Charwat (Sp)

153A. Engineering Acoustics. (Formerly numbered Engineering 153A.) Prerequisite: upper division standing in engineering or consent of instructor. Fundamental course in acoustics, including the ear and hearing; basic acoustical instrumentation; propagation of sound; sources of sound; architectural reverberation; selected subjects. Mr. Meecham (F)

153B. Acoustics Laboratory. (Formerly numbered Engineering 153B.) Laboratory, eight hours. Prerequisite or corequisite: course 153A or consent of instructor. Experimental studies in the field of acoustics, including audiometry, noise control, acoustical filters, impedance measurements, transducer characteristics, and interaural delay fields. Occasional field trips may be necessary to obtain data. Mr. Meecham

153C. Noise and Noise Control Design. (Formerly numbered Engineering 153C.) Prerequisite: course 153A, or consent of instructor. Design of systems and structures, mufflers, barriers, sound in- terference in structures, sound insulation, properties of materials, sound standards. Mr. Meecham (Sp)

154A. Preliminary Design of Aircraft. (Formerly numbered Engineering 154A.) Prerequisite: course 154A. Preliminary design analysis of the performance of a variety of aircraft, construction, measurement, and analysis of noise suppression techniques. Includes equipment, transducers, environmental factors in sound propagation, enclosures, properties of materials, sound in structures, noise standards and analysis. Mr. Friedmann (W)

154S. Flight Mechanics, Stability, and Control of Aircraft. (Formerly numbered Engineering 154S.) Prerequisite: course 150A. Theoretical analysis of aircraft performance, flight mechanics, stability, and control, presenting some of the basic ingredients needed for the design of an aircraft. The effects of airplane flexibility on stability derivatives is also treated.

Mr. Forster (F,Sp)

155. Intermediate Dynamics. (Formerly numbered Engineering 155.) Prerequisite: course 102 or equivalent. The axioms of Newtonian mechanics, generalized coordinates, Lagrange's equations, variational principles; central force motion; kinematics and dynamics of a rigid body. Euler's equations, motion of rotating bodies, oscillatory motion, normal coordinates, orthogonality relations, the vibrating string.

Mr. Westmann (F,Sp)


Mr. Westmann (F,Sp)

157. Basic Mechanical Engineering Laboratory. (Formerly numbered Engineering 157.) Laboratory, eight hours. Prerequisites: courses 103, M105A, M106A, M106B, Civil Engineering 108. Methods of measurement of basic quantities and performance of basic experiments in the thermal sciences, fluid mechanics, and structures. Primary sensors, transducers (motion, force and stress, temperature), recording equipment, signal processing, and data analysis.

Mr. Dhir, Mr. Monkewitz (F,W)

157A. Fluid Mechanics/Aerodynamics Laboratory. (Formerly numbered Engineering 157A.) Laboratory, eight hours. Prerequisites: courses 150A, 157. Course provides an environment for illustration of important physical phenomena in the area of fluid mechanics/aerodynamics as well as hands-on experience with modern experimental tools and techniques in the field, including the basics of data digital acquisition.

Mr. Charwat, Mr. Monkewitz (Sp)


Mr. Friedmann, Mr. Westmann (Sp)

161A. Introduction to Astronautics. (Formerly numbered Engineering 161A.) Prerequisite: course 102. The space-environment of earth, near-earth orbits and trajectories, slate rockets and staging, the two-body problem, orbital transfer and rendezvous, elementary perturbation theory, influence of earth's oblateness.

Mr. Forster (F)

162A. Introduction to Mechanisms and Mechanical Systems. (Formerly numbered Engineering 162A.) Prerequisite: course 12. Analysis and synthesis of mechanisms and mechanical systems are studied, including both kinematics and dynamics aspects. Mechanisms from a wide range of applications, including automatic machinery, transportation systems, and computer peripheral equipment, are introduced.

Mr. Yang (F,Sp)

162B. Fundamentals of Mechanical System Design. (Formerly numbered Engineering 162B.) Lecture, three hours; laboratory, three hours. Prerequisite: course 102. An introduction to the development of mechanical systems. Application and analysis of basic components and subsystems such as gears, bearings, hydraulic and pneumatic subsystems. The dynamics of high-speed machines. Students create a design of their choice.

Mr. Yang (F,Sp)

162C. Electromechanical Systems Design Laboratory. (Formerly numbered Engineering 162C.) Lecture, five hours; laboratory, two hours. Prerequisite: course 162B or consent of instructor. Laboratory and design course for students interested in development of complex mechanical and electromechanical systems. Students, with consent of instructor, select a system which they develop, build, and document. Behavior of this system is studied in detail.

Mr. Yang (Sp)

162M. Senior Mechanical Engineering Design. (Formerly numbered Engineering 162M.) Lecture, one hour; laboratory, three hours. Prerequisite: course 162B, Civil Engineering 106A, Materials Science and Engineering 147B. Must be taken during the last two quarters of the academic program. Students concep- tualize, design, fabricate, and test a complex system which they develop, build, and document. Behavior of this system is studied in detail.

Mr. Yang (Sp)


Mr. Melkanoff

164. Digital Control of Physical Systems. (Formerly numbered Engineering 164.) Not the same as course 164 prior to Fall Quarter 1982.) Prerequisite: course 121C or Electrical Engineering 122A. Recommended: courses 163, 171C. Analysis and design of digital control systems. Discrete-time transfer functions for physical systems. Design using classical methods; state-space equations; frequency response, root locus; compensation. Design using state-space methods: control laws, estimators. Practical considerations: roundoff, stable rate selection, computer implementation.

Mr. Mingori (W)

159A. Introduction to Feedback and Control Systems. (Formerly numbered Engineering 159A.) (Same as Civil Engineering M192A.) Prerequisites: course 102, Civil Engineering 108. Recommended: Electrical Engineering 121C. Fundamentals of vibration theory and applications. Free, forced, and transient vibration of one and two degrees of freedom systems, engineering and mechanical behavior. Normal modes, coupling, and normal coordinates. Elements of vibration and wave propagation in continuous systems.

Mr. Friedmann (F,W)

171A. Introduction to Feedback and Control Systems. (Formerly numbered Engineering 171A.) Prerequisite: consent of instructor. Recommended: Electrical Engineering 121C. Introduction to feedback principles, control systems design, and system stability. Modeling of physical systems in engineering and other fields; transform methods; controller design using Nyquist, Bode, and Root Locus methods; compensation; computer-aided analysis and design.

Mr. Mingori (F,W)

171C. Dynamic Systems Control I. (Formerly numbered Engineering 171C.) Recommended prerequisite: course 171A or Electrical Engineering 122A. State-space models of continuous and discrete-time dynamical systems; state variables; state models; observability, controllability, and canonical forms. Stability. Controllability and observability. State representation of nonlinear systems; linearization. Emphasis on modeling and computer-aided applications, and control computer-aided problem solving.

Mr. Leondes (Sp)

174B. Reliability and Quality Assurance. (Formerly numbered Engineering 174B.) Prerequisite: course 193A or consent of instructor. An introduction to the manufacturing-oriented and related fields of reliability and quality in terms of organizational relationships, major functional tasks, statistical and other techniques, and elements of engineering analysis.

Mr. O'Brien

180A. Environmental Biotechnology. (Formerly numbered Engineering 180A.) Prerequisite: Materials Science and Engineering M107A or consent of instructor. Physical, physiological, and psychological aspects of the interaction between man and thermal, atmospheric, radiant, and mechanical agents and energies in the environment. Biological and physical requirements for engineering control of the environment; applications to complex systems.

Mr. Forster (WSp)


Mr. Yang (F,Sp)


Mr. Forster, Mr. Kastenberg (F,Sp)

192B. Mathematics of Engineering. (Formerly numbered Engineering 192B.) Prerequisite: course M192A or equivalent. Applications of mathematical methods to engineering problems are considered. Eigenvalue problems for continuous systems and the related special functions are studied.

Mr. Forster, Mr. Kastenberg (Sp)

Mr. Forster, Mr. Kastenberg (F)

193A. Engineering Probabilistics and Stochastics. (Formerly numbered Engineering 193A.) Prerequisite: junior standing in engineering. Sets and set algebra; sample spaces; combinatorics; absolute and conditional probability; discrete and continuous random variables; probability distribution, increment, and density functions; Chebyshev's inequality; Laplace-Fourier transforms; law of large numbers; central limit theorems; discrete and continuous stochastic processes.

Mr. Meecham (F)


Mr. Meacham (F)

194A. Fundamentals of Computer-Aided Design and Manufacturing. (Formerly numbered Engineering 194A.) Prerequisite: junior standing in engineering or mathematics. Corequisite: course 194B. Basic course in computer-aided and manufacturing area. Covers foundations of computerized drafting, including primitives, tolerances, and major functions. Discusses descriptions and representations of solid objects; hardware, software, and available commercial systems. Discusses the data processing and numerical control aspects of computer-aided manufacturing.

Mr. Melkanoff (W)

194B. Computer-Aided Design Laboratory (2 units). (Formerly numbered Engineering 194B.) Laboratory, four hours. Prerequisite: junior standing in engineering or mathematics. Corequisite: course 194A. Students are taught system design in a computer-aided system, to draw and to design various parts and systems.

Mr. Melkanoff (W)

195L. Numerically Controlled Manufacturing Machinery Laboratory. Laboratory, six hours. Prerequisites: senior standing, consent of instructor. Individual investigation of a selected topic to be arranged with a faculty member. Enrollment request forms are available in department office. Occasional field trips may be arranged. May be repeated for credit.

Mr. Okrent (Sp)

199. Special Studies (2 to 3 units). Prerequisites: senior standing, consent of instructor. Individual investigation of a selected topic to be arranged with a faculty member. Enrollment request forms are available in department office. Occasional field trips may be arranged. May be repeated for credit.

Graduate Courses

201. Mechanical, Aerospace, and Nuclear Engineering Seminar (2 units). Prerequisite: graduate standing in engineering. Lectures on current research topics in mechanics and structures. May be repeated for credit. S/U grading.

Mr. Okrent


Mr. Melkanoff

21A. Convective Heat Transfer Theory. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 21A.) Prerequisite: course 131A. The convective heat transfer equation and its application to flow in a laminar and turbulent, incompressible and compressible flows. Internal and external flows; free convection. Variable wall temperature; effects of variable fluid properties. Analogies among convective and conductive processes. Mr. Calton (Sp)


Mr. Calton (Sp)


Mr. Dhir (W)

21D. Application of Numerical Methods to Transport Phenomena. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 21D.) Prerequisite: course 132A or consent of instructor. Numerical techniques for solving selected problems in heat and mass transfer. Applications include free convection, boundary layer flow, two-phase flow, separated flow, flow in porous media. Effects of concentration and temperature gradients, chemical reactions, radiation, electro and magnetic fields.

Mr. Okrent (Sp)


Mr. Dhir (Sp)

21F. Advanced Heat Transfer. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 21F.) Prerequisite: course 132A. Advanced topics in heat transfer from the current literature. Linear and nonlinear theories of thermal and hydrodynamic instability; variational methods, nonequilibrium flow models. Interfacial heat and mass transfer. Mr. Calton (Sp)

22A. Advanced Mass Transfer. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 22A.) Prerequisites: courses 131A, 132A. The formulation of the general convective heat and mass transfer problem, including equilibrium and nonequilibrium chemistry. Similar and nonsimilar solutions for laminar flows; solution procedure for turbulent flows. Multi-component diffusion, Application to the hyperbolic boundary layer, ablation and transpiration, cooling combustion.

Mr. Calton (W)


Mr. Charwat (Sp)

23A. Topics in Thermal Design. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 23A.) Prerequisites: courses 131A, 132A. Conductive behavior of materials confined to reactors, designs such as heat exchangers, heat shields, heat pipes, thermal environment control, spacecraft temperature control, and solar thermal conversion. Presentations are made by the staff and occasionally by invited off-campus specialists.

Mr. Mecklenburg (Sp)

23A. Nuclear Reactor Theory. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 23A.) Prerequisites: courses 135, M192A. The underlying physics and mathematics of nuclear reactor design. Diffusion theory, chemical reactions, reactor kinetics, slowing down and thermalization, multigroup methods, introduction to transport theory.

Mr. Pomraning (W)


Mr. Conn, Mr. Pomraning

23C. Methods of Nuclear Reactor Analysis. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 23C.) Prerequisite: course 235A or consent of instructor. The analysis of nuclear reactor systems by approximation techniques, analytical methods, and numerical methods. A synthesis of reactor physics and engineering, with applications to various systems.

Mr. Okrent

236A. Nuclear Fuel Element Behavior. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 236A.) Prerequisite: course 136A. Void swelling of cladding materials, fuel swelling due to fission gases, pore migration and fuel restructuring, fission gas release, computer codes for swelling and gas release, densification, and hot pressing, modeling of the structural behavior of fuel elements and assemblies.

Mr. Okrent

236B. Radiation Damage in Reactor Materials. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 236B.) Prerequisite: course 136C. Fundamentals of radiation damage; energy loss and Lindhard's theory, alom displacement, the collision cascade; focusing and channeling concepts, computer simulations and experiments on cascades, damage simulation techniques for material testing, bulk effects of radiation; void swelling and irradiation creep, surface effects; blistering and sputtering of surface elements. Mr. Ghorinem

236C. Nuclear Reactor Safety. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 236C.) Prerequisite: course 135B. Safety-related characteristics of thermal and fast nuclear power reactors; design criteria and siting considerations; methods for the evaluation of risk; fault/event tree analysis; dependent failures; data evaluation; decision theory; applications to various systems (e.g., nuclear power plants, nuclear power system design, etc.). Mr. Apostolakis

236D. Probabilistic Risk Assessment. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 236D.) (Not the same as Chemical, Nuclear, and Thermal Engineering 236D prior to Winter Quarter 1982.) Prerequisite: course 136A. Basic concepts of risk benefit; low probability — high consequence events; methods for the evaluation of risk; fault/event tree analysis; dependent failures; data evaluation; decision theory; applications to various systems (e.g., nuclear power plants, nuclear power system design, etc.). Mr. Apostolakis
238E. Advanced Problems in Reactor Design. (Formerly numbered Chemical, Nuclear, and Thermal Engineering 238E.) Prerequisites: at least four courses from 235A, 235B, 235C, 236A, 236B, 236C, 236D. Methods of attack and solution for advanced problems in reactor design, including fuel elements, reactor cores, pulsing, thermal, fuel management, thermal-hydraulics, shielding, and safety. Mr. Okrent (Sp)


M237C. Fusion Reactor Technology and Design. (Formerly numbered M252.) (Same as Electrical Engineering M214E.) Prerequisite: course 135A or consent of instructor. Reactor design, both magnetic and inertial. Operating conditions, power balance, system Q. Drivers for inertial confinement, magnet systems; blanket and shield design and analysis, induced radioactivity, tritium breeding and processing; radiation damage effects, stability of reactors for electricity production or as hybrid systems. Mr. Conn (Sp)


239BA-239BZ. Seminar: Current Topics in Nuclear and Thermal Engineering (2 to 4 units each). (Formerly numbered Chemical, Nuclear, and Thermal Engineering 239D-239DZ.) Prerequisite: consent of instructor. Lectures, discussions, student presentations, and projects in areas of current interest in transport phenomena. May be repeated for credit. S/U grading.

239BA-239FZ. Seminar: Current Topics in Nuclear and Thermal Engineering (2 to 4 units each). (Formerly numbered Chemical, Nuclear, and Thermal Engineering 239D-239DZ.) Prerequisite: consent of instructor. Lectures, discussions, student presentations, and projects in areas of current interest in nuclear engineering. May be repeated for credit. S/U grading.


239HA-239HZ. Special Topics in Fusion Physics, Engineering, and Technology (2 to 4 units each). (Formerly numbered 253AA-253GZ.) Prerequisites: consent of instructor, additional prerequisites for each offering as announced in advance by the department. Advanced treatment of subjects chosen from recent developments in fusion technology, including experiments such as instabilities in burning plasmas, alternate fusion confinement concepts, inertial confinement fusion, fusion-fission hybrid systems, and fusion reactor safety. May be repeated for credit with topic change. 239J. (Formerly numbered M251.) Prerequisite: course 150A or consent of instructor. The course develops and applies the fundamental theorems of fluid dynamics. Ideal fluids, potential flow, vortex motion, and viscous flow are treated. The history of fluid dynamics is illustrated, with problems drawn from mechanics, aerodynamics, and geophysics. Mr. Kelly (F)

239B. Viscous and Turbulent Flows. Prerequisite: course 150A or consent of instructor. The course applies the fundamental principles of fluid dynamics to the study of fluid resistance. States of fluid motion are discussed in order of advancing Reynolds number; wakes, boundary layers, instability, transition, and turbulent shear flows. Mr. Kelly, Mr. Monkewitz (W)

250C. Compressible Flows. Prerequisite: course 150A or 150B or consent of instructor. 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. Mr. Charwat (Sp)

251A. Stratified and Rotating Fluids. Prerequisite: course 150A or equivalent or consent of instructor. Fundamentals of fluid flows with density variations or rotation, illustrated by examples with environmental, geophysical, or technical importance. Linear and finite amplitude wave motion. Flow past bodies; blocking phenomena. Viscous effects. Instabilities. Turbulent shear flows, wakes, plumes, and gravity currents. Mr. Kelly

251B. Marine Hydrodynamics. Prerequisite: courses 150A, 150B, and 150B, or equivalent, or consent of instructor. Basic hydrodynamics; small amplitude waves; second-order effects on wakes; wind waves; internal waves; the Earth's tides. Mr. Meecham (F)

251C. Fluid Dynamics of Pollution. Prerequisite: course 150A or consent of instructor. The course is devoted to the study of the effects of pollution on fluid flows. A variety of disciplines is included, properties of various disciplines the fluid mechanical aspect of pollution problems. The lectures discuss in depth the fluid dynamics of photochemical smog, oil slicks, and pollution in waterways. Mr. Liu (Sp)

252A. Stability of Fluid Motion. Prerequisite: course 150A or equivalent or consent of instructor. Mechanisms by which laminar flows can become unstable and lead to turbulence of second-order motions. Linear stability theory; thermal, centrifugal, and shear instabilities; boundary layer instability. Nonlinear aspects: sufficient criteria for stability, subcritical instabilities, supercritical states, transition to turbulence. Mr. Kelly

252B. Statistical Theory of Turbulence. Prerequisite: course 150A or consent of instructor. The course develops statistical methods of wide utility in engineering, then applies them to turbulent flows. Topics include stochastic processes, kinematics of turbulence, energy decay. Kolmogorov similarity, analytical theories, and origins of Reynolds stresses. Mr. Meecham (Sp)

253A. Advanced Engineering Acoustics. Advanced studies in engineering acoustics, including three-dimensional wave propagation; propagation in bounded media; Ray acoustics; attenuation mechanisms in fluids. Mr. Meemach (F)

253B. Fundamentals of Aeroacoustics. Prerequisite: course 150A or consent of instructor. Detailed discussions of wave propagation in both linear and non-linear systems, layered and moving media, multiple reflections. Inhomogeneous wave equation. Monopole, dipole, quadrupole source fields from scattering into inhomogeneous media, and turbulence; Lighthill's sound radiation sources. Similarity methods. Selected detailed applications. Mr. Meemach (Sp)

253C. Sound and Vibration. Prerequisite: consent of instructor. Theoretical analysis of the interaction of sound and structures, acoustic radiation by finite fluid layers and walls; structural wave propagation; multidimensional random processes using wave number and frequency space; response and radiation of infinite and finite structures; statistical energy analysis. Mr. Meemach (Sp)

254A. Special Topics in Aerodynamics. Prerequisites: courses 150A, 150B, M192A, 192B, and 192C, or equivalent, or consent of instructor. Special topics of current interest in advanced aerodynamics. Examples are transonic flow, hypersonic flow, sonic booms, and unsteady aerodynamics. Mr. Friedmann (W)

254A. Advanced Dynamics. Prerequisites: courses 155 and M169A, or consent of instructor. Variational principles and Lagrange's equations. Kinematics and dynamics of rigid bodies; procession and nutation of spinning bodies. Mr. Mingori (F)

255B. Mathematical Methods in Dynamics. Prerequisite: course 255A. Concepts of stability; state-space interpretation; stability determination by simulation, linearization, and Liepunov's direct method; Hamiltonian and Liapunov function; nonlinear autonomous systems; averaging and perturbation methods of nonlinear analysis; parametric excitation and non-linear resonance. Application to mechanical systems. Mr. Meecham (Sp)

256A. Mechanics of Deformable Solids. Prerequisites: courses 155A and 156A, or consent of instructor. Kinematics of deformation, strain tensors, invariance, compatibility; conservation laws; stress tensors; equations of motion; boundary conditions; constitutive equations: general theory, linearization, anisotropy; reciprocity linear isotropic elastic problems, plane and generalized plane problems; dynamical problems. Mr. Mal, Mr. Westmann (F)

256C. Plasticity, Creep, and Thermal Stress. Prerequisite: course 156A or 156B, or consent of instructor. Incremental plastic stress-strain relations. Stress-strain-time relations commonly used in structural analysis. Unified treatment of plastic strain, creep strain, and thermal strain. Plastic and creep analyses of beams, columns, shafts, frames, and plates. Mr. Westmann (Sp)

256F. Analytical Fracture Mechanics. Prerequisites: courses 156A, 156A, or 156B, and Materials Science and Engineering 243A. Review of modern fracture mechanics, elementary stress analyses; analytical and numerical methods for calculation of crack tip stress intensity factors; engineering applications in stiffened structures, pressure vessels, plates, and shells. Mr. Westmann

M257A. Elastic Wave Propagation I. (Same as Earth and Space Sciences M224A.) Prerequisite: course 156A or 156B, or consent of instructor. Review of elasticity theory; elastic waves in unbounded media; reflection and refraction of plane elastic waves; surface waves and guided waves in multilayered media; waves generated by concentrated loads; radiation from dislocations; attenuation; representative applications in engineering and seismology. Mr. Mal (F)

M257B. Elastic Wave Propagation II. (Same as Earth and Space Sciences M224B.) Prerequisite: course M257A. Diffraction and scattering of elastic waves by isolated cracks and inclusions; normal modes and variational methods for the vibration of finite elastic bodies; dynamic theories of fracture; representative applications in engineering and seismology. Mr. Mal (W)

SCHOOL OF ENGINEERING AND APPLIED SCIENCE / Mechanical, Aerospace, and Nuclear Engineering / 367
258. Experimental Techniques in Fluid Mechanics and Thermal Science. Prerequisite: consent of instructor. Survey of wind tunnels and other facilities for research in fluid mechanics, aerodynamics, and heat transfer, with emphasis on analysis of their critical design features. Modern sensors, instruments, and measurement techniques. Signal processing and storage by analog and digital methods.

Mr. Charwat

259A. Seminar on Advanced Topics in Fluid Mechanics. Prerequisite: consent of instructor. Advanced study of topics in fluid mechanics, with intensive student participation involving assignments in research problems leading to a term paper or an oral presentation (possible help from guest lecturers). Mr. Charwat (W)

259B. Seminar on Advanced Topics in Solid Mechanics. Prerequisite: consent of instructor. Advanced study in various fields of solid mechanics on topics which may vary from term to term. Topics cover dynamics, elasticity, plasticity, and stability of solids.

Mr. Westman (W)

260AA-260ZZ. Seminar: Current Topics in Mechanical Engineering (2 to 4 units each). (Formerly numbered 259AA-259ZZ.) Prerequisite: consent of instructor. Lectures, discussions, and student presentations and projects in areas of current interest in mechanical engineering. May be repeated for credit. S/U or letter grading.

262A. Fluid Mechanics. (Formerly numbered Engineering Systems 262A.) (Same as Civil Engineering M262A.) Prerequisite: course M169A or consent of instructor. Response of structural and mechanical systems to random vibrations. Stationary and nonstationary excitations. Response of systems with random parameters. Discrete and continuous linear systems. Applications to earthquake, wind sway of buildings, gust response, vibrations due to inaccurate firetrucks. Mr. Melkanoff (F)

269D. Aeroelastic Effects in Structures. Prerequisite: course M269A. Presentation of field of aeroelasticity from unified viewpoint applicable to fixed structures, compliant structures, and control surfaces of modern aircraft. Emphasis on use of computer aided techniques for analysis of real structures. Mr. Leondes (W)

271A. Dynamic Systems Optimal Control. (Formerly numbered Engineering Systems 271A.) Prerequisite: course 171C or consent of instructor. Optimal control problem formulation. Performance criteria, feedback elements, and other complex components and subsystems. Various fields. Mr. Mingori (F)


271D. Seminar and Special Topics in Dynamic Systems Control. (Formerly numbered Engineering Systems 271D.) Prerequisite: consent of instructor. Seminar on current research topics in dynamic systems modeling, control, and applications. Topics selected from process control, differential games, nonlinear estimation, adaptive filtering, industrial and aerospace applications, etc. Mr. Leondes (Sp)

279A. Structural Analysis and Design. (Formerly numbered Engineering 279A.) Prerequisites: Mathematics 131A, 132, 134A and 262A. Prerequisite: consent of instructor. Applications of basic mathematical methods to structural analysis and design. Mr. Gibson (W)

279B. Advanced Dynamics of Structures. Prerequisites: course M269A. Civil Engineering 265A. Analysis of linear and nonlinear response of structures to dynamic loadings. Stresses and deflections in structures. Structural damping and self-induced vibrations. Mr. Friedman (W)

279C. Introduction to Probabilistic Dynamics. (Formerly numbered 269C.) (Same as Civil Engineering M269C.) Prerequisite: course M169A. Response of structural and mechanical systems to random vibrations. Stationary and nonstationary excitations. Response of systems with random parameters. Discrete and continuous linear systems. Applications to earthquake, wind sway of buildings, gust response, vibrations due to inaccurate firetrucks. Mr. Westman (Sp)

285A. Computer-Aided Manufacturing. Prerequisites: courses 94, 163A, 163L, 195L. Analysis of the usage of the computer in manufacturing. Manufacturing information systems; group technology; computer-aided manufacturing process planning; flexible manufacturing systems. Mr. Melkanoff (F)

295B. Computer-Integrated Manufacturing. Prerequisite: course 295A. Systems analysis and design of computer-integrated manufacturing, including automated factories and flexible manufacturing systems.

Mr. Melkanoff (W)

297. Seminar in Manufacturing Engineering. Lecture, two hours. Prerequisite: consent of instructor. Teams of students perform detailed system analysis and plan the design of manufacturing engineering systems at various manufacturing plants. In Progress grading.

Mr. Melkanoff (W, 497A; Sp, 497B)


Mr. Okrent (F, W, Sp)

497A-497B. Field Project in Manufacturing Engineering. Lecture, two hours. Prerequisite: consent of instructor. Teams of students perform detailed system analysis and plan the design of manufacturing engineering systems at various manufacturing plants. In Progress grading.

Mr. Melkanoff (W, 497A; Sp, 497B)

596. Directed Individual or Tutorial Studies (2 to 8 units). Prerequisites: graduate standing in mechanical, aerospace, and nuclear engineering, consent of instructor. Petition forms to request enrollment may be obtained from the Assistant Dean, Graduate Studies. Supervised investigation for M.S. candidates, including thesis preparation for M.S. candidates. S/U grading.

597A. Preparation for M.S. Comprehensive Examination (2 to 12 units). Prerequisites: graduate standing in mechanical, aerospace, and nuclear engineering, consent of instructor. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

597B. Preparation for Ph.D. Preliminary Examinations (2 to 16 units). Prerequisites: graduate standing in mechanical, aerospace, and nuclear engineering, consent of instructor. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination (2 to 16 units). Prerequisites: graduate standing in mechanical, aerospace, and nuclear engineering, consent of instructor. 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 units). Prerequisites: graduate standing in mechanical, aerospace, and nuclear engineering, consent of instructor. 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 units). Prerequisites: graduate standing in mechanical, aerospace, and nuclear engineering, consent of instructor. Usually taken after student has been advanced to candidacy. S/U grading.

368 / Mechanical, Aerospace, and Nuclear Engineering / SCHOOL OF ENGINEERING AND APPLIED SCIENCE
Schoolwide Engineering

6426 Boelter Hall, 825-2473

Professor
Allen B. Rosenstein, Ph.D.

Emeritus Professors
Edward P. Coleman, Ph.D.
J. Morley English, Ph.D.
Warren A. Hall, Ph.D.
Alfred C. Ingersoll, Ph.D.
Herbert B. Nottage, Ph.D.
Russell L. Perry, M.E.
Arthur F. Pillsbury, Engineer
Bonham Spence-Campbell, E.E.

Adjunct and Visiting Professors
Don Lebell, Ph.D., Adjunct Professor
Charles H. Wilcox, Ph.D., Visiting Professor

Visiting Lecturer
Iris Firstenberg, Ph.D.

Bachelor of Science in Engineering

The curriculum leading to the Bachelor of Science degree in Engineering has a total of four major field programs. Three of these (aerospace engineering, materials science and engineering, and mechanical engineering) are described above under the individual departments.

Bioengineering is a schoolwide program which does not fall under any specific department. A description and requirements for the B.S. degree in this program follows.

Bioengineering Major Field

Area I

Area I is an area of specialization within the context of the major fields of chemical engineering, mechanical engineering, etc., and is designed to provide (1) engineering fundamentals and (2) specialization in a basic engineering discipline combined with bioengineering and life science courses.

This area of specialization within bioengineering is intended for students who wish to emphasize a traditional engineering discipline (e.g., mechanical, electrical, chemical) while preparing for a possible career and/or graduate study in bioengineering.

Course requirements are as follows:

(1) Eight recommended core courses: Chemical Engineering M105A (or Mechanical, Aerospace, and Nuclear Engineering M105A), Civil Engineering 108, Electrical Engineering 100, 121C, Materials Science and Engineering 14, Mechanical, Aerospace, and Nuclear Engineering 102, 103, and Chemical Engineering M105D or Mechanical, Aerospace, and Nuclear Engineering M105D (for applied biochemistry) or Engineering 106B (for biomechanical and biotechnology).

If you substitute courses for any of the recommended courses listed above, you must satisfy the engineering curriculum core requirements as follows:

The core consists of eight courses (32 units) selected from the five subject areas listed below. The minimum and maximum number of units allowed is given for each.

- Computer Processes (0 to 4 units): Electrical Engineering 124A.
- Electrical Sciences (4 to 8 units): Electrical Engineering 100, 100B.
- Mechanics (8 to 12 units): Civil Engineering 108, Mechanical, Aerospace, and Nuclear Engineering 102, 103.
- Systems (4 to 8 units): Engineering 106B, Electrical Engineering 121C, 127B.
- (2) Civil Engineering 106A (satisfies the engineering economics requirement); one upper division mathematics course selected in consultation with your faculty adviser; and the following courses, depending on your subject area:
  - Biocybernetics: Civil Engineering 160, Computer Science 171, 196A, M196B, Electrical Engineering 110A, 116A, 120A, Materials Science and Engineering M107A, Mechanical, Aerospace, and Nuclear Engineering 171A or Electrical Engineering 122A, Mechanical, Aerospace, and Nuclear Engineering 171C or Electrical Engineering 128A; Electrical Engineering 100L, Biology 166 (two units of lab credit), and one additional laboratory course (satisfy the laboratory requirement).
  - Biomechanics: Civil Engineering 160, 165A, 165B, 166, 169A (or Mechanical, Aerospace, and Nuclear Engineering M169A), Computer Science 196A, M196B, Mechanical, Aerospace, and Nuclear Engineering 162B, Kinesiology 122, Physiology 101; eight laboratory units (Civil Engineering 157B and Mechanical, Aerospace, and Nuclear Engineering 157 are recommended; an additional two-unit laboratory course must be taken if course 157B is selected).

Area II

Area II is a multidisciplinary major field consisting of a core of courses in bioengineering and the physical and life sciences, and provides (1) engineering fundamentals, (2) breadth in the physical and biological sciences, (3) breadth in several bioengineering disciplines. This area of specialization within bioengineering is intended for students desiring broad exposure to these three subject areas in preparation for a career and/or graduate study in bioengineering, biological science, behavioral science, or medical or dental school. This area satisfies all the life science requirements, except biological chemistry, for the Ph.D. program in Bioengineering at UCLA.

Course requirements are as follows:


If you substitute courses for any of the recommended courses listed above, you must satisfy Biotechnology: Civil Engineering 174A, Computer Science 196A, M196B, Materials Science and Engineering M107A, 180B, Mechanical, Aerospace, and Nuclear Engineering 171A, 180A, 193B or Psychology 150, and two courses from Psychology 115, 120, Public Health 100B, 100C, 100D, 110; eight laboratory units (Engineering 106C and 106D are recommended).

(3) Required technical elective courses: Chemistry 11C/11CL, 21, 23, and 25 (may be used to satisfy the life science requirement) for applied biochemistry and biocybernetics; Kinesiology 14 and one free elective course for biostuctural mechanics.

(4) English 3; Chemistry 11A, 11B/11BL; Computer Science 10C or 10F; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 8A, 8B/8BL, 8C/8CL, 8D/8DL; one life science elective course.

(5) A minimum of seven courses from the humanities, social sciences, and/or fine arts approved list (at least three must be upper division; at least three — with two upper division — must be in the same academic department or otherwise reflect coherence with respect to subject matter; and one must satisfy the engineering and science in society requirement, which may also be satisfied by one of the free elective courses).

(6) Three free elective courses, which must be used to satisfy the required technical elective courses for the applied biochemistry, biocybernetics, and biostuctural mechanics subject areas.
the engineering curriculum core requirements as follows:

The core consists of eight courses (32 units) selected from the five subject areas listed below. The minimum and maximum number of units allowed is given for each.

**Computer Processes** (0 to 4 units): Electrical Engineering 124A.

**Electrical Sciences** (4 to 8 units): Electrical Engineering 100, 106B.

**Mechanics** (8 to 12 units): Civil Engineering 108, Mechanical, Aerospace, and Nuclear Engineering 102, 103.

**Systems** (4 to 8 units): Engineering 106B, Electrical Engineering 121C, 127B.


(2) Civil Engineering 160, Computer Science 171, 196A, M196B, Electrical Engineering 110A, 116A, Materials Science and Engineering M107A, Mechanical, Aerospace, and Nuclear Engineering 171A or Electrical Engineering 122A; Electrical Engineering 100L, Biology 166 (two units of lab credit), and four additional laboratory units; Civil Engineering 106A or any other course that satisfies the engineering economics requirement; Electrical Engineering 120A or Mathematics 152A (satisfies the mathematics requirement); two elective courses selected in consultation with a bioengineering faculty adviser (e.g., acoustics, control systems, electronics, materials, computer science, mechanics, biotechnology, biocytnermics, etc.).

(3) A minimum of six life science core courses, including Biology 5 and 7 (may be used to satisfy the life science requirement), 166, Chemistry 21, 23, and at least one course from Chemistry 25 (may be used to satisfy the life science requirement), Kinesiology 14, Psychology 115; Chemistry 11C/11CL are required technical electives.

(4) English 3; Chemistry 11A, 11B/11BL; Computer Science 10C or 10F; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 8A, 8B/8BL, 8C/8CL, 8D/8DL; one life science elective course.

(5) A minimum of seven courses from the humanities, social sciences, and/or fine arts approved list (at least three must be upper division; at least three — with two upper division — must be in the same academic department or otherwise reflect coherence with respect to subject matter; and one must satisfy the engineering and science in society requirement).

(6) Three free elective courses which must be used to satisfy the required technical electives and other required courses in the life science core.

**Graduate Study**

For information on graduate admission to the schoolwide engineering programs and requirements for the M.S., Engineer, and Ph.D. degrees and certificate of specializations, see "Graduate Study" at the beginning of this chapter.

**M.A.—Latin American Studies/ M.S.—Engineering**

The school and the Latin American Studies Program have established an articulated degree program through which students may complete requirements for the M.S. in Engineering and the interdepartmental M.A. in Latin American Studies. After successful completion of the program, students are awarded both degrees simultaneously. Articulated programs do not allow course credit to be applied toward more than one degree.

**Lower Division Courses**

11. **Patterns of Problem Solving.** An introduction to patterns of reasoning in the process of problem solution and decision making. Exposure to concepts, theories, and techniques in the analysis and synthesis of total systems in our complex technological civilization.

Mr. Rosenstein (F,W,Sp)

12. **Applied Patterns of Problem Solving.** Prerequisite: course 11. An application of the tools and methods discussed in course 11 to three specific problems of a social and technical nature.

Mr. Rubinstein (Sp)

**Upper Division Courses**


Mr. Rosenstein (F,W,Sp)

106C. **Experimental Design Laboratory.** Laboratory, eight hours. Prerequisite: course 106B or equivalent. Creative experimental projects for student design projects in any engineering domain where individual students have preparation and interest, exemplifying the professional method. Predicted idealized performance is compared to experimentally achieved realities. Student prize competition entries are encouraged.

Mr. O’Neill (W)

106D. **Engineering Systems Design Laboratory.** Recitation, one hour; laboratory, eight hours. Prerequisite: course 106C, advanced senior standing. Recommended: course 104. Similar to course 106C and normally a continuation thereof. Design projects generally emphasizing productivity, energy, environment, and process cost-benefit studies.

Mr. O’Brien (Sp)

109. **The Engineer and Society.** Prerequisite: senior standing. Selected lectures, discussions, oral and written reports related to creative engineering, its sociological and ecological impacts, present, future, and past relationships. Maximum student participation in topical selection and class structuring. Creativity and original thinking is emphasized.

Mr. O’Brien (F,W,Sp)


Mr. Rosenstein (F)

**Graduate Courses**

375. **Teaching Apprentice Practicum** (1 to 4 units).

Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

470A-470D. **The Engineer in the Technical Environment** (3 units each). Limited to students in the Engineering Executive Program. Theory and application of quantitative methods in the analysis and synthesis of engineering systems for the purpose of making management decisions. Optimization of outputs with respect to dollar costs, time, material, energy, information, and manpower. Includes case studies and individual project aids.

Mr. O’Neill (F,W,Sp)

471A-471B-471C. **The Engineer in the General Environment** (3 units, 3 units, 1½ units). Limited to students in the Engineering Executive Program. Influences of human relations, laws, social sciences, humanities, and fine arts on the development and utilization of technological advances.

Mr. O’Neill (F,W,Sp)

472A-472D. **The Engineer in the Business Environment** (3 units, 3 units, 1½ units). Limited to students in the Engineering Executive Program.

The 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 the firm, the community, and the nation, provided through cooperation and participation with California business corporations and government agencies. In Progress grading (credit to be given on completion of courses 472B and 472D).

Mr. O’Neill (F,W,Sp)

473A-473B. **Analysis and Synthesis of a Large-Scale System** (3 units each). Limited to students in the Engineering Executive Program. A problem area of modern industry or government is selected as a class project, and its solution is synthesized using quantitative tools and methods. The project also serves as a laboratory in organization for a goal-oriented technical group.

Mr. O’Neill (F,W,Sp)

495. **Teaching Assistant Training Seminar.** Prerequisite: graduate standing in engineering, appointment as a teaching assistant. Seminar on communication of engineering principles, concepts, and methods, preparation, organization of material, presentation, use of visual aids, grading, advising, and rapport with the students. S/U grading.

Mr. O’Neill (F)

501. **Cooperative Program** (2 to 8 units).

Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor, department chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in programs taken under cooperative arrangements with neighboring institutions. S/U grading.
Graduate School of Architecture and Urban Planning

Richard S. Weinstein, Dean

Professional education is the central concern of UCLA’s Graduate School of Architecture and Urban Planning (GSAUP). Our belief is that a small, high-quality school of architecture and urban planning can make a great contribution to professional education, under conditions of rapid professional change and experimentation. Programs can be started and ended readily and problems solved through informal means. It is important that our school functions as a community, and that is more readily achieved in a small school. Community has to be nourished; toward this end, we have encouraged measures ranging from democratic governance to a variety of schoolwide activities.

For a relatively young school, GSAUP enjoys an impressive position among the top schools in the country. It also enjoys a considerable international reputation. A noted regular faculty is supplemented by distinguished visiting faculty. The student body comes from around the world. Developed as a small school with an enrollment of 340, GSAUP encourages close interaction between faculty and student to maximize the educational experience.

To supplement the classroom experience and to help bring the public and the professional community into active relationship with the school, a series of public lectures and various exhibits are scheduled throughout the academic year. In addition, the school has created the Urban Innovations Group (UIG) as an independent, nonprofit clinic or practice arm where faculty and students undertake professional projects on a contract basis to provide opportunities for students to gain practical professional experience.
Graduate School of Architecture and Urban Planning

1317 Architecture, 825-3791

The Graduate School of Architecture and Urban Planning at UCLA offers programs of study leading to the degrees of Master of Architecture (M.Arch.), M.A. in Architecture/Urban Planning, Ph.D. in Architecture, and Ph.D. in Urban Planning. Currently, the school offers educational opportunities for a broad spectrum of careers, including a number that are not yet common in practice, but which reflect emerging social needs. It offers a choice of two major programs: Architecture/Urban Design and Urban Planning.

Architecture/Urban Design

B315 Architecture, 825-0525, 825-7857

Professors
Marvin Adelson, Ph.D.
Samuel Aroni, Ph.D., Acting Dean
Baruch Givoni, Ph.D.
Thomas S. Hines, Ph.D.
Lionel March, Sc.D.
Murray A. Milne, M.Arch.
William J. Mitchell, M.E.D., Program Head
Charles W. Moore, Ph.D.
Barton Myers, M.Arch.
Richard Schoen, M.Arch.
Robert Yudell, M.Arch.

Associate Professors
F. Eugene Kupper, M.Arch.
Jung Lang, Dipl.Arch., ETH.
Robin Liggett, Ph.D.
George Rand, Ph.D.
George Stiny, Ph.D., Associate Dean

Assistant Professors
Diane Favro, Ph.D.
Ben Refuerzo, M.Arch.

Lecturers
Berge Aran, Ph.D.
Charles Griggs, B.Arch.
Jeffrey Hamer, M.Arch.
Charles Jencks, Ph.D.
Anthony Lumsden, B.Arch.
Donald Mills, B.Arch.
John Rubie, M.Arch.
Robert Yudeli, M.Arch.

Adjunct Associate Professors
Franklin Israel, M.Arch.
Kuppataney Iyengar, M.Arch.

Adjunct Assistant Professors
Christopher B. Johnson, B.Arch.
Barton Phelps, M.Arch.
William Hubbard, M.Arch.

Scope and Objectives

Architecture/Urban Design at UCLA offers four degree programs tailored to the needs of different groups of students: M.Arch. I, M.Arch. II, M.A., and Ph.D.

M.Arch. I is a three-year first professional degree program which is accredited by the 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.

Master of Architecture I

Admission

The M.Arch. I program is open to students holding a bachelor's degree (or its equivalent) comparable in standards and content to a bachelor's degree from the University of California. Applications are accepted from students with a variety of backgrounds. No academic or experiential training in architecture is required, although many students have had experience in this field prior to admission.

Applicants are required to submit three letters of recommendation, academic transcripts, a statement of purpose, and a "creative" portfolio. No admission tests are required. In addition to the application for graduate admission, applicants should submit the "Departmental Supplement," available from the Admissions Office, Architecture/Urban Design, Graduate School of Architecture and Urban Planning, B315 Architecture, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

No in-depth specialization is required within the context of the M.Arch. I program. However, you are required to concentrate several elective courses within a single curricular area. A minimum of three elective courses must be taken within this curricular area, including two courses in theory and one studio application, during the second year of study.

Specializations are currently available in the following areas: urban design; policy, programming, and evaluation (including social building); technology (including energy conserving design); design theory and methods (including computer-aided design); history, analysis, and criticism of architecture.

Course Requirements

You must complete a minimum of 27 courses, at least 24 of which must be graduate courses. The total number of units required is 108. The required courses, listed below, must be taken in the sequence indicated.

First Year

Fall: Courses 411, 421, 191
Winter: Courses 412, 437, 431
Spring: Courses 413, 442, 432

Second Year

Fall: Courses 414, 433, 291, elective
Winter: Courses 415, 441, elective
Spring: Elective studio/project, plus two other electives

Third Year

Fall: Course 416, two electives
Winter: Elective studio, course 461, elective
Spring: Course 598A

Elective courses allow you to explore in depth specific subject areas and to gain exposure to a variety of topics. You are required to take a minimum of seven elective courses. At least four of these must be taken within the school.
During the second year at least two electives must be in preparation for undertaking a specific studio or project in the Spring Quarter of your second year.

If you can demonstrate that you already have adequate background in topics covered by specific required courses, you may petition to waive those courses and replace them with electives. However, permission to waive required courses does not reduce the minimum number of 27 courses required for the M.Arch. I degree nor does it reduce the nine-quarter residence requirement. The petition should be addressed to the faculty member responsible for that course and may be granted at the faculty member’s discretion, possibly by means of a special examination.

Students with undergraduate degrees in architecture or undergraduate degrees with majors in architecture may, at the end of their first quarter, petition the curriculum committee for advanced standing. You are then permitted to waive specified required courses and may enter second-year courses at the beginning of your second quarter. A petition for advanced standing should include a transcript documenting relevant prior academic work, a portfolio demonstrating level of design competence, and a plan showing how waived courses will be replaced by a program of elective work in specified areas of specialization. Advanced standing requires the concurrence of both the curriculum committee and the faculty member in charge of each specific course to be waived. It does not reduce the number of courses (27) required for the M.Arch. I degree nor does it reduce the nine-quarter residence requirement.

You must enroll in at least four and no more than eight units of Architecture and Urban Planning 596A. You may also apply eight units of course 596A toward the unit requirements for graduation with prior consent of your advisor. No more than eight units may be applied without consent of the curriculum committee; application of more than 16 units requires Graduate Division approval. A maximum of eight units of 596 courses taken outside the school may be applied toward graduation. All independent work will be graded on an S/U basis.

Thesis or Comprehensive Examination Plan

M.Arch. I students generally present a large-scale design project that functions as a design thesis at the end of their three-year course of study. Occasionally, students who have already demonstrated superior design skills will elect to do more research-oriented work instead. Because of the format required by the nature of an architectural presentation, the projects are all classified as "comprehensive examinations."

You should obtain faculty approval of project topics at least three months, and preferably six months, before presentation dates.

Master of Architecture II

Admission

The M.Arch. II program emphasizes advanced studies in architecture and requires that applicants have completed a five-year professional degree in architecture and hold a B.Arch. degree or the equivalent.

You must state your major area of specialization and your choice of the comprehensive examination or thesis option on your application, as you are admitted to a specific major and option and may change only by petition to the advanced graduate studies curriculum committee. A minimum of three academic quarters in residence is required. This is a full-time program, and you are expected to remain continuously in residence until all academic work is completed, unless a leave of absence is granted.

If your primary language is not English, you are required to score at least 580 on the Test of English as a Foreign Language (TOEFL). In addition, you must take the English Proficiency Examination on arrival at UCLA and, beginning in your first quarter of residence, take any required English courses. Because such courses may not be applied toward the minimum course requirement, you should expect to spend additional time in residence.

Major Fields

You are required to select your major area at the time of application to the program and must take a minimum of 24 units of coursework in that area. The six major areas include architectural design; urban design; policy, programming, and evaluation; technology; design theory and methods; and history, analysis, and criticism of architecture.

Course Requirements

A minimum of 36 units of coursework (normally four-quarter courses) is required. At least 24 units must be at the graduate level; the remaining 12 units may be either upper division or graduate courses. No more than eight units of 500-series courses may be applied toward the requirements for graduation.

Students in architectural design are required to complete at least 12 units of advanced design studio work plus 12 units of approved seminar courses.

Students in urban design must complete a year-long sequence of related urban design studio and seminar courses consisting of one studio and one seminar course each quarter.

Students in the other four major areas (policy, programming, and evaluation; technology; design theory and methods; history, analysis, and criticism of architecture) are required to complete an approved sequence of three core courses consisting of two lecture/seminar courses which establish substantive foundations and a project course (Architecture and Urban Planning 403) which explores applications, plus 12 units of elective courses in the major area.

There may be more than one approved core sequence in each of the areas. The curriculum committee establishes and publishes a list of approved core sequences, which is reviewed and revised as necessary on a yearly basis. In special cases you may propose core sequences not on the list for approval by the committee.

Thesis Plan

Under this plan you may submit either a written thesis or a design project. A three-person thesis committee must be established at least one quarter before submission of the thesis, and you must take eight units of Architecture and Urban Planning 598A, which may not be applied toward the minimum course requirement. The thesis may, in exceptional cases, be presented after three quarters in residence, but you should normally expect to take from four to six quarters to complete the thesis plan. The thesis must be submitted within two years after entry into the program.

Comprehensive Examination Plan

Under this plan you are required to establish a comprehensive examination chair at least one quarter before taking the examination and to receive approval of an examination topic from the curriculum committee. You are then required to take four units of Architecture and Urban Planning 597A, which may not be applied toward the minimum course requirement. The examination consists of a research paper or design project on the approved topic, which is to be publicly presented and defended after the completion of all required coursework, usually at the end of the Spring Quarter, or at any point up to 12 months later. The faculty examination committee votes on acceptance or rejection. In the event of rejection, you may repeat the examination once.

Master of Arts in Architecture/Urban Planning

Admission

This program offers an academic degree and prepares students to do specialized research or teaching in fields related to the architectural profession. Applicants are required to hold a bachelor’s degree (or its equivalent) comparable in standards and content to a bachelor’s degree from the University of California. They should possess the experience and knowledge that would allow them to do advanced research in whatever aspect of architecture they plan to explore within the context of the master’s program.

Applicants are required to submit three letters of recommendation, academic transcripts, a statement of purpose, and a "creative" portfolio.
Ph.D. in Architecture

Admission

Applicants must hold a bachelor's degree from an accredited college or university. It is anticipated that most applicants will have completed a first professional degree in architecture (a five-year B.Arch. or a professional M.Arch. degree). Students with degrees in other fields are also encouraged to apply but may, at the discretion of the Ph.D. program committee, be required to complete specific coursework as a condition of admission.

Applicants are required to submit three letters of recommendation, academic transcripts, a statement of purpose, a proposed program of studies, a short biographical resume, and examples of research and/or creative work. An interview may also be required.

Applicants whose native language is other than English are required to pass the Test of English as a Foreign Language (TOEFL) before entering.

Criteria considered for admission include (1) evidence of capacity for original scholarship and research in architecture, and ability to achieve eminence in the field; (2) an outstanding academic record, including grades (3.5 minimum GPA), Graduate Record Examination (GRE) scores, and references; (3) demonstration in the work submitted of adequate communication skills, particularly writing skills; (4) presentation of a clear and realistic statement of purpose.

Preliminary Evaluation of Research Skills:

Students who have any background deficiencies in research skills essential for work in their chosen areas of Ph.D. specialization (e.g., mathematics, statistics, or computing) are required to round out their knowledge early in their residence. The Ph.D. program committee conducts a formal evaluation of each student at an early stage to assure adequacy of research skills. You may apply for this evaluation no earlier than your second quarter in residence, and no later than the fourth quarter. In order to undergo this evaluation you must have made up any background deficiencies and present a research paper or other evidence of capacity for original work.

If you are unable to satisfy the committee of the adequacy of your research skills, you will either be given specific advice on how to make up remaining deficiencies and apply for reevaluation at a later date, or else be advised to leave the program. If you do not satisfy the committee by the end of the sixth quarter, you will be subject to termination from the program.

Major Fields

Students are required to undertake programs of study that include one major area selected from the following: policy, programming, and evaluation; technology; design theory and methods; and history, analysis, and criticism of architecture.

Majors outside these areas, or combinations of some of them, may be undertaken, subject to the approval of the Ph.D. program committee if supported by qualified faculty members willing to provide the necessary instruction and guidance.

Minor Field Requirement

You are required to include in your program of study at least one minor field, which must be outside the Architecture/Urban Design Program (i.e., outside the school or within the Urban Planning Program). The objectives of the minor field requirement are to assure adequate academic breadth in your preparation and to encourage participation in the general intellectual life of the University. Students planning their minor field courses are advised accordingly.

The normal method of demonstrating competence in the minor field is to complete at least 16 units of coursework, which represents a unified course of study in that field, with a grade of B or better. If a qualified Architecture/Urban Design faculty member is willing to provide the necessary supervision, the Ph.D. program committee may accept an alternative method of completing this requirement (e.g., a substantial research project).

Mathematics, Computing, or Foreign Language Requirement

You are expected to develop adequate skills in mathematics, computing, or foreign languages, as appropriate to your field of specialization, and are strongly advised to complete this requirement as early as possible. One of the following is required.

(1) Proficiency in mathematics and computing as demonstrated by passing an approved group of four graduate or upper division courses in mathematics, statistics, and/or computing with a grade of B or better. The courses must not overlap in content and normally require prerequisites which may not be applied toward the four-course requirement.

(2) Satisfactory reading knowledge of two foreign languages relevant to your field of specialization (a GSFLT score of 500 or higher).

(3) Superior knowledge of one foreign language relevant to your field of specialization (a GSFLT score of 700 or higher).

With approval of the Graduate Division, English may be used to satisfy the foreign language requirement if your language of education is not English.

Courses applied toward this requirement may not also be applied toward a major or minor field requirement.
Course Requirements

Generally you are required to take sufficient coursework to provide adequate preparation for the qualifying examination and the dissertation. Each student in the program is required to take at least 24 units of coursework and complete four quarters in residence and 48 units of coursework. All other candidates are required to complete six quarters in residence and 72 units of coursework. Half of the units must be graduate courses in architecture/urban design, and an overall GPA of 3.0 or better must be maintained. In exceptional cases, and with prior approval of the Ph.D. program committee, upper division courses may be applied toward these requirements. At least 32 units must be in 200-series courses.

Each of the major field core sequences of three to five courses includes one project course (Architecture and Urban Planning 403), which focuses on the practical application of research results to architectural problems and provides an opportunity to explore interrelations between the research and professional concerns of the field.

Students who are admitted to the Ph.D. program without having the background of a professional degree in architecture are required to take at least 24 units of basic professional courses (400 series) in architecture approved by the Ph.D. program committee. No more than eight units of course 598A may be applied toward degree requirements, but eight units of course 597A and as many units of course 599A as necessary may be applied.

Qualifying Examinations

After successful completion of the preliminary evaluation of research skills, the mathematics, computing, or foreign language requirements, and the course requirements, you may apply to take the qualifying examinations. They consist of a comprehensive written examination in the major field, a written examination in the minor field (this may be waived under certain circumstances), and an oral examination focusing primarily on your proposed dissertation. The qualifying examinations should be completed in one quarter and must not extend over more than two quarters.

The major and minor field examinations are conducted by a five-member examination committee. The written examination in the major field is a substantial exercise followed by an oral presentation to the committee. The work must demonstrate your ability to teach an introductory course in the field and contribute to the progress of the field through scholarship and research. The written examination in the minor field is a short exercise and may be waived for candidates who hold a recognized master’s degree in the field in which the minor is located, or at the discretion of the examination committee on the basis of outstanding grades (at least two A grades out of the four minor field courses).

The University Oral Qualifying Examination, conducted by the doctoral committee, takes place after successful completion of the two written qualifying examinations. It explores your proposed dissertation topic and your ability to undertake the proposed work successfully. After passing the oral examination, you are advanced to candidacy (the C.Phil. degree is not awarded) and may begin work on your dissertation.

Final Oral Examination

The examination involves a defense of the completed dissertation before the doctoral committee.

Upper Division Courses

187. Planning and Designing Our Cities. An introduction to urban planning and urban design, with emphasis on methods and tools used in practice. Starting with an overview of the planning field, the course addresses itself to physical planning for redevelopment, for projects in expanding areas, and for new towns. Lectures (with illustrative examples), field trips, and presentation of the students' own projects create the framework for expanding the understanding of the urban planning and design process.

Mr. Kamnitzer

189. Premodern and Postmodern Architecture. Consideration of 19th-century revivalism and the response of architects to a growing historical awareness. Issues of eclecticism within the beaux arts and art nouveau movements are studied. These same themes are reconsidered in terms of the postmodern era.

Mr. Jencks (W)

190. The Human Environment: An Introduction to Architecture and Urban Planning. The course aims to introduce students to the kinds of problems that arise in creating and maintaining an environment for urban activities, and the approaches and methods of architecture and urban planning in helping to cope with such problems. Students are exposed to the complexities involved in giving expression to human needs and desires in the provision of shelters and movement systems, to the possibilities and limitations of technology and building forms, and to the issues involved in relating the human-made to the natural environment. Students are encouraged to comprehend the major urban issues both as citizens and as potential technical experts.

Mr. Kamnitzer

191. Modern Architecture. A brief examination of the tenets of Western architecture after the Renaissance, the accelerating eclecticism of the 19th century, the basis of the revolutionary movements of the 20th century in Germany, Holland, Austria, Italy, France, Russia, and the United States, and the subsequent extension and rejection of those movements after World War II. Though the "International Style" is the central figure of this drama, its ancestors occupy the stage as well.

Mr. Jencks (W)

Graduate Courses

201A. Architectural Theory (2 to 4 units). Lecture, three hours. Varying present-day and historical descriptive and normative frameworks for the discussion of architecture and its relation to other aspects of the environment. The effects of literary, art, and other forms of criticism on architectural theory. Epochs and styles, ideologies, and social settings for architecture.

203A-203B. Decision Making in Planning and Design. Lecture, three hours. Statistical decision theory and methods of decision analysis are used for coping with different degrees of future uncertainty in planning; nature of models for rational behavior in presence of conflicts of interest; individual and group decision making under uncertainty.

Mr. Adelson

204. Imaging the Future. Lecture, three hours. Introduction to social and technological forecasting, including nature and limitations of forecasting, ideology and values in forecasting, review of integrative forecasting techniques, and the role of forecasting in environmental planning, design, and management processes.

Mr. Adelson

219. Special Topics in the Built Environment (2 to 8 units). Lecture, three hours. Seminar on topics in the built environment selected by the faculty. May be repeated for credit.

224. Methodology: Design Theory. Lecture, three hours. A survey of the literature on systematic methods and design, including problem solving, information handling, artificial intelligence, and decision making in the design process. May be repeated for credit.

Mr. Stiny (F, W)

226A. Computer Applications in Architecture and Urban Planning I. Lecture, three hours. Prerequisite: an introductory course in computer programming (course 227A, Management 404, or equivalent). The logic of problem solving using the computer, with emphasis on writing and executing programs specifically applicable to architecture, urban design, and planning. Two computer languages are introduced: FORTRAN IV and PL/I.

Ms. Liggett

226B. Computer Applications in Architecture and Urban Planning II. Lecture, three hours. Prerequisite: course 226A or equivalent. Seminar on advanced computing techniques and modeling, with emphasis on data structures and the fields of architecture and urban planning. The course uses the PL/I programming language and assumes proficiency in that language.

Ms. Liggett

227A. Computer Graphics. Discussion. Three hours. Prerequisite: consent of instructor. Assuming a basic familiarity with computer programming, the course provides an introduction to the theory, techniques, and applications of computer graphics in architecture. It consists of a series of lectures/seminars on technical topics, plus intensive practical work conducted on two storage-tube graphics terminals.

Ms. Liggett, Mr. Mitchell (F)

227B. Computer-Aided Design. Discussion, three hours. Prerequisite: consent of instructor. An examination of existing computer-based systems for aiding decision making. Topics include artificial intelligence, self-organizing systems, and hardware capabilities and limitations. An attempt is made to develop and test components of a computer design partner.

Ms. Liggett, Mr. Mitchell (W)
of mathematical models in architectural design. Lecture, three hours. Prerequisite: consent of instructor. An introduction to concepts and techniques of introducing variables into architecture. Basic mathematics is needed to develop models. The formal description of built form: data structures. Practical case studies and exercises dealing with the use of mathematical models in architectural design.

228B. Research in Design Methods. Lecture, three hours. Prerequisite: consent of instructor. Developmental work in a specific method of design. Theoretical and operational problems of a design method: degree of systematization, man-machine relationships, areas of application, problems of translation, and compatibility with other methods.

225. Urban Morphology: Definitions and Consequences. Lecture, three hours. An analysis of urban spatial form and its socioeconomic and behavioral bases and consequences. Special emphasis on ecological approaches (e.g., social area analysis, urban growth models, factorial ecology) and behavioral analysis (cognitive mapping, urban imagery, attitudes toward human and material resources).

258. Research in Human-Environment Relations (2 to 8 units). Selected topics for research in social and behavioral relations to the environment. Intended to provide a teaching space for visiting teachers in the social, and behavioral sciences. May be repeated for credit.

271. Elements of Urban Design. Lecture, three hours. Introduction of basic knowledge of elements and methods of urban design. A multidisciplinary approach to an understanding of socioeconomic, sociocultural, and technological framework of urban systems and its dynamic interrelations. Mr. Lang (F)

272. Real Estate Development for Planners and Architects. Introduction to the real estate development process. Special problems specifically geared to students in planning, urban design, and architecture. Financial decision model, market studies, designs, loan packages, development plan, and feasibility study. Lectures and projects which integrates the development process with proposed design solutions which are iteratively modified to meet economic feasibility tests. Mr. Kamraven (F)

274. Introduction to Physical Planning, Lecture, three hours. Discussion of the influence of determinants on the design of urban areas, with illustrations of the consequences for urban design. Generally taken in the first year. Ms. Leavitt (F)

276. Research Methods in Human-Environment Relations (2 to 4 units). Lecture, three hours; discussion, two hours. A survey of a variety of research methods applicable to problems on the human-environment interface, including both those now frequently employed (survey research) and others not so well known (demography, ethnography, sociology). The course emphasizes the application of research methods to selected exercises and specific field situations. Ms. Leavitt (Sp)

278. Housing for Developing Countries. Discussion, three hours. Considerations of sociocultural, economic, and political factors, materials, structural systems, shelter accessories, and manufacturing technologies related to the priorities of developing countries in housing policies and the planning and design of shelter.

281. Introduction to the History of the Built Environment in the United States. Lecture, three hours. Open to advanced undergraduates by consent of instructor. An introduction to American urban, environmental and architectural history, a survey of the main economic, political, social, and aesthetic forces forming the built environment. The course covers the Colonial period to the present, emphasizing the important issues of the spatial design of cities and buildings to public policy.

283. History of the American Household and the American Home. Lecture, 90 minutes; discussion, 90 minutes. Prerequisite: course 281 or consent of instructor. An introduction to the history of design in the United States, emphasizing the changing roles of women and men from Colonial times to the present and the effects of these social changes on the physical form of the dwelling and the settlement. The development of prototypes, market studies, attitudes are examined, as well as the activity of bankers, builders, and homemakers. Ms. Hayden

284. The Ideal City in History. Prerequisite: course 281 or consent of instructor. Since the time of Thomas More's Utopia, creating the ideal city has been a favorite device used by novelists, political theorists, economic and social critics, and architects to criticize existing society and demonstrate the dramatic possibilities of the architectural utopian tradition in its literary, political, and aesthetic forms, examining satirical cities, moral cities, and urban fantasies from the 16th century to the present. Ms. Hayden

286. History of Specific Building Types. Lecture, three hours. Consideration of socioeconomic and historical factors involved in the development of a specific building type (i.e., theaters, schools, museums, and hospitals). May be repeated for credit. Mr. Aran (W)

287. Ancient and Islamic Architecture in the Mediterranean Area. Prerequisite: consent of instructor. The influence of the physical and social environments on building activity throughout the history of societies argued the Mediterranean and Renaissance influence on architectural development in Greece. Mr. Aran (Sp)

288. Architectural History: Medieval Period. Prerequisite: consent of instructor. A survey of European architecture from the year one thousand, with selected buildings and environments considered in terms of the existing context. Mr. Lang (F)

294. Special Topics in Architecture and Urban Design (2 to 4 units). Prerequisite: consent of instructor. Selected academic topics initiated by students, students, teams, or faculty and directed by a member of the faculty. May be repeated for credit.

297. Architectural Programming and Theory. The first part of the course explores concepts and methods of architectural programming and its interrelation to the design process; planning of the design project. The second part focuses on programming concepts and considers the spatial and temporal development of the design project and the architectural project.

298. Social Analysis of Buildings and Settings. Prerequisite: consent of instructor. The class conducts a ten-week evaluation of a building in Los Angeles, designed and built within the past five years, where the architect, builder, initiator, or other parties involved in the inception process are available for cooperative review of the facility. The structure of the course involves a review of evaluation theory in the first three weeks and a series of exercises performed on a single building, looking at its effectiveness and character through a variety of approaches to evaluation. The class produces a comprehensive evaluation using multiple methods for each building evaluated.

299. Application of Behavioral Research to the Design Process. Lecture, three hours. Prerequisite: course 258 or consent of instructor. The course examines the relationship between research and design by building on the ideas and techniques generated in course 258, applying them to research in a field situation, and translating the results of this research into a preliminary design solution. A selected community. Emphasis on problem definition, the generation of meaningful results, research questions and understandable results, iterative approaches to the research/design interface, and novel ways of presenting design ideas. May be repeated for credit.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

401. Projects in Architecture. Laboratory, three hours. Prerequisite: consent of instructor. Students may choose from a number of different projects in relevant problem areas to be offered by faculty members. May be repeated for credit. (F, W, Sp)

402. Projects in Urban Design. Laboratory, three hours. Prerequisite: consent of instructor. Students may choose from a number of different projects in relevant problem areas to be offered by faculty members. May be repeated for credit. (F, W, Sp)

403. Project Studio with Specific Topic (2 to 4 units). Studio, eight hours. Prerequisites: prior courses 258 or 284, or consent of instructor. May be repeated for credit.

404A. Projects in Systems Building.

405B. Projects in Energy Conserving Design.

405C. Projects in Man-Environment Relations.

406D. Projects in Educational Facilities.

403E. Projects in Housing.

403F. Projects in History.

403G. Projects in Design Methodology.

403H. Projects in Computer-Aided Design. (F, W, Sp)

411. Introductory Design Studio. Studio, twelve hours. Prerequisite: consent of instructor. An introduction to design tools and techniques used in the architectural process. Students will be introduced to the use of different computer programs depending on the phase of the design process.

412. Building Design Studio. Studio, twelve hours. Prerequisite: course 411 or consent of instructor. The design of the project starts with the exploration of the architectural program in relation to the design process and, particularly, the implications of the program on architectural forms and concepts. In a second phase, structural elements are introduced to fulfill the program requirements and to support and further develop the intended forms and concepts. (W)

413. Building Design with Landscape Studio. Studio, twelve hours. Prerequisite: courses 411 and 412, or consent of instructor. Building design and site planning in relation to water, landforms, and plants in natural landscape. With special attention to natural light and its varying effects. (Sp)

414. Major Building Design I. Studio, twelve hours. Prerequisite: second-year standing. Design projects which enable students to concentrate on specific architectural issues, with emphasis either on design in buildings of large-scale projects or exploration in design of projects called for in a series of exercises. Students learn to integrate structure, environmental controls, physical context, and the cultural environment in design of buildings and to present their ideas in graphic or model form.
415. Major Building Design II. Studio, twelve hours. Prerequisite: course 414. Design projects which enable students to concentrate on specific architectural issues, with emphasis either on treatment in breadth of large-scale projects or exploration in depth and detail of small-scale projects. Students learn to integrate structure, mechanical systems, physical context, and the cultural environment in design of buildings and to present their ideas in graphic or model form. Special emphasis on integration of environmental control systems.

416. Comprehensive Design Studio. Studio, twelve hours. Prerequisites: completion of required coursework up to first quarter of third year, consent of instructor. Course completes the regular required sequence of design work, preparing students for the third-year thesis preparation course. Comprehensive design projects are structured to test students on integration of structural aspects, mechanical systems, site planning, and climatic considerations within their design solutions.

421. Architectural Drawing. Discussion, three hours; laboratory, three hours. Description of architectural drawing techniques and skills, including sketching, diagramming, freehand drawing, drafting techniques, and reproduction to axonomic projection and perspective.

422. Advanced Architectural Drawing (2 to 4 units). Discussion, three hours; laboratory, three hours. Prerequisite: course 421 or consent of instructor. The course continues with emphasis on the exploration of the interrelationship between drawing and design. More advanced design strategies and modes of graphic exploration and presentation are developed.


436. Construction Documents. Laboratory, eight hours. The course considers the relationship of the design processes from schematic design through the production of all of the documents for the construction contract. A simple structure is designed, and the design development is carried through working drawings and an outline form of specifications.

437. Building Construction. Introduction to the first principles of structure and building construction. Building elements are not only explored for their structural qualities and possibilities of their production and assembly, but also for their formal and functional properties and, particularly, their application and role within a building.


439. Methods In Building Systems Development. Building analysis, building operation, component compatibility, measurement regulation, modular coordination. In-depth study of past and recent developments, such as SCSD, S.A.R.

441. Environmental Control Systems. Lecture, three hours. Prerequisite: consent of instructor. The design of the mechanical systems necessary for the functioning of large buildings: air handling, fire and life safety, plumbing, vertical and horizontal circulation, communication and electrical power distribution, analysis of the interaction of these systems and their integrated effects on the architectural form of a building.

442. Building Climatology. Lecture, three hours. Prerequisites: basic physics, completion of first year in M.Arch. I, consent of instructor. The design of buildings which specifically respond to the local climate; utilization of natural energies, human thermal comfort; sun motion and sun control devices; use of plant materials and landform to modify microclimate.

443A. Passively Integrated Solar Systems: Heating. (Formerly numbered 443.) Prerequisites: courses 289 (section 2) and 442, or consent of instructor. Course analyzes the different passively integrated solar systems for heating buildings, considering their anticipated performance and suitability for different climates and building types. The course focuses on quantitative aspects, including calculations of energy by year and expected indoor comfort conditions.

443B. Passively Integrated Solar Systems: Cooling. (Formerly numbered 443.) Prerequisites: courses 289 (section 2) and 442, or consent of instructor. Course analyzes the different passively integrated solar systems for cooling buildings, considering their anticipated performance and suitability for different climates and building types. The course also considers passive effects, including calculations of performance in terms of energy saving and expected indoor comfort conditions.

444. Light and the Visual Environment. Lecture, two to four hours. Prerequisites: course 432 or consent of instructor. Explores the extent to which the physical form of a building controls the luminous environment of its occupants; the design of naturally and artificially illuminated environments; parameters of human visual comfort.

445. Sound and the Auditory Environment. Lecture, two to four hours. Prerequisite: course 432 or consent of instructor. Explores the extent to which the physical form of a building controls the acoustic environment of its occupants; design of auditoriums for auditory privacy and for auditory enhancement; parameters of human audition.

446. Introduction to Energy Conserving Design. Prerequisite for M.Arch. I students: course 432 or equivalent; for others: consent of instructor. A professional practice-oriented view of introductory energy flow and thermal comfort concepts. Review of existing and developing Energy Conservation Design and Management "active" and "passive" techniques. Applicability of solar technology to architectural design within the ECD/M context. Explanation of historical as well as current and proposed energy/resource consumption patterns in residential buildings, and cities. May be repeated for credit.

Mr. Schoen (F,W)

460. Architectural Management. Lecture, three hours. Problems of land development and real estate. The professions of architecture and planning: traditional and innovative organizational forms. Manufacture, distribution, transport, and on-site construction/assembly Controls and resources: government programs and restrictions; financing and administration; costs estimation; materials and labor availability.

461. Professional Organization and Practice. Lecture, three hours. The profession of architecture: historical development, relation to other professions and disciplines, the changing role of the architect. Architecture and professional societies: the American Institute of Architects, state and national registration boards, educational accreditation. Legal and ethical questions relating to the practice of architecture. Emerging forms of architectural practice.

Mr. Phelps (W)

490. Urban Innovations Group Workshop (4 to 8 units). Laboratory. Prerequisite: consent of workshop staff. Applied research and development work in the Urban Innovations Group workshop under the supervision of the workshop staff. Client-oriented projects concerned with significant urban, social, or technical problems of the physical environment. May be repeated for credit.

496. Special Projects in Architecture (2 to 8 units). Prerequisite: consent of instructor. Projects initiated by either individual students or student teams and directed by a member of the faculty. May be repeated for credit.

497. Special Projects in Urban Design (2 to 8 units). Prerequisite: consent of instructor. Projects initiated by either individual students or student teams and directed by a member of the faculty. May be repeated for credit.

596A. Directed Individual Research and Study in Architecture and Urban Design (2 to 8 units). May be repeated for credit.

597A. Preparation for M.Arch. II Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units). May be repeated for credit. S/U grading.

598A. Preparation in Architecture/Urban Design for Master's Thesis (2 to 8 units). Prerequisite: consent of instructor. May be repeated for credit.


Urban Planning
Edward W. Soja, Ph.D.
Martin Wachs, Ph.D.

Associate Professors
Leobardo Estrada, Ph.D.
J. Eugene Grigsby, III, Ph.D.
Allan Heskin, Ph.D., LL.B.
Jacqueline Leavitt, Ph.D., Acting
Robin Liggett, Ph.D.

Assistant Professors
Margaret FitzSimmons, Ph.D.
Robin Liggett, Ph.D.
Michael Storper, Ph.D.

Adjunct Associate Professor
Karen Hill Scott, Ed.D.

Scope and Objectives
The professional urban planner works on the creation and management of the urban environment, including its physical, economic, and social elements. Housing, transportation, air and water quality, the preservation of historic communities, and the development of community-level economic and employment programs are some of the tasks undertaken by recent graduates of the UCLA Urban Planning Program. Graduates have taken positions in local, state, and national government, and increasingly with private companies whose products and services affect the urban environment. While most UCLA graduates find positions in the United States, 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 a two-year Master of Arts degree and a Ph.D. Concurrent and articulated degree programs are available which enable students to combine study for an M.A. in Architecture/Urban Planning with work toward an M.B.A. in the Graduate School of Management, a J.D. in the School of Law, or an M.A. in Latin American Studies.

The Urban Planning Program at UCLA 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. A number of student organizations provide an interesting program of extracurricular activities.

Requirements for Graduate Degrees
Admission
The Urban Planning Program admits students in the Fall Quarter only, and you should begin the application process a year in advance.

Prospective applicants may obtain a detailed program statement and Graduate Division application by writing to Admissions, Urban Planning Program, Graduate School of Architecture and Urban Planning, 1125 J Architecture, UCLA, Los Angeles, CA 90024.

A statement of purpose, letters of recommendation, grade-point averages, and relevant experience are all considered in the review process for admission. Applicants must submit transcripts from each college attended and are encouraged to submit Graduate Record Examination (GRE) scores. The Test of English as a Foreign Language (TOEFL) is required of applicants whose native language is not English, unless they have completed at least two years of university-level coursework at an English-language institution.

A maximum of two work samples may be submitted in support of the application (e.g., reports, papers, slides, etc.). Work samples will be returned only on request. (Applicants in the U.S. must enclose a self-addressed, stamped envelope.)

Areas of Concentration
You should select an area of concentration by the end of your first quarter in the program. The areas of concentration distinguish between different kinds of issues and contexts in which planners characteristically become engaged, as a professional career or a field of research. They are not meant to be mutually exclusive. The four areas of concentration are:

Urban and Regional Development: Rural poverty and urban migration, unemployment, the problems of economically depressed areas, and the deterioration of inner-city neighborhoods present problems which call for comprehensive analysis and innovative solutions. Within this area, you are expected to select an emphasis either on developments within the United States and other advanced industrial nations, with a focus on community, or on problems of development in newly industrialized countries.

Social Policy and Analysis: This field of study concentrates on services, approaching questions of equity and social structure through the planning and analysis of services that are supplied publicly or semipublicly. It is concerned with the economic, political, and social context of service delivery systems, with analytic techniques for planning and evaluating them, and with the implications of different ways of financing them.

Natural Environment and Resources: The natural environment is both the context within which all human activities take place and a social product of those activities. Environmental planning begins as an attempt to mitigate often unforeseen consequences of economic growth and expansion, consequences which appear both as environmental hazards to human health and well-being and as problems in the management of natural resources. A special feature of this area of concentration is its emphasis on problems arising from the intensive use of environmental resources, viewed from the perspective of political economy.

The Built Environment: This area of concentration represents a blending of urban planning and architecture. It deals with the social and economic forces affecting the built environment and with the built environment on an urban scale. Within this area, you can select one of three specializations: history, theory, and criticism of the built environment; public policy and the built environment; or urban design and physical planning.

Additional Areas of Concentration: In special circumstances, you may devise your own area in consultation with appropriate faculty members. Final approval of the proposed additional area of concentration must be obtained from the program head.

International Development Studies: If you wish to focus your studies on policy and planning problems of newly industrializing countries, you can do so in the context of one of the major areas of concentration. Coursework is currently offered in rural development, urbanization policies, housing, the environmental impacts of resource-based development, spatial policies for development, and the role of women in development. In addition, a number of courses are concerned with the evolving world economy, general development issues, and related ideological questions.

In its four Area Studies Centers, UCLA has major institutional resources that facilitate research and furnish a rich environment in which to study development issues in a global context. Opportunities for work exist with international agencies, voluntary agencies, and foreign governments. Doctoral students are encouraged to pursue careers in teaching, research, and consulting.

Students wishing to pursue comparative development studies at either the M.A. or Ph.D. level should contact Professor John Friedmann.

Master of Arts in Architecture/Urban Planning
Course Requirements
You must complete a minimum of 72 units. Students generally take 12 units per quarter, completing the program in two years.

Core Course Requirement: The core areas comprise knowledge common to all areas of planning, regardless of your specific focus. Seven core courses are required: Architecture and Urban Planning 207, 220A (waiver by examination), 220B, two core courses in theory and context, and two additional courses (three if course 220A is waived) from a selection of 14 remaining core courses in methods, theory and context, and/or practice.
On entering the program, you must pass examinations indicating competence in basic mathematics and microeconomics before enrolling in courses 220A and 207 respectively. Copies of sample examinations are mailed with admission offers to applicants accepted into the program. An undergraduate course in college algebra or precalculus should provide suitable background to pass the basic mathematics examination. An undergraduate course in microeconomics should be sufficient preparation for the microeconomics examination.

You are strongly encouraged to prepare for the examinations before enrolling so you can take courses 207 and 220A (offered only once per year in Fall Quarter) during your first quarter of studies.

Area Course Requirement: You must select an area of concentration. A list of courses is prepared for each area of concentration, from which you are required to select at least five; two are generally specified.

Fieldwork Requirement: Two field projects courses (eight units) are required (subject to waiver).

You are encouraged to seek waivers for requirements which have been met in your previous education.

Thesis Plan
In partial fulfillment of the requirements for the M.A. degree, you are required to complete either a thesis or one of two comprehensive examination plans. The master's thesis is intended to provide the opportunity for independent scholarly research and should be the length and quality of a publishable journal article. If you select this option, in order to meet established deadlines, you are urged to begin thesis work no later than the Fall Quarter of your second year. Academic credit for thesis preparation is given through Architecture and Urban Planning 598P.

Comprehensive Examination Plan
If you select the comprehensive examination option, you may choose either Plan A or Plan B.

Plan A (Long-Term Project): A client-oriented project is recommended for students who are more interested in practical application of what they have learned in their coursework than in scholarly research. The time span and magnitude of the final project approximates that of the thesis. Academic credit for project involvement is given through Architecture and Urban Planning 597P.

As an alternative under Plan A, you are encouraged to take courses 217A-217B (group comprehensive project sequence), offered each year, to fulfill the comprehensive examination requirement.

Plan B (Two-Week Examination): Examinations for all areas of concentration are normally offered during the break between Winter and Spring Quarters. A committee of three faculty members offers, reads, and grades the examination. No course credit is received.

Fieldwork
Master's students who come to the Graduate School of Architecture and Urban Planning without prior experience in planning are required to complete a minimum of eight units of fieldwork. Fieldwork is defined as clinical or "real world" experience with a planning office, a private organization involved in planning, a community action agency, or applied research within a clinical context (excluding conventional university-based research projects). Details on fulfilling this requirement are available in the program office.

Cooperative Degree Programs
J.D./M.A.-Architecture/Urban Planning
The Graduate School of Architecture and Urban Planning and the School of Law offer a concurrent plan of study providing an integrated curriculum for those planning to specialize in the legal aspects of urban problems. Education in planning offers an overview of theories and methods that permit identification and treatment of urban problems; education in law offers insight into the institutional causes and possibilities for treatment of these problems. Students pursue studies in both schools and receive both the J.D. and M.A. degrees at the end of four years.

Students interested in the concurrent degree program must apply and be admitted to the School of Law, the Urban Planning Program, and the Graduate Division. For additional information, contact the graduate counselor in the Urban Planning Program.

The Graduate School of Architecture and Urban Planning and the Graduate School of Management offer a three-year concurrent degree program designed for students who seek careers which draw on general and specialized skills in urban planning and management. By providing knowledge of the workings of both the private and public sectors, the program enables individuals who have acquired these skills to move easily between careers in private industry and public service.

Students should request all application materials from the M.B.A. Admissions Office, Graduate School of Management. Further details may be obtained from the graduate counselor in the Urban Planning Program.

The Urban Planning Program and the Latin American Studies Program offer a 2½- to 3-year articulated plan leading to an M.A. degree in each program. However, no course may be used for credit toward more than one degree. Issues related to migration and settlement, comparative urbanization, human resource development and distribution, and rural economics are all of direct concern to planners and other policymakers working in Latin America. The articulated degree program provides an integrated curriculum through which students can develop professional knowledge and skills while receiving advanced area studies and language training.

Students should apply through the Urban Planning Program. Further details may be obtained from the graduate counselor in the Urban Planning Program.

Ph.D. in Urban Planning
Admission
Students admitted to the Ph.D. program in Urban Planning must have a master's degree in planning or a closely related field.

You must have a minimum 3.5 grade-point average in all graduate work completed for consideration for the Ph.D. program. Employment experience in planning or a closely related field is strongly recommended.

Foreign Language Requirement
A foreign language is not required either for admission to or completion of the doctoral program. However, students who are expecting to do dissertation research abroad are strongly advised to obtain the necessary language skills prior to beginning such research.

Course Requirements and Qualifying Examinations
You must demonstrate a high level of competence in a major field, a minor field, and in planning theory as measured by coursework and doctoral examinations. In addition, you must satisfy a requirement in research methods and are required to take Architecture and Urban Planning 208 to aid in preparation of dissertation research and writing.

Planning Theory Requirement
Planning theory is concerned with the ideas which have influenced planning since the beginning of the nineteenth century and with philosophical issues in societal guidance and social transformation.

You are required to take Architecture and Urban Planning 210A, 210B, and 210C and to present, at the end of your third quarter, an original research paper on a topic related to planning theory selected in consultation with faculty. The planning theory requirement should
be completed in your first year in the program, prior to taking the major field examination.

Research Methods Requirement
The research methods’ field covers a variety of techniques useful for collecting, organizing, processing, and analyzing information for planning decisions. The methods to be covered emphasize statistics and their application to urban and regional studies and planning. Statistical tools include probability theory, probability distribution, sampling, survey methods, estimation techniques, hypothesis testing, analysis of variance, correlation, regression, and factor analysis. You may also study methods which address research of a more qualitative nature, including ethnomet hodology, anthropological field methods, historiography, and Marxist methodologies.

To fulfill the research methods requirement, you must complete a sequence of three methods courses beyond the introductory level with a grade of B or better. In order to meet a minimum requirement in statistics, one of the three courses must be Architecture and Urban Planning 220B or the equivalent. The courses must be approved by your adviser and should begin during your first year in the Ph.D. program.

Major Field Examination
The major field examination tests your competence in a substantive area of study in planning. Following a prescribed process (available in detail from the graduate counselor), a committee of three faculty members is appointed by the program head to supervise your preparation for the field examination, which normally takes from six months to a year following successful completion of the planning theory requirement. The examination has two parts — one written, one oral. The written part is given each quarter simultaneously to all students on the Friday of the seventh week of the same quarter. You may receive academic credit for the examination. The examination normally takes at least six months following the successful completion of the planning theory requirement. The examination, which is optional, constitutes a defense of the completed dissertation.

Upper Division Courses
179. Variable Topics in Urban Planning (2 to 8 units). Lecture, three hours. A variable topics course in selected subjects in social policy and public services, urban and regional development, environment and resources, and the built environment. May be repeated for credit.

187. Planning and Designing for Our Cities. See listing under "Architecture/Urban Design." (F)


M195. Engineering and Environmental Geology. (Same as Earth and Space Sciences M139.) Lecture, two and one-half hours. Prerequisite: Earth and Space Sciences 1 or 100. Recommended: Earth and Space Sciences 111A. Principles and practice of soil mechanics and foundation engineering in light of geologic conditions, recognition, prediction, and control of subsidence, landslides, earthquake, and other geologic aspects of urban planning and subsurface disposal of solids and solid wastes.

M197. Planning for Minorities. Lecture, three hours. The course introduces the student to inner-city urban planning using materials from the Alternatives: Inner-City Future Exercise, (2) each student is expected to identify the 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 which affect implementation. (F)

M199. Special Studies (2 to 8 units). See listing under "Architecture/Urban Design." (F)

Graduate Courses
M202A. Control of Land Development (3 to 6 units). (Same as Law M286.) Analysis of the legal and administrative aspects of the regulation of land use and development, and the problems and techniques of urban planning; public participation, building codes, zoning, subdivision controls, public acquisition of land, tax controls, and urban development.

M202B. Governance: State, Regional, and Local (3 to 4 units). (Same as Law M285.) Lecture, three hours. Legal problems involving local governmental entities; sources and extent of powers and duties with respect to personnel, finance, public works, community development, and related topics.

M202C. Seminar: Urban Affairs (3 to 6 units). (Same as Law M526.) The purpose of the course is to explore in a concrete case setting the application of legal tools to the solutions of planning and land-use problems. Real situations are selected in which significant theoretical issues exist that appear to be amenable to solution by legal methods. A number of case studies are selected so that students may choose one issue which directly interests them. For each case, a specific student works with the class in presenting the problem that client is facing and remains available through the course of the project for consultation; the end product for each case is the presentation of a formal report. Clients include the County Planning Commission, the Environmental Quality Board, the Housing Authority, and others.

M205C. Urban Government. (Same as Political Science CM229.) An analysis of the policies, processes, institutions, and organization of governments in major urban areas.

206. Urban Data Analysis. The course is designed to teach the student how to use data, both quantitative and qualitative, and to understand the nature of data, the use of data, and the use of software for analyzing data. The course covers the use of statistical software for analyzing data and the use of qualitative data analysis software. The course covers the use of statistical software for analyzing data and the use of qualitative data analysis software. The course covers the use of statistical software for analyzing data and the use of qualitative data analysis software. The course covers the use of statistical software for analyzing data and the use of qualitative data analysis software. The course covers the use of statistical software for analyzing data and the use of qualitative data analysis software.

207. Public Resource Allocation. Lecture, three hours. Prerequisite: passing score on a microeconomics examination given the first day of class. The course covers the use of statistical software for analyzing data and the use of qualitative data analysis software.

208. Seminar in Advanced Research Methods. (Formerly numbered 208A.) Lecture, three hours. Prerequisites: doctoral standing, consent of instructor. Required of Ph.D. students in or following the second year. The course begins the process of developing a dissertation proposal and introduces students to research design (teachings of science and research). (F)

209. Special Topics in Planning Theory. (2 to 8 units). Seminar, three hours. Seminar on topics in planning theory selected by the faculty. May be repeated.

210A. A History of Planning Thought since 1800. (Formerly numbered 210B). Lecture, three hours. A historical introduction to the major ideas and theories of planning which have influenced its development from the early 19th century to the present. (W)

210B. Colloquium in Planning Theory. (Formerly numbered 210C.) Lecture, one hour; discussion, two hours. Prerequisite: course 210A. Intended for Ph.D. students. Students may enroll by departmental petition only. An introduction to some of the central theoretical issues of contemporary planning, such as the role of planning in society, the nature of social learning, conceptions of space and time, the politics of spatial design, the ethics of forecasting. Designed to help students develop a topic for the research paper required in course 210C. In Progress grading (credit to be given only on completion of course 210C).

210C. Research Seminar in Planning Theory. Discussion, three hours. Prerequisite: course 210B. Limited to Ph.D. students. A seminar to prepare Ph.D. students for their research paper in planning theory. Presentations by students and lectures and discussions on topics selected for research by the class. (W)
21A. Law and the Quality of Urban Life. Lecture, three hours. The course is an introduction to law as an urban system in its directed people toward those interested in social and advocacy planning. The course is organized around a number of urban problems, such as employment, housing, social welfare, and land use, and examines the law's role as a partial cause and cure of these problems. Although certain legal principles are stressed, the course examines law as a changing process rather than a collection of principles. It is a goal of the course that students develop a facility to interact with law and lawyers in a positive and forceful manner. Mr. Heskia

212. Uses of Forecasts in Policy-Making. Alternative concepts of the future and their relationship to urban planning; institutional requirements that forecasts be conducted by planners; the technical characteristics of forecasts themselves and the relationship between technical forecasting methods and assumptions about the future; case studies of the use of forecasting in policy-making drawn from a variety of techniques and interests in joint solution of a problem in urban planning and development. Each project is the equivalent of eight units total and spans two quarters. Because of the time required for the completion of project work, it is expected that students enrolled in a project will select the comprehensive examination plan option in place of the master's thesis. Credit to be given on completion of course 217B.

217A-217B. Comprehensive Planning Project. Prerequisite: second-year standing. The comprehensive planning project is offered by at least two faculty members representing different areas of policy concentration in the urban planning and social planning courses and brings together students of varying backgrounds and interests in joint solution of a problem in urban planning and development. Each project is the equivalent of eight units total and spans two quarters. Because of the time required for the completion of project work, it is expected that students enrolled in a project will select the comprehensive examination plan option in place of the master's thesis. Credit to be given on completion of course 217B.

218. Special Topics in the Built Environment (2 to 4 units). See listing under "Architecture/Urban Design."

220A. Quantitative Analysis in Urban Planning I. Lecture, three hours. Prerequisite: course 220A or equivalent (demonstrated by passing score on mathematics proficiency examination given the first day of course 220A). An introduction to concepts of statistical inference and modeling, with emphasis on urban planning applications. Topics include hypothesis testing, analysis of variance, correlation, regression, and causal modeling. Applications include such planning problems as forecasting population growth and change, estimating the use and need for public facilities, and the analysis of demand and revenue characteristics of urban populations. Case studies are presented which cover the design and analysis of typical urban planning research projects. The course also introduces the use of a computer as a tool in statistical analysis and modeling.

220B. Quantitative Analysis in Urban Planning II. Lecture, three hours. Prerequisite: course 220A or equivalent (demonstrated by passing score on mathematics proficiency examination given the first day of course 220A). An introduction to concepts of statistical inference and modeling, with emphasis on urban planning applications. Topics include hypothesis testing, analysis of variance, correlation, regression, and causal modeling. Applications include such planning problems as forecasting population growth and change, estimating the use and need for public facilities, and the analysis of demand and revenue characteristics of urban populations. Case studies are presented which cover the design and analysis of typical urban planning research projects. The course also introduces the use of a computer as a tool in statistical analysis and modeling.

221. Evaluation Methods. (Formerly numbered 221A-221B.) Lecture, three hours. Prerequisites: courses 207, 220A. An examination of methods used to evaluate the efficiency and effectiveness of government programs and investment projects. Theory and practice of evaluation. Techniques of cost-effectiveness analysis, cost-benefit analysis, discounting, sensitivity analysis, target efficiency, fiscal audits, and rate-of-return calculations. Mr. Rolleden

222A. Professional Development Series. Lecture, three hours. A lecture-seminar project course offering an introduction to the planning profession and, more specifically, to the Urban Planning Program at UCLA. An overview of the profession and its practice over time and an exploration of various professional roles for planners. Planning education is viewed as a response to changing needs and as a catalyst for emerging roles for professional planners. Several short projects are designed to expose students to "real world" problems and to the various viewpoints and methods that the areas of concentration specialties would bring to bear. Course 222A also serves as the Fall Quarter of the first-year professional program course offering an introduction to course 223B.

223B. Professional Development Series. Lecture, three hours. Highly recommended prerequisite: course 223A. The course is concerned with problems of professional practice. Students must be working in a field setting to enroll. A job fair is held at the beginning of Winter Quarter to place students in field settings. Students who wish to arrange their own placement and join the class may do so by consent of instructors. The course develops professional tools which integrate theory and practice through readings and individual and collective analyses of each student's experience. In addition, a larger look at the planning profession is provided by noted professionals brought to the classroom to dialogue with the students. Students combine course 223B with one quarter of course 490 or 496F to meet the fieldwork requirement.


229. Special Topics in Planning Methodology (2 to 4 units). See listing under "Architecture/Urban Design."

231. Urban Housing and Community Development (3 to 4 units). (Same as Law M231.) Lecture, three hours; discussion, one hour. The course comprises the planning of a housing and rehabilitation function of American cities, with the major emphasis on the "housing process" — the way in which shelter and related facilities are created by the institutions which direct housing activities in urban areas. Students are encouraged to undertake research projects, with emphasis on field research, in lieu of a substantial portion of the final examination.

Mr. McGee

232A. Introduction to Regional Planning: The Evolution of Regional Planning Disciplines. Lecture, three hours. An introduction to the evolution of regional planning theory and practice, with particular emphasis on the relationships between regional planning and developments within Western social and political philosophy. Major concepts include regions and regionalism, the philosophy of urban community, and the social production of space.

Mr. Friedmann, Mr. Soja

232B. Spatial Planning: Regional and International Development. An examination of the theory and practice of spatial planning at the regional, national, and international scales, including an evaluation of regional growth strategies, national settlement policy, growth center concepts, and the normative-ideological issues involved in international development planning. Generally taken in the first year.

Mr. Soja

233. The Political Economy of Urbanization. An introduction to the basic concepts and analytical approaches of urban political economy, with major emphasis on Amritsar urban problems. Topics include the historical geography of urbanization, the development and transformation of urban spatial structure, urbanization and metropolitan political fragmentation, the fiscal crisis, and the role of urban social movements.

Mr. Soja

235A-235B. Urbanization and Rural Development in Third World Countries. Lecture, 90 minutes; discussion, 90 minutes. Prerequisite for course 235A: course 220A or consent of instructor. For course 235B: course 235A or consent of instructor. The first quarter addresses questions of urbanization and planning; the second quarter considers rural development. Case studies are drawn from Latin America, Africa, and Asia. The course consists of lectures, student presentations, and policy debates.

Mr. Friedmann

236A. Urban and Regional Economic Development I. Lecture, three hours. An introduction to basic principles of urban and regional economics as they bear on public policy formulation and urban and regional planning, especially in the U.S. context. The course examines contemporary economic problems, theoretical frameworks for analyzing these problems, and methodological issues. Topics include international distribution of employment/unemployment income and standards of living, with special attention to sectoral shifts in employment and demographic and migratory changes in the U.S. Emphasis on American urban problems. The course is generally taken in the first year.

Ms. Morales and the Staff (F)

236B. Urban and Regional Economic Development II. Lecture, three hours. A seminar focusing on local economic development, meaning job creation, job retention, or various forms of income redistribution for the purposes of developing or stabilizing a community's economy. Reasons for and measurement of unemployment and impoverishment, programmatic approaches for dealing with these problems, and a critical analysis of the objectives, outcomes, and public accountability of the different approaches are covered. Topics include labor market considerations in economic development planning; incentives to private enterprise investment; alternative sources for economic development; and financing public and private investment.

Ms. Morales (W)

236C. Urban and Regional Economic Development III. Discussion, three hours. Prerequisite: course 236B. An advanced seminar for students wishing to design or critically evaluate programs in economic development. First part of course consists of three to five-week intensive workshops on computing techniques and economic development law. Remainder of course is devoted to individual student projects.

Ms. Morales (S)
238. Advanced Seminar in Urban and Regional Development. Lecture, two hours; discussion, two hours. Prerequisite: doctoral standing or consent of instructor. An advanced research seminar on major issues in urban and regional development theory and policy. Topics usually reflect faculty research projects and change from year to year. May be repeated for credit.

239. Special Topics in Urban and Regional Development Policy. (2 to 8 units). Lecture, three hours. Seminar on topics in urban and regional development policy selected by the faculty. May be repeated for credit.

241A. Urban Transportation Planning I. (Formerly numbered M241A.) Lecture, three hours. Historical development of urban transportation planning and the current political and administrative frameworks for planning; the relationship between transportation systems and urban form; historical review of automobile and public transit systems; urban highway and transit planning programs; the financing of urban transportation; environmental and social impacts of transportation systems; current policy dilemmas; controlling the automobile, promoting mass transit, energy issues, needs of elderly and handicapped. Mr. Wachs (F)

241B. Urban Transportation Planning II. (Formerly numbered M241B.) Prerequisites: courses 207, 220B, and 241A, or consent of instructor. Economic and social basis for travel; basic data sources for examining urban travel and transportation; technical models of forecasting and analyzing travel; mathematical models of travel; trip generation, trip distribution, modal split, traffic assignment, and route choice; uses of forecasts and approaches to transportation system and project evaluation. Mr. Wachs (W)

241C. Urban Transportation Planning III. (Formerly numbered M241C.) Prerequisites: courses 207, 220B, 241A, and 241B, or consent of instructor. Recent experience and case studies in transportation planning and policy: Planning a rail system and downtown people mover for Los Angeles; community dial-a-ride services; express buses on freeways; the Santa Monica Freeway diamond lane project; decision making in the case of the Century Freeway; a parking management program for Los Angeles; carpooling and vanpooling programs; field trips and guest speakers. Mr. Wachs (Sp)

244. Housing Markets. Lecture, three hours. The ways that housing markets should but sometimes do not work in developed economies. Interaction of demand factors such as population distribution, household formation, income, and credit is emphasized, as well as their particular impacts on groups of the population. Topics include filtering, housing search, segregation, pricing, production efficiency, organization of the construction industry, market failure, and appropriate policy responses. Mr. Burns

245. Urban Public Finance. Lecture, three hours. Prerequisites: courses 207 and 220A, or consent of instructor. 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, the effects of taxes on land use decisions, benefit assessments to finance neighborhood public investment, private and intergovernmental contracting as a method of supplying urban public services, tax increment finance for urban redevelopment, and the municipal bond market. The equity of public service distribution among and within cities is considered, and the results of lawsuits to equalize public services are reviewed. Mr. Shoup

246. Housing in Social and Economic Development Policy. Lecture, three hours. Prerequisite: course 207 or equivalent or consent of instructor. Seminar on the position of housing in national and regional development strategies, with focus on policies for Third World nations. Topics include the nature of housing "need," market responses, evolution of housing policy, theory of intervention, alternative policies for increasing the housing supply. Numerous case studies. Mr. Burns

249. Special Topics in Social Policy and Analysis (2 to 8 units). Lecture, three hours. Seminar on topics in social policy and analysis selected by the faculty. May be repeated for credit.
251. Planning for Multiple Publics. Lecture, three hours. Prerequisite: prior background in statistics and research design. Course is designed to explore the planning needs of various social groups in urban settings. Students are required to explore existing literature and research studies to determine appropriate mechanisms of planning for multiple publics. Students analyze communities in the Los Angeles metropolitan area as a means of gaining insights into the practical, theoretical, and methodological problems of planning for multiple publics. Generally taken in the first year.

252A. Human Lives in Development. Lecture, three hours. The course covers the growth and development of the individual throughout the life cycle. Attention is given to four major schools of thought regarding human development, drawing implications to planning approaches. Emphasis on the psychosocial basis of individual development and its relationship to planning. Ms. Hill Scott

252B. Social Policy in Human Development. Prerequisite: course 252A or consent of instructor. The seminar examines the applications of human development information on the formulation of child care and family policy. Students are given the opportunity to examine how a wide variety of data on child development, family structure, female labor force participation, and the economics of public investments are used in developing policies regarding the organization and supply of child care services. Ms. Hill Scott

253. Social Theory for Planners. Lecture, three hours. Prior knowledge of sociological theory would be useful but is not essential. The course relates the sociological tradition to issues of change, the role of the state, and the relationship between institutions and values as they affect planning. The course concentrates on insights and crucial issues which have arisen from social theory as they relate to the concerns of planning and social policy. Contemporary developments in urban sociology are also examined. Mr. Marris

254. Social Research Methods. Lecture, three hours. Prerequisite: course 220B or equivalent. Course reviews basic methods commonly used in planning and applied social work and, in particular, survey research. Topics include conceptualizing the research problem; developing a research plan; sampling, instrumentation, and data collection; and management of a research study. Mr. Badda, Mr. Levine

255. Social Impact Analysis. Lecture, three hours. Prerequisite: consent of instructor. Recommended: courses 220A, 220B, a course in advanced statistics, a course in survey research and methodology. Limited enrollment. The course explores ways of creating methods for assessing and determining social impacts on communities. Intent is to develop both methodologies and policy formulation for assisting in community development. Generally taken in the second year. Mr. Grigsby

260A. Political Economy and the Environment. Lecture, three hours. Debate about environmental policy is increasingly couched in economic terms. Environmental issues have become questions of political economy, as they influence international and domestic policy and reflect on the functioning of the market system. The assumptions and implications of alternative approaches to political economy, as these pertain to questions of environmental policy, are examined. Ms. FitzSimmons (W)

260B. Politics, Institutions, and the Environment. (Formerly numbered 261B.) Lecture, three hours. Planners face some important dilemmas in designing institutions and policies intended to correct or prevent disruptions of the environment. The course is an introduction to these problems, focusing on the theoretical questions that must be addressed in attempts to control environmental problems in our society. Recent developments in environmental policy in light of the growing environmental movements are reviewed, and current approaches to environmental problems are evaluated, considering their institutional forms and epistemological foundations.

Mr. Storper (Sp)

261. Land-Use Control: Economic and Structural Perspectives. Lecture, two hours; discussion, one hour. Prerequisites: courses 260A and 260B, or consent of instructor. The course compares regulatory methods of land-use control to command or planning methods. The first part is spent looking into the basics of how command and planning work and how land-use regulations affect markets. The second part looks historically to develop a structuralist perspective on the use of land in cities and regions. The third part looks at land-use regulation in the light of the first two, to see how effective it is in steering the course of actual development. The regulatory approach is compared with real planning.

Mr. Storper (F)

262A. Urban Environmental Problems: Wastes and Hazards. Lecture, three hours. Prerequisites: courses 260A and 260B, or consent of instructor. Urbanologically active chemicals in urban environments are a focus of increasing public concern. Public health experts and planners are being asked to assess the risks such substances present and to take such risks into account in the planning process. Hazardous wastes pose a planning and policy problem which requires simultaneous consideration of environmental issues, economic development questions, and social services policy. Ms. FitzSimmons (W)

262B. Urban Environmental Problems: Water Resources. Lecture, three hours. Prerequisites: courses 260A and 260B, or consent of instructor. Water is life and wealth in California, which has the world’s most extensive long-distance, interbasin water transfer system, to date. Water resources planning has been devoted almost exclusively to adding facilities for water delivery. But conflicts over additional developments are increasing. The environmental, legal, and economic issues are presented, along with the geography of California water generally is reviewed. The use of water in California is addressed: agricultural irrigation, water pricing, water rights, and water districts. A resource planning perspective is considered in contrast to a strict development orientation.

Mr. Storper (F)

263. Natural Resource Conservation. Discussion, three hours. Prerequisites: courses 260A and 260B, or consent of instructor. The seminar explores, through reading, discussion, and student presentations, the meaning of resource conservation, its desirability, and ways of achieving it. The focus is on the integrated management of the public lands, though students may attend particularly to a specific resource (minerals, water, timber, wilderness).

Ms. FitzSimmons (F)

264. Environmental Law and Policy (3 to 4 units). (Same as Law M290.) Lecture, three hours. This course covers the first one-third of the text from perspectives meaningful to legal institutions, the nature of environmental problems. It then considers the means by which law has responded, and can and should respond, to problems of environmental quality. Both common law and legislative and administrative measures are considered. The course uses the air pollution problem as the primary vehicle for study.

Ms. FitzSimmons (W)

265. History of American Environmentalism. Discussion, three hours. Prerequisites: courses 260A, 264B or equivalent, and consent of instructor. How did the conservation movement address the conservation/preservation division at the turn of the century, the environmental implications of those concepts of regional integration developed by the RPA, and others in the 1920s which were institutionalized in the New Deal, the rise of environmental activism after World War II, and the emergence of a legislative and judicial framework for environmental politics? Ms. FitzSimmons, Mr. Gottlieb (W)

266. City and Countryside in the Third World. (Not the same as course 266 prior to Fall Quarter 1984.) Lecture, three hours. The course reviews the basic literature and schools of thought on development theory through an analysis of natural resource economies, colonialism, capitalism, and socialism on various urban and rural social and economic structures in the Third World. Through an evaluation of theoretical writings and case studies, the complexity and diversity of developing countries are presented. The linkages between the rural and urban impacts are particularly emphasized. The course gives students important background for courses 267A, 267B, and other planning courses related to Third World issues. Ms. Hecht (F)

267A. Resource-Based Development Planning. Discussion, three hours. Recommended prerequisite: course 266. The course addresses some of the major questions facing planners in the Third World. Topics may include land uses, agriculture, development and rural women, agricultural ecology, comparative land reform, agrarian revolution, and the special problems of tropical development. May be repeated for credit by consent of instructor.

Ms. Hecht (F)

267B. Rural Development Issues. Lecture, three hours. Recommended prerequisite: course 266. The purpose of the course is to develop more thoroughly the student’s understanding of the problems facing rural areas in developing countries. Topics may include land uses, agriculture, development and rural women, agricultural ecology, comparative land reform, agrarian revolution, and the special problems of tropical development. May be repeated for credit by consent of instructor.

Ms. Hecht (F)

268. Advanced Seminar in Natural Environment and Resources. (Formerly numbered 269.) Discussion, three hours. Prerequisite: consent of instructor. Examination of public issues related to environmental quality and resource planning. Generally intended for second-year M.A. and Ph.D. students. May be repeated for credit.

269. Special Topics in Natural Environment and Resources (2 to 8 units). Lecture, three hours. Semester. Topics may include land uses, agriculture, development and rural women, agricultural ecology, comparative land reform, agrarian revolution, and the special problems of tropical development. May be repeated for credit.

270. Real Estate Development for Planners and Architects. See listing under "Architecture/Urban Design." Mr. Karmitzer

273. Site Planning. (Formerly numbered 267.) Lecture, 90 minutes; discussion, 90 minutes. Introduction to principles of site planning for urban areas, including new towns, new towns-in-town, shopping centers, industrial parks, office, and retail centers, and regional developments. Discussion of case studies in Southern California; exercises at the scale of the small city, the urban neighborhood, and the superblock. Mr. Karmitzer

274. Introduction to Physical Planning. See listing under "Architecture/Urban Design." Ms. Leavitt

276. Planning Workshop (4 to 8 units). Laboratory, six hours. Prerequisite: course 421 or 422 or Design 32A or demonstrated background in architectural design or consent of instructor. Planning projects with a focus on physical planning. Emphasis on synthesis combined with iterative evaluation of the emerging solutions. Projects may be reality bound, hypothetical, or in the form of exploring the impact of nonphysical forces on the physical environment. Development of presentation skills, both graphic and verbal, is an essential component of this workshop. Mr. Karmitzer
277. Introduction to Historic Preservation. Lecture, two hours; discussion, one hour; one-day field trip. Following an explanation of the philosophy and history of the preservation movement, lectures focus on various aspects of historic preservation, such as current legislation, tax incentives for developers, preservation planning for cities, methods of recognizing significant buildings and of conducting a survey, adaptive reuse, citizen involvement from national to local levels, appropriate restoration techniques, structural reinforcement of masonry buildings, and social problems caused by preservation (such as gentrification and displacement).

278. Research Methods in Human-Environment Relations (2 to 4 units). See listing under “Architecture/Urban Design.” Ms. Leavitt

281. Introduction to the History of the Built Environment in the United States. Lecture, three hours. Open to advanced undergraduates by consent of instructor. An introduction to American urban, environmental, and architectural history, a survey of the main economic, political, social, and aesthetic forces forming the built environment. The course covers the Colonial period to the present, emphasizing the importance of the spatial design of cities and buildings to public policy. Ms. Hayden

283. History of the American Household and the American Home. Lecture, 90 minutes; discussion, 90 minutes. Prerequisite: course 281 or consent of instructor. An introduction to the history of housing design in the United States, emphasizing the changing roles of women and men from Colonial times to the present and the effects of these social changes on the physical form of the dwelling and the settlement. The concerns of professional architects and planners are discussed, as well as the activity of bankers, builders, and homemakers. Ms. Hayden

284. The Ideal City in History. Prerequisite: course 281 or consent of instructor. Since the time of Thomas More’s Utopia, creating the ideal city has been a favorite device used by novelists, political theorists, economic and social critics, and architects to criticize existing society and demonstrate the dramatic possibilities of thoroughgoing reform. The seminar deals with the utopian tradition in its literary, political, and aesthetic forms, examining satirical cities, moral cities, and urban fantasies from the 16th century to the present. Ms. Hayden

285. Private Life, Public Life, and the Built Environment: Planning for the Changing Household and the Changing Work Force. Lecture, 90 minutes; discussion, 90 minutes. An introduction to the substantial literature on the relationship between gender and urban experience. Alternative research strategies attempt to define a private/public urban split; to describe an inadequate fit between American households, housing, and services; and to document environmental inequities women and children face in contemporary cities. Students prepare seminar papers using one or more of these approaches to explore topics in the areas of housing, neighborhood development, transportation, or social services. Ms. Hayden

286. History of Specific Building Types. See listing under “Architecture/Urban Design.” Mr. Aran (W)

287. Ancient and Islamic Architecture in the Mediterranean Area. See listing under “Architecture/Urban Design.” Mr. Aran (Sp)

288. Architectural History: Medieval Period. See listing under “Architecture/Urban Design.” Mr. Aran (F)

375. Teaching Apprentice Practicum (1 to 4 units). See listing under “Architecture/Urban Design.”


494. Supervised Independent Teaching (2 to 8 units). Supervised individual teaching experience. May be repeated for credit. S/U grading.

496F. Field Projects (2 to 8 units). May be repeated for credit. S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor, department Chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596P. Research in Planning (2 to 8 units). May be repeated for credit.

597P. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 8 units). May be repeated for credit. S/U grading.

598P. Preparation for M.A. Thesis in Urban Planning (2 to 8 units). May be repeated for credit. S/U grading.

599P. Ph.D. Dissertation Research in Planning (2 to 8 units). May be repeated for credit. S/U grading.
The primary goal of the Graduate School of Education is "the improvement of educational practice." In attainment of this goal, the functions of the school have expanded markedly in the past several decades to include a major commitment to educational research, to the advanced education of professional leaders and specialists, to the study and criticism of educational policy, and to field consultative services — all in addition to the traditional preparation of teachers. The professional studies appropriate for the school originate in the nature and management of learning, the maintenance and governance of educational institutions, and the discernment of educational purposes. There is concern for learning theory in its most important phases, for the entire realm of values as it pertains to the education of man, and for the nature and substance of education in this country as it compares with systems of education in other countries.

The UCLA Graduate School of Education, largest of its kind in the University of California system, provides a full range of academic and professional degree programs. Students may select from programmatic offerings consistent with individual goals and professional aspirations. At the master's degree level, professional Master of Education and academic Master of Arts programs are offered; at the doctoral level, qualified students may pursue the professional Doctor of Education or the academic Doctor of Philosophy degree. Additionally, several instructional and services credential sequences are available.
Graduate School of Education

Office of Student Services: 201 Moore Hall, 825-8325

Professors
Marvin C. Atkin, Ed.D.
Alexander W. Astin, Ph.D.
Helen S. Astin, Ph.D.
Eva L. Baker, Ed.D.
Gordon L. Berry, Ed.D.
Nicholas Burton Jones, Ph.D.
James E. Bruno, Ph.D.
Burton R. Clark, Ph.D. (Allan M. Carter Professor of Higher Education)
Arthur M. Cohen, Ph.D.

Assistant Professors
James S. Catterall, Ph.D.
David P. Ericson, Ph.D.
Sandra Graham, Ph.D.
Barbara Hecht, Ph.D.
Carolyn Howes, Ph.D.
Harold G. Levine, Ph.D.

Doctor of Philosophy in Education

Admissions
Qualifications for admission to a program of study in education, in addition to the University requirements for admission, are:

1. A minimum total score of 1000 on the combined quantitative and verbal sections of the Graduate Record Examination (GRE). (Note: The Miller Analogies and Doppelt Mathematical Reasoning Test may be substituted for the GRE; minimum scores are 48 and 19 respectively.)

2. Acceptance in a particular specialization is dependent on the availability of openings in that field; preference may be given to applicants with related backgrounds and/or experience.

Admission to an initial advanced degree program occurs simultaneously with admission to graduate standing and to the Graduate School of Education. No screening examination (other than described above) and no specific coursework are required for admission to a degree program.

Note: Applicants who do not meet the University minimum grade average and/or GRE score requirements may be admitted to the school on the basis of relevant work experience, accomplishments, or public service.

Letters of recommendation, while not required, may prove useful in documenting qualifications and/or professional experiences. The Graduate School of Education has an application form for both master's and doctoral degree programs which must be completed in addition to the one used by the Graduate Admissions Office.

Application forms and departmental brochures are available from the Office of Student Services, Graduate School of Education, 201 Moore Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

Area I — Social and Philosophical Studies in Education

Comparative and International Education — 204A, 204B, 204C, 204D, 204E, 204F, 253A, 253B, 253C, 253D, 253E, 253F, 253G, 253H


Area II — Educational Psychology


Area III — Organizational and Administrative Studies in Education


Teacher Education


Special Studies


Fields of specialization which may be selected in completion of the specific degree programs are indicated below. Contact the Office of Student Services regarding faculty member(s) to be consulted with respect to enrollment and research opportunities and/or course sequencing in each field of specialization.

Master of Education — Administrative and policy studies in education; bilingual/cross-cultural education; curriculum and the study of schooling; teacher education.

Master of Arts in Education — Area I (education and the social sciences; philosophy of education); Area II (all specializations); Area III (education work; higher education).

Doctor of Education — Area II (all specializations, except counseling); Area III (all specializations).

Doctor of Philosophy in Education — Areas I, II, III (all specializations).

Master of Education

The Master of Education degree is a professional master's degree designed for individuals preparing for a mid-level professional position in schooling or for advanced graduate study; it is the appropriate degree to provide professional foundation study in preparation for the Ed.D. program.

Admission

Requirements are applicable in accordance with selected specializations:

1. Administrative and Policy Studies in Education: Possession of a valid teaching credential is preferred. Students with a demonstrated commitment to improving American schooling will be sought for admission.

2. Bilingual/Cross-Cultural Education: Completion of an approved program of professional preparation leading to a preliminary teaching credential is required, as is classroom experience — as a teacher or aide — for at least two years, at any level of schooling. Evidence of professional competence and conscientiousness, as well as the necessary second-language proficiency are also required. (This M.Ed. specialization will not be offered after 1985-86.)

3. Curriculum and the Study of Schooling: Persons with above-average capabilities and interest in curriculum and instruction will be sought. Experience as a practitioner in the specialization field is advantageous.

4. Teacher Education: This is a four-quarter program leading to qualification for a Multiple or Single Subject Teaching Credential and a Master of Education degree. Individuals with the highest qualifications in all subject areas, including mathematics, science, and the humanities, will be sought. Experience in working with children is advantageous.

Course Requirements

A minimum of nine upper division and graduate courses (36 units) is required, although no specific upper division courses are necessary. Six courses (24 units) must be taken in the Education 200/500 series. A maximum of two 500-series courses (eight units) may be applied toward the divisional course minimum and toward the graduate course minimum.

Information regarding specific course requirements in a selected M.Ed. specialization may be obtained from the Office of Student Services.

Teaching Experience

For some M.Ed. specializations, teaching experience is required. Specific information may be obtained from the Office of Student Services.

Comprehensive Examination Plan

There is no thesis plan offered in this program. Comprehensive examinations for master’s degrees are offered twice yearly, once in Fall Quarter and once in Spring Quarter. They consist of:

1. A comprehensive written examination designed to assess (a) comprehension of the professional knowledge basic to the selected field of specialization, including key concepts and principles, major theoretical positions, and fundamental issues and (b) understanding of the broad educational context in which the selected professional field resides.

2. A performance examination designed to assess your competency in the solution of problems in the selected professional field; a test of whether knowledge can be applied in a real or simulated professional setting.

Information regarding examination foci for any selected M.Ed. specialization is available from your academic adviser.

The comprehensive examination may be taken twice. After a second failure, you will be allowed to continue in the Graduate School of Education only in highly unusual circumstances.

Master of Arts in Education

The Master of Arts degree in Education is an academic master's degree designed to meet the needs of the individual preparing for a career in basic research or for advanced graduate study; it is the appropriate prerequisite education degree to the Ph.D. degree program.

Course Requirements

A minimum of nine upper division and graduate courses (36 units) is required, although no specific upper division courses are necessary. Six courses (24 units) must be taken in the Education 200/500 series. A maximum of two 500-series courses (eight units) may be applied toward the divisional course minimum and toward the graduate course minimum.

Two courses must be selected from Education 200A, 200B, 210A, 210B. Additional courses to complete the 36-unit requirement may be selected from offerings in Education and/or other departments on consent of your assigned adviser.

Thesis Plan

Under this plan, you prepare a thesis which is a report of the results of original investigation. Before beginning work on the thesis, you must obtain approval of the subject and general plan from the Graduate School of Education and the chair of your thesis committee.

The thesis committee must be formed, and a Petition for Advancement to Candidacy for the Master of Arts must be filed no later than one quarter prior to completion of course requirements for the degree.

The Theses and Dissertations Adviser and the Graduate Division publication, Regulations for Thesis and Dissertation Preparation, provide guidance in the final preparation of the manuscript. The department does not require a formal examination in connection with the thesis plan.
Comprehensive Examination Plan
The comprehensive examination is concerned with central topics in the selected major area of study and field of specialization. Questions are comprehensive in nature and are designed to measure the breadth and depth of knowledge, as well as ability to focus that knowledge on specific problems.

The comprehensive examination, offered twice yearly in Fall and Spring Quarters, may be taken twice. After a second failure, you will be allowed to continue in the Graduate School of Education only in highly unusual circumstances.

Doctor of Education
The Doctor of Education degree is a professional degree designed to meet the needs of individuals preparing for careers of leadership and applied research in the schools and community educational programs. Emphases include practice, applied studies, and knowledge-related professional skills.

Admission
A Master of Education degree or equivalent is required; at least two years of successful professional experience in education or equivalent must be completed prior to advancement to candidacy.

Course Requirements
The following items are required:

(1) Major specialization study and additional coursework as specified by your adviser.

(2) An approved minor sequence consisting of a minimum of three courses in a specialization other than the major field.

(3) A minimum of three courses beyond the bachelor's degree in research methods or formal processes of inquiry. Such courses may be taken within or outside the Department of Education but must be approved as acceptable for the research methods requirement; at least two courses must be completed at this University.

(4) A minimum of one approved breadth course, including a final examination, in each of three specified breadth categories. Breadth courses must be outside both major specialization and minor.

(5) A field experience minimally approximating a one-course requirement.

Qualifying Examinations
After all coursework is completed (or when you have no more than one required course and one practicum in progress), you must complete the following qualifying examinations:

(1) A written examination in the specialization concerned with key concepts and issues in the profession, which draw from specialized content as well as from content of related specialization study. The examination is offered twice yearly, once in Fall Quarter and once in Spring Quarter, and may be taken a maximum of two times. After a second failure, you will be allowed to continue in the Graduate School of Education only in highly unusual circumstances.

(2) A written examination (may be taken a maximum of two times) focusing on minor field content.

(3) A professional competency performance examination, including demonstration of technical and artistic skills (e.g., may utilize simulated school setting or actual field setting to assess skills in decision making, interaction, information gathering, problem solving).

Note: For the Ed.D. degree, the research methodology and breadth written examinations are those given in connection with individual courses.

After you have completed all courses and professional experiences which are part of the program of study, the University Oral Qualifying Examination is conducted by the doctoral committee, employing topics from education which are related to the research proposal. In case of failure, the examination may be repeated once on the recommendation of your doctoral committee.

Final Oral Examination
At the option of the certifying members of the doctoral committee, a final oral examination may be required.

Ph.D. in Education
The Doctor of Philosophy degree in Education is an academic degree designed for individuals preparing for a career in basic research or college-level instruction. Emphases include theory, research methodology, basic studies, and in-depth knowledge in education and an approved cognate field.

Admission
A master's degree or equivalent in either education or the cognate field in which you plan to work is required.

Foreign Language Requirement
There is a foreign language requirement for the Ph.D. in some specializations. Detailed information is available from the graduate adviser in the Office of Student Services.

Course Requirements
The following items are required:

(1) Major specialization study and additional coursework as specified by your adviser.

(2) An approved minor sequence consisting of a minimum of three courses in a specialization other than the major field.

(3) A minimum of three courses beyond the bachelor's degree in research methods or formal processes of inquiry. Such courses may be taken within or outside the Department of Education but must be approved as acceptable for the research methods requirement; at least two courses must be completed at this University.

(4) A minimum of one approved breadth course, including a final examination, in each of three specified breadth categories. Breadth courses must be outside both major specialization and minor.

(5) A coherent program of at least five graduate courses (or equivalent) in an approved UCLA cognate department. The five courses will be determined by you and your academic adviser. (Note: Cognate courses in addition to the stated minimum may be required by your adviser.)

(6) A research internship minimally approximating a one-course requirement.

Qualifying Examinations
After all required coursework is completed (or when you have no more than one required course and one practicum in progress), you must complete the following written qualifying examinations:

(1) A written examination (may be taken a maximum of two times) focusing on content derived from the major field of specialization.

(2) A written examination (may be taken a maximum of two times) focusing on minor field content.

Note: For the Ph.D. degree, research methodology, breadth, and cognate field written examinations are those given in connection with individual courses.

All courses and professional experiences which are part of the program of study must be completed before taking the University Oral Qualifying Examination. The examination is conducted by the doctoral committee, employing topics from both education and the cognate discipline which are related to the research proposal. In case of failure, the examination may be repeated once on the recommendation of your doctoral committee.

For further information on the written and oral qualifying examinations, contact the Office of Student Services.

Final Oral Examination
At the option of the certifying members of the doctoral committee, a final oral examination may be required.

Joint Ph.D. Program in Special Education
A joint Ph.D. program in Special Education is offered by UCLA and California State University, Los Angeles. The goals of the joint program...
are (1) the stimulation and preparation of research workers of high competence in the various fields of special education; (2) improved preparation for potential teachers of exceptional individuals; and (3) improved preparation of personnel for research and in policy formation in the public schools of California. Students seeking information regarding emphases and requirements should consult the joint doctoral adviser at UCLA (126B Moore Hall) or the Chair of the Department of Special Education at CSULA.

Cooperative Degree Programs

For details regarding either of the following cooperative degree programs, contact the Office of Student Services.

J.D./Education Program

The Graduate School of Education and the School of Law offer a concurrent plan which allows students to design a program of study leading to the J.D. and any advanced degree in education (M.Ed., M.A., Ed.D., or Ph.D.). If the program meets the degree requirements in both schools, students will be awarded both degrees on its completion. (This program will not be offered in 1985-86.)

M.A.-Latin American Studies/ M.Ed.

The Graduate School of Education and the Latin American Studies Program offer an articulated degree program which allows students to combine study for the M.A. in Latin American Studies and the M.Ed., with a specialization in curriculum. Articulated programs do not allow course credit to be applied toward more than one degree.

Certificate (Credential) Programs

The California Commission on Teacher Credentialing has authorized the Graduate School of Education to offer professional programs that lead to (1) the Multiple Subject Teaching Credential, (2) the Single Subject Teaching Credential, (3) the Bilingual Emphasis Teaching Credential, (4) the Administrative Services Credential, (5) the Pupil Personnel Services Credential, and (6) the School Psychologist Services Credential.

Upper Division Courses

100B. Cross-Cultural Foundations of Education (2 units). Prerequisite: consent of instructor. Analysis of significant problems and issues in the history, culture, and current affairs of particular ethnic minority groups in the United States. Patterns of intergroup and intragroup communications and methods of teaching minority students. Includes field experiences.

M102. The Mexican-American and the Schools. (Formerly numbered 102.) (Same as Chicano Studies M102.) Prerequisite: consent of instructor. Review of research and teaching strategies. Analysis of school policies and practices and their effect on the development of Mexican-American and Chicano youth and communities.

M108. Sociology of Education. (Same as Sociology M143.) Prerequisite: Sociology 1. Study of social processes and interaction patterns in educational organizations; the relationship of such organizations to aspects of society, social class, and power; social relations within the school, college, and university; formal and informal groups, subcultures in educational systems; roles of teachers, students, and administrators.

Mr. O'Shea, Ms. Wrigley

112. Psychological Foundations of Education. Prerequisite: consent of instructor. Analysis of learning processes in school situations. Examinations of professional-human relations, the affective, cognitive, social, and personal development of children and adolescents, the evaluation of learning, individual differences, and the implications of relevant theory and research to instructional practices.

Ms. Graham, Ms. Kowalsky, Mr. Silberman

125A. The Education of Exceptional Individuals. Prerequisite: Psychology 10 or equivalent. An introduction to the field of special education, with emphasis on the psychology of individual differences, the learning characteristics of exceptional individuals, and application of research and theory to special education problems.

Mr. Hewett

125B. Principles for Teaching Exceptional Individuals. Prerequisite: consent of instructor. Examinations of approaches to teaching exceptional individuals in special and regular education programs. Principles and assumptions underlying alternative approaches. Emphasis on individualizing curriculum and classroom management. Observation in schools.

M148. Women in Higher Education. (Same as Women’s Studies M148.) Prerequisite: upper division standing. The course examines the education and career development of women in higher education. Specifically, it focuses on undergraduate and graduate women’s faculty and administrators; curricula, programs, and counseling services designed to enhance women’s educational and career development, affirmative action, and other recent legislation.

Ms. Astin

180. Social Psychology of Higher Education. An overview of significant studies in the social psychology of higher education. Focusing on institutional characteristics and students’ interpersonal and intrapersonal processes, special emphasis on identifying and explaining the effects of the college experience on student development and achievement.

Mr. Trent

M197. Senior Seminar in Women’s Studies. (Same as Women's Studies M197.) Discussion, seminars; laboratory, one hour. Prerequisites: Women’s Studies 100 plus two other women’s studies courses; for seniors and juniors: consent of instructor. Designed for students completing work in women’s studies. Each student pursues research on a specific topic concerning women, explores frameworks for understanding female experience (biological, economic, historical, and psychological), and refines methods for research. Fulfills Letters and Science social science or humanities breadth requirement.

Ms. Astin

199. Special Studies (2 to 8 units). Prerequisites: senior standing, consent of instructor. Independent study of individual problems.

Graduate Courses

200A. Historical Research and Writing. Techniques 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.

Mr. S. Cohen

200B. Survey Research Methods in Education. Prerequisite: course 210A or equivalent. Problems of conceptualization, organization, and gathering non-experimental and quasi-experimental quantitative and qualitative data.

Mr. O'Shea

200C. Analysis of Survey Data in Education. Lecture, three hours; laboratory, two hours. Prerequisite: course 200B. Introduction to techniques of processing and analyzing nonexperimental and quasi-experimental quantitative data.

Mr. O'Shea

M201C. History of American Education. (Same as History M264.) The aim is to depict the intellectual and social forces impinging on American education from the 1860s to the present and to analyze the relation between these forces and the values, curricula, structural organization, and functions of education.

Mr. S. Cohen

203. Educational Anthropology. Recommended prerequisite: Anthropology 22. Study of education through the research and method of the cultural anthropologist, focusing on culture and cultural education, with emphasis on cross-cultural studies of enculturation, schooling, values, cognition, language, and cultural change.

Mr. LaBelie

204A. Topics and Issues in International and Comparative Education. Analysis of basic topical and issues in comparative and international education. Emphasis on those topics and issues that cut across national boundaries and are at the forefront of educational policy and practice in both developed and developing nations.

Mr. Hawkins, Mr. LaBelie, Mr. Rust

204B. Introduction to Comparative Education. An examination of conceptual and methodological questions underlying comparative education. Particular attention to the development of the field and to styles of social analysis which may be applied to comparative and cross-national studies in education.

Mr. Hawkins, Mr. Nakashima, Mr. Rust

204C. Education and National Development. Application of social scientific perspectives and methodologies to education in the international context. Emphasis on relevant research literature and development processes and strategies for international development education, with concentration on so-called less developed countries.

Mr. Hawkins and the Staff

204D. Minority Education in Cross-Cultural Perspective. Historical and contemporary analyses of educational policies with regard to ethnic, religious, and gender minorities in selected national and international case studies. Introduction to cross-cultural education in representative countries in relation to social, political, and economic systems.

Mr. Hawkins, Mr. LaBelie, Mr. Nakashima

204E. International Education in Education. Analysis of problems and concepts related to diffusion, borrowing, and adaptation across cultural and national boundaries. Activities of bilateral and multilateral agencies in promoting international education are examined, as well as conceptual and practical curricular efforts which intend to increase international understanding.

Mr. Hawkins and the Staff

204F. Nonformal Education in Comparative Perspective. A comparative and international study of organized and systematic educational activity for children, youth, and adults carried on outside of organized and systematic educational activity. Types of programs include, among others, consciousness raising, community action, skills training, literacy, and extension programs.

Mr. Hawkins, Mr. LaBelie, Mr. Rust
205. Computers in the Educational Process. Introduction to the theory, experimentation, evaluation, and future of computer systems in education, with emphasis on the educational implications of information storage and the use of computers to teach programming and to foster development of writing, computational, and filing skills. Mr. Dorr

206A. Philosophy of Education: Introduction. Systematic introduction to the field, indicating ways in which philosophy serves to elucidate educational aims, content, methods, and values. Mr. Elliott, Mr. Ericson, Mr. Weinberg

206B. Philosophy of Education: Existentialism and Humanism. Examination of existentialist ideas and their application in contemporary humanistic movements in school and society. Mr. Elliott, Mr. Weinberg

206C. Philosophy of Education: Logic and Language. Conceptual analysis of recurrent and contemporary themes in the field. Emphasis on the development of logical and linguistic skills used in the analysis of educational problems and issues. Mr. Elliott, Mr. Ericson

206D. Philosophy of Education: Ethics and Values. A study of ethics and values in the history of education, learning, educational organization and policy, and curriculum design and validation. Mr. Elliott, Mr. Ericson

206E. Philosophy of Education: Introduction to Humanism in Education. Examines the philosophical foundations of humanism and their relationships to educational theory and practice. Mr. Weinberg

207. Politics and Education. Course explores the political dimensions of both formal and nonformal educational enterprises in a national and international perspective. Political theory is explored in the context of such educational issues as policy formation, pressure groups, and public and private elites. Mr. Hawkins and the Staff

208A. Perspectives on the Sociology of Education. Designed to introduce students to sociological perspectives on current issues in educational policy and practice. Issues include desegregation, decentralization, equality of educational opportunity, structure of educational organization, teacher-student relationships, reform in education at the elementary, secondary, postsecondary levels. Mr. Gordon, Mr. O'Shea, Ms. Wingley

208B. Issues in Education: Sociological Perspectives. Prerequisite: course 208A or equivalent. Exploration of educational issues and the structure and processes of formal schooling, from sociological perspectives such as functionalism, conflict theory, symbolic interactionism, ethnomethodology, and critical sociology. Mr. O'Shea

208C. Explanation in the Social Sciences and Educational Research. Lecture, two hours; discussion, two hours. Prerequisite: graduate standing or consent of instructor. An overview of basic strategies and forms of explanation relevant to inquiry in education from the vantage point of the various social and behavioral science disciplines. Mr. Blumenton, Mr. Ericson

209. History of Higher Education. An examination of the development of postsecondary education in the United States, with attention to the social context and to the scope and variety of institutions. Mr. Astin, Mr. A. Cohen, Ms. Mock

210B. Issues in Higher Education. Identification, articulation, and discussion of current issues, innovation trends, and policies in postsecondary education. Mr. Clark, Mr. A. Cohen, Mr. Kintzer

209C. Problems in Research and Evaluation in Higher Education. A critical review of research and evaluation studies of higher education, with special attention to the need for studies of new programs, and problems and to the design and methodology of evaluative research. Mr. Astin, Ms. Mock

209D. The System of Higher Education. An analysis of the structure and function of American postsecondary education from a systems perspective. Emphasis on the structure of the systems, and on the perspectives of different types of institutions. Mr. Astin, Mr. Clark

210A. Basic Concepts in Educational Research. Fundamentals of research design. The language of research. Planning and conduct of research. Interpretation and reporting of research outcomes. Introduction to descriptive statistics: mean, median, mode, variance. Introduction to the normal curve. Mr. Astin, Mr. Clark, and the Staff

210B. Experimental Design in Educational Research. Prerequisite: knowledge of research designs and univariate descriptive statistics. Regression, correlation, inference, normal curve tests, t-tests, simple and factorial analysis of variance, and selected nonparametric tests. Mr. Shavelson, Mr. Skager, Ms. Webb

210C. Experimental Design: Advanced Topics. Prerequisite: course 210B or equivalent. Completely randomized designs, randomized block designs, nested designs, and their combinations into advanced factorial designs using fixed, random, and mixed models. Analysis of covariance, introduction to multiple regression and quasi-experimental designs. Mr. Shavelson, Ms. Webb, and the Staff


211A. The Measurement of Educational Achievement and Aptitude. Prerequisite: course 210A. A critical study of tests of achievement and aptitude, with emphasis on group tests; the relation of achievement to aptitude; social implications of the measurement of intelligence; elements of validity and reliability theory. Mr. Popham, Mr. Skager

211B. Measurement in Education: Underlying Theory. Prerequisite: course 211A. Measurement theory as applied to testing, focusing primarily on classical test theory and the implications of theories of test construction and selection; current status of validity and reliability theory. Mr. Burstein, Mr. Shavelson, Ms. Webb

211C. Problems in Measurement. Prerequisite: course 210C, 211B, or consent of instructor. Generalizability theory, statistical theories of test scores; item response theory, factor analysis. Mr. Muthen, Mr. Shavelson, Ms. Webb

212A. Learning and Education. Models of learning, modeling, reinforcement, motivation, encoding, memory, transfer, individual differences, and instruction. Mr. Graham, Mr. Silverman, Mr. Wittrock

212B. Motivation and Affect in the Educational Process. Prerequisites: courses 210A, 212A. A review of the theoretical and empirical literature on motivational factors in school settings and the conditions for the acquisition of affective outcomes. Mr. Graham

212C. Cognition and Creativity in Education. Prerequisite: course 212B. A review of the theoretical and empirical literature on cognitive processes in school learning, including concept learning, problem solving, learning to learn, and creativity. Mr. Wittrock

213A. Fundamentals of Student Personnel Work. Prerequisite: graduate standing or consent of instructor. Analysis and in-class application of student and pupil personnel service methods, with emphasis on task groups and evaluation. Mr. Healy, Mr. Sorenson

213B. Legal and Ethical Bases of Student Personnel Work. Prerequisite: course 213A. Ethical and legal codes relevant to pupil personnel services; relation of value systems and personality; case studies and the implications of personal values in counseling situations. Mr. Berry, Mr. Sorenson

213C. Group Counseling Theory and Practice. Lecture, three hours; discussion, one hour. Prerequisites: courses 213A, 214A, and 214B, or consent of instructor. Group counseling, leadership in groups, social perception, attitude formation, and the effect of behavior changes in individuals and groups. Evaluation of the social, psychological, and educational principles related to the therapeutic experiences of individuals in small groups. Mr. Berry

214A. Counseling Theory and Practice. Application of concepts drawn from cognitive psychology to the nonacademic problems which people encounter in everyday life, such as finding suitable employment, achieving satisfying interpersonal relationships, and making productive use of leisure time. Mr. Sorenson

214B. Advanced Counseling Theory and Practice. Limited to advanced degree candidates whose major interest is counseling and to selected high school and college counselors. Counseling procedures, educational planning, and methods for helping students handle personal problems that interfere with school progress; critical evaluation of procedures. Mr. Sorenson

214C. Principles of Career Planning. Examination of the nature of careers across ages and ethnic and sexual groups in order to determine implications for career planning in postindustrial society. Mr. Healy

214D. Vocational Guidance. Depth study of current interests and needs in vocational guidance; principles, problems, and practices of vocational guidance. Mr. Berry, Mr. Healy

214E. Alcohol and Other Drugs in Contemporary Society. Extent and variety of substance abuse and dependency in schools and wider society. Relevant theory, including predisposing factors, effects on users and significant others, and recovery process. Critical indicators of substance dependency in the counseling interview. Prevention education and intervention strategies for youths and adults. Mr. Skager

215. Personality, Motivation, and Attribution. (Same as Psychology M215.) Examines the theoretical research and theory relating personality variables (e.g., attributional styles, self-esteem) to motivational concerns such as persistence and intensity of behavior. Perceived causes of outcomes in achievement and attributional domains also are stressed.

216. Counseling Models from a Cross-Cultural Perspective. Prerequisite: course 213A or consent of instructor. Research related to the psychological, educational, and sociological characteristics of counseling clients within a cross-cultural perspective and the implications for counseling models. Evaluation of counseling practices through an analysis of school, community, and mental health settings is systematized.

217A. Social Development and Education. Biological and familial, school, and other influences on the child; development in the 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. Mr. Healy, Mr. Skager

217B. Cognitive Development and Education. Lecture, two hours; discussion, two hours. Prerequisites: graduate standing. A critical review of theories and research in cognitive development, focusing on the work of Piaget and Vygotsky, and the relation of this work to issues in educational practice. Mr. Saxe, Ms. Stipek
217D. Language Development and Education. Research and theory on how children develop their first language; sociolinguistic and psycholinguistic issues in preschool and primary years; bilingual and dialectic issues. Ms. Valadez

217F. Human Development and the Educational Process. Cognitive and social development; cultural, family, peer, and schooling influences on human development; application of developmental theory and research to educational practice. Ms. Howes, Mr. Saxe, Ms. Stipek

218A. Multiple Regression Analysis. Prerequisite: course 210B. Regression-based techniques for analyzing quantitative data; multiple regression methods, multiple correlation, partial correlation; introduction to the general linear model, with direct application to educational inquiry. Mr. Burstein, Ms. Webb

218B. Advanced Quantitative Models in Non-experimental Research. Prerequisites: course 218A or equivalent, consent of instructor. Quasi-experimental research designs, longitudinal models, introduction to causal models, path analysis, recursive and nonrecursive model estimation. Emphasis on conceptual and methodological foundations, assumptions, applications, and limitations. Mr. Burstein, Mr. Mutthen

218C. Structural Equation Modeling. Prerequisites: courses 210D, 218A, or equivalent. Extends path analysis (causal modeling) by considering models with measurement errors and multiple indicators of latent variables. Covers the LISREL approach, including confirmatory factor analysis, covariance structure modeling, and multiple-group analysis. Treats identification, estimation, testing, and model building considerations. Mr. Mutthen

219. Laboratory: Advanced Topics in Research Methodology. Provides assistance in the design of research, interpretation of data, and integration of ideas. Intended for students who have made a commitment to research, required for students from other specializations. Coverage of special topics not included in other courses on research methods. Mr. Burstein, Mr. Shavelson, Ms. Webb

220A. Inquiry into Schooling: Organization and Change. Critical analysis of the structures of organization, roles, and systems of schooling; concepts of function and structure of schooling; organization theory; systems approaches in the analysis of organization development and change. Ms. Crabtree, Ms. Kouritsky, Ms. Tyler


221. Computer Analyses of Empirical Data in Education. Lecture, two hours; laboratory, two hours. Prerequisite: course 210A or equivalent. A course designed to develop conceptual and technical skills needed for designing and executing empirical research utilizing statistical packages. Each student conducts two original studies. Equal emphasis on techniques of data analysis and interpretation of results. Mr. Astin

222A. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Same as Anthropology M236Q and Psychiatry M235.) Lecture, three hours. Prerequisite: consent of instructor. The skill of observing and recording behavior in natural settings is taught, emphasizing field training and practice in observing behavior. Some of the uses of observations and their implications for research in the social sciences are also discussed. Students are expected to integrate observational work into their current research interests. May be repeated for credit. Ms. Levine

222B. Design Issues in Naturalistic Research. Lecture, three hours; discussion, one hour. Prerequisite: course M222A or consent of instructor. Issues in conceptualization and design of naturalistic research studies, particularly within educational settings. Specific topics include problem definition and focus, units of observation, sampling, controlled comparisons, and meaningful variation, and reliability/validity concerns in observational research. Special attention to ethnographic studies. Mr. Levine

222C. Qualitative Data Reduction and Analysis. Lecture, two hours; discussion, two hours. Prerequisite: course M222A or M222B or consent of instructor. Theory and practice in qualitative data reduction and analysis. Discussion of data storage and retrieval systems, data manipulation techniques such as typologies and attribute spaces, and specific analytic procedures. Interpreting qualitative and quantitative data also discussed. Mr. Levine

223. Aesthetics and the Curriculum. Lecture, two hours; discussion, two hours. An examination of various ideas and theories in aesthetics and the application of those ideas to educational practice. Mr. Levine

224. Problems and Issues in Bilingual and Multicultural Education. Introduction to the development and implementation of bilingual and multicultural programs in the U.S. Analysis of program goals, models, typologies, and effectiveness. Mr. Valadez

225A. Issues in the Education of Exceptional Individuals. Prerequisite: graduate standing. Analysis of major research concerning contemporary trends, issues, and programs for the exceptional: consideration of commonalities and differences among exceptional individuals. Ms. Hecht, Mr. Krupski, and the Staff

225B. Advanced Issues in the Education of Exceptional Individuals. Prerequisite: permission of instructor. Provides a synthesis of developmental and educational research on physically and mentally handicapped individuals. The course also includes consideration of the historical context of current research and applies issues in special education. Ms. Keogh

226. Research in the Education of Learning Handicapped Individuals. Prerequisite: course 225A or consent of instructor. Research on the education of individuals with learning handicaps, with emphasis on assessment and instructional modifications. Mr. Krupski

227A. Research on the Learning Characteristics of Exceptional Individuals. Prerequisite: course 225B. An overview of research and theory regarding learning characteristics of exceptional individuals and discussion of the application of this work to educational practice. Ms. Krupski

227B. Research on the Cognitive and Language Characteristics of Exceptional Individuals. Prerequisite: course 227A. Review of the empirical and theoretical literature regarding the language and cognitive development of exceptional individuals; focus on intervention programs developing language and cognition. Ms. Hecht

227C. Research on the Behavioral and Social Characteristics of Exceptional Individuals. Prerequisite: course 227B. Analysis of social and emotional development of exceptional individuals and the development of social competence in special education programs. Mr. Hewett

228. Methodology of Longitudinal Studies. Lecture, two hours; discussion, two hours. Prerequisites: course 210A or equivalent, consent of instructor. An examination of some of the statistical methodological issues in conducting longitudinal studies and interpreting their results. Questions related to data interpretation are a central focus. The range of questions that might be asked and conclusions that might be drawn which are specifically related to influences on children's development are also considered. Mr. Blanton Jones


230. Criterion-Referenced Measurement. (Formerly numbered 410.) An introduction to the field of criterion-referenced measurement. As this assessment device applies to research, development, educational research and evaluation. Mr. O'Shea, Ms. Wrigley

232. Industrialism, Work, and Education. Studies the relationship between education and the making of a working class in the new urban industrial America, 1860 to the present. Mr. S. Cohen

233. American Values in the Development of Vocational Education. Course traces social values that supported early vocational education, reviews relevant research, and analyzes potential future directions for vocational education. Mr. Wilm's

234. Education and Social Stratification. Addresses the relationship between education and components of social inequality: social class, race, and gender and earnings. Explores competing theories used in studying education and social stratification and analyzes relevant research. Conclusions are drawn regarding individual career decisions, social policies, and theories of society. Mr. O'Shea, Ms. Wilm's

235. Education and Work. A review of the theoretical and empirical literature on issues concerning the interface of education and work. A review of alternatives in the school-to-work transition of youth and an appraisal of present vocational training and manpower development programs. Mr. Silberman

236. Human Abilities. Prerequisite: course 210B or equivalent. The nature, development, and measurement of intellectual abilities and their relations to learning and instruction. Review of research and theory of models of ability and test development. Ms. Webb

237. Principles for Effective Media. Prerequisites: courses 205, 210A, and 212A, or consent of instructor. Elucidation of theoretical principles underlying effective media content and media utilization. Consideration of particular differences among print, computers, and audiovisual media, and out of school. Role of research in development of such materials. Ms. Baker, Ms. Dorr

238. Cross-National Analysis of Higher Education. Comparative study of national systems of higher education: their division of work, basic values, structures of authority, modes of national integration, and types of change. Mr. Clark
239. The Organization and Governance of Educational Systems. Academic organizations, precollege and postcollege, are most commonly studied as complex, Professionalized organizations. Course provides basic understanding of characteristics of educational institutions and systems as organizations; environmental relations, governance structures, processes, and patterns of decision making and policy-making. Ms. Mock

240A. Organizational and Administrative Perspectives on School Management. Introductory course in administrative and organizational theory, with emphasis on the management of public and private schools and school systems. Perspectives on dominant educational reform strategies in the context of schools as complex organizations. Mr. Williams

241. Research Methodology in School Administration. Prerequisite: consent of instructor. Examination of research problems and strategies in school administration. Mr. Erickson, Mr. Williams, and the Staff

242. Economic Analysis. Educational Policy and Planning. Prerequisite: graduate standing. An introductory course focusing on concepts and quantitative methods from economics, statistics, and operations research applied to educational policy and planning issues. Instruction in program evaluation, computers for instruction (BASIC) and management information systems (dBASE). Mr. Bruno

244. Economics of Education. An introductory course in microeconomic and macroeconomic techniques applied to education. Methodologies such as marginal analysis, linear programming, Leontief I-O models, and Lorenz curve analysis are discussed, with application to school finance, underdeveloped countries, equality of educational opportunity, and credit management. Mr. Bruno, Mr. Solmon

246A. Seminar: Mathematical Modeling in Educational Policy Analysis. Prerequisite: course 242 or consent of instructor. Stochastic and deterministic modeling techniques as applied to educational policy and planning issues. Instruction in programming microcomputers for instruction (BASIC) and management information systems (dBASE). Mr. Bruno

247. Seminar: Personnel Training for the Corporate Setting. Lecture, two hours; discussion, two hours. Survey of major topics on personnel training methods used by organizations to facilitate the learning of job-related behavior on the part of their employees. Topics include needs assessment, maximizing trainees' learning, training methods, and evaluating training programs. Mr. Silberman

248. Seminar: Perspectives on Lifelong Learning. From an interdisciplinary perspective, lifelong learning is studied theoretically and as an area of educational research, policy, and practice. Conceptual distinctions are drawn among the major proponents of lifelong learning, and implications for schooling are considered. Mr. Aslin

249A. Seminar: National Evaluations of Postsecondary Education. Critical review of national evaluation studies of higher education, including programs of federal education and professional development school programs; emphasis on the design, methodology, and interpretation of large-scale evaluation studies. Mr. Astin

249B. Seminar: Institutional Research and Program Evaluation. Critical review of institutional evaluation studies, with consideration of the scope and content of information needed for various purposes and the problems of interpreting this information to appraise overall institutional functioning and effectiveness. Mr. Trent

251A. Seminar: Philosophy of Education, Epistemology. Prerequisite: consent of instructor. Mr. Ericson

251C. Seminar: Philosophy of Education: Behavioral Science Problems — Methodological Perspectives. Prerequisite: course 206C or consent of instructor. Mr. Ellett, Mr. Ericson

251D. Seminar: Philosophy of Education, Problems in Ethics and Values. Prerequisite: course 250D or consent of instructor. Mr. Ellett, Mr. Ericson

251E. Seminar: Philosophy of Education, Selected Issues. Mr. Rust

252A. Seminar: Educational Organizations. Prerequisite: course 206A or consent of instructor. Mr. Gordo, Mr. O'Shea, Mr. Wrigley

252B. Seminar: Education and Social Change. Prerequisite: course 206A or consent of instructor. Mr. LaBelle, Mr. O'Shea

252C. Seminar: Current Problems in Comparative Education. Mr. Hawks, Mr. LaBelle, Mr. Rust

253G. Seminar: The Asian American and Education. Basic issues and topics related to Asian Americans in the field of education. Examples of these issues and topics are Asian Americans and the community, socioeconomic status, the education-work transition, the language and culture question. Mr. Nakanishi

253H. Seminar: The Chicano/Hispanic and Educational Basic issues and topics related to Chicano/Hispanic student progress (e.g., early childhood, elementary, higher education; specific topics: assessment, access, tracking, segregation; implications for schooling). Mr. Hawkins, Mr. LaBelle, Mr. Nakanishi

255. Seminar: Special Topics in Measurement and Research. Prerequisites: courses 210C and 211C, or consent of instructor. Mr. Nakanishi

256A. Seminar: Special Topics in School Learning. Prerequisite: consent of instructor. Ms. Graham, Mr. Wiltrock

256B. Seminar: Special Topics in Development. Prerequisite: consent of instructor. Mr. Berry, Mr. Healy, Ms. Tidwell

257. Seminar: Pupil Personnel Services. Prerequisite: consent of instructor. Mr. Berry, Mr. Healy, Ms. Tidwell

258A. Seminar: Problems in Instructional Research. Mr. Wiltrock

258B. Seminar: Problems in Instructional Development. Ms. Baker, Mr. Don, Mr. Levine

259A. Seminar: Research on Characteristics of Students. Mr. Trent

259B. Seminar: Research on Characteristics of Educational Environments. Mr. Trent

260. Seminar: Principles of Curriculum and Instruction. Mr. McNeil, Ms. Tyler

261A. Seminar: Early Childhood Education. Prerequisite: course 421A. Mr. McNeil

261C. Seminar: Secondary Education. Mr. McNeil, Mr. Silberman

261D. Seminar: The Community College. Mr. A. Cohen, Mr. Kintzler

261E. Seminar: Education and Work. Mr. Silberman and the Staff

261F. Seminar: Higher Education. Mr. Kintzler, Mr. Trent

262A. Seminar: The Social Studies. Ms. Crabtree

262B. Seminar: Reading. Mr. McNeil

262F. Seminar: Research Topics in Bilingual/Multicultural Education. Prerequisite: consent of instructor. Mr. Valadez

262J. Seminar: Contemporary Issues in Education and Work. Mr. Wilms


275. Seminar: School Desegregation. Prerequisite: consent of instructor. Analysis of the social, political, and legal response to desegregation programs in Northern and Southern school districts; review of court decisions and development of legal policy on school desegregation. Consideration of effects of integration on school achievement and interracial attitudes. Mr. Wrigley

280A. Seminar: Selected Topics in Special Education (2 units). Prerequisite: consent of instructor.

280B. Seminar: Exceptional Individuals. Prerequisite: doctoral standing.

281A-M229A-M229B-M229C and Psychiatry M279A-M279B-M279C). Mr. Rust, Mr. Healy, Ms. Tidwell, Mr. McNeil, Mr. Solmon

299A-299B-299C, Research Practicum in Educational Research (4 to 8 units each). May be repeated for credit.

312. Basic Principles of Curriculum and Instruction. Prerequisite: consent of instructor. Analysis and practice of basic principles and concepts for planning, conducting, and evaluating units of curriculum and instruction. Emphasis on the study and utilization of a variety of instructional strategies and their application in elementary and secondary schools. Ms. Crabtree, Ms. Kourinsky, Mr. McNeil

315A-315B. Principles and Methods for Teaching Reading for Multiple Subject Instruction (2 units each). Prerequisite: consent of instructor. Courses 315A is prerequisite to 315B. Reading instruction in the elementary school. Analysis of reading problems and programs; study of relationships between language/culture/cognition and reading. Examination and development of instructional programs; analysis and practice of alternative instructional methods. Observation and participation in schools.

315A-316A-316B. Principles and Methods for Teaching Reading for Multiple Subject Instruction (2 units each). Prerequisite: consent of instructor. Courses 316A is prerequisite to 316B. Reading instruction in the secondary school. Analysis of reading problems and programs; study of relationships between language/culture/cognition and reading. Examination and development of instructional programs; analysis and practice of alternative instructional methods. Observation and participation in schools.

Ms. Kourinsky
318A. Principles and Methods for Multiple Subject Instruction (2 units each). Prerequisite: consent of instructor. Course 318A is prerequisite to 318B. Examination and development of instructional programs; analysis and practice of alternative instructional methods. Focus on subjects commonly taught in elementary schools. Observation and participation in schools.

Ms. Kourlisky

320A-320B. Principles and Methods for Single Subject Instruction (2 units each). Prerequisite: consent of instructor. Course 320A is prerequisite to 320B. Examination and development of instructional programs; analysis and practice of alternative instructional methods. Focus on subjects commonly taught in secondary schools. Observation and participation in schools.

Ms. Kourlisky

324A. Observation and Participation: Multiple Subject Instruction (2 to 6 units). Prerequisite: consent of instructor. Six hours per week of observation and participation in classrooms in which multiple subjects are taught, normally in elementary schools. Preparation for supervised teaching. S/U grading.

Ms. Kourlisky

324B. Supervised Teaching: Multiple Subject Instruction (2 to 10 units). Prerequisites: course 324A. Observation and participation in classrooms in which multiple subjects are taught, normally in an elementary school. S/U grading.

Ms. Kourlisky

324C. Supervised Teaching: Multiple Subject Instruction (2 to 10 units). Prerequisites: course 324B, consent of instructor. Advanced practice teaching under the daily supervision of a teacher in a classroom in which multiple subjects are taught, normally in an elementary school. S/U grading.

Ms. Kourlisky

324D. Supervised Teaching: Multiple Subject Instruction (2 to 10 units). Prerequisites: course 324C, consent of instructor. Advanced practice teaching under the daily supervision of a teacher in a classroom in which multiple subjects are taught, normally in a secondary school. S/U grading.

Ms. Kourlisky

325A. Laboratory in the Education of Exceptional Individuals. Prerequisite: course 125A or consent of instructor. Six to eight hours per week of fieldwork in the UCLA Neuropsychiatric Institute School, other campus facilities, or public school special education programs.

325B. Advanced Laboratory in the Education of Exceptional Individuals. Prerequisite: course 325A. Six to eight hours per week of fieldwork in the UCLA Neuropsychiatric Institute School, other campus facilities, or public school special education programs.

330A. Observation and Participation: Single Subject Instruction (2 to 6 units). Prerequisite: consent of instructor. Six hours per week of observation and participation in classrooms in which single subjects are taught, normally in secondary schools. Preparation for supervised teaching. S/U grading.

Ms. Kourlisky

330B. Supervised Teaching: Single Subject Instruction (2 to 10 units). Prerequisites: course 330A, consent of instructor. Practice teaching under the daily supervision of a teacher in a classroom in which a single subject is taught, normally in a secondary school. S/U grading.

Ms. Kourlisky

330C. Supervised Teaching: Single Subject Instruction (2 to 10 units). Prerequisites: course 330B, consent of instructor. Advanced practice teaching under the daily supervision of a teacher in a classroom in which a single subject is taught, normally in a secondary school. S/U grading.

Ms. Kourlisky

330D. Supervised Teaching: Single Subject Instruction (2 to 10 units). Prerequisites: course 330C, consent of instructor. Advanced practice teaching under the daily supervision of a teacher in a classroom in which a single subject is taught, normally in a secondary school. S/U grading.

Ms. Kourlisky

334. Supervised Teaching: Higher Education. Mr. A. Cohen

360. Teaching Clinical Practicum. Discussion, two hours; fieldwork, two hours. Prerequisite: consent of instructor and director of Teacher Education Laboratory. Seminar and directed field experience. Examination and analysis of different methods of teaching and their effects on the student. Ms. Kourlisky

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

411A. Introduction to Educational Evaluation. An introduction to systematic evaluation as it applies to educational settings. Program evaluation is considered as a means of improving the quality of educationally relevant decisions.

Mr. Akin, Mr. Popham

411B. Evaluation Theory. Course provides students with a basic understanding of prevailing evaluation theories, with various of the alternative evaluation theories currently being proposed, and with the process of theory development in educational evaluation.

Mr. Akin, Mr. Popham

411C. Procedural Problems in Evaluation. Assessment methodologies appropriate for evaluation problems. Writing evaluation proposals, developing program monitoring procedures, selecting appropriate evaluation design strategies, coping with ethical controversies in evaluation, understanding the decision context, and reporting evaluation results.

Mr. Akin, Mr. Popham, Mr. Skager

413A-413B-413C. Internship in School Psychology. Lecture, two hours; field experience, sixteen hours. Prerequisite: consent of instructor. Must be completed in three consecutive quarters: limited to students enrolled in the counseling specialization. Work experience in public schools or comparable setting performing duties of a school psychologist, including case study, material, staffing cases, developing educational plans, working with teachers and parents, and establishing evaluative criteria. Ms. Healy, Ms. Tidwell

415A. The Appraisal of Intelligence. Prerequisites: courses 210A, 211A. Concepts and theories leading to development of individual cognitive assessment instruments; issues and implications relating to the development and current practices of utilizing such tests. Ms. Ellett

421A-421B-421C. Problems and Methods of Analysis in Child Development, Education, and Social Policy. Lecture, two hours; discussion, two hours. The seminar examines the roles of child development, education, and social scientists in the development, implementation, and evaluation of policies affecting children and their families. Students learn to design and conduct interviews, analyzing legislative documents, and present analyses to policymakers.

Ms. Dorr, Ms. Stipek

421G. The Humanistic Curriculum. A consideration of the philosophical and cultural foundations of humanistic curricular strategies. Reviews techniques and procedures of affective education with a view to their place in an overall theory of teaching and learning.

Mr. McNeil, Ms. Tyler

422. Inquiry Into Schooling: Basic Issues. Critical examination of basic issues and problems in the organization and reconstruction of precollegiate secondary school curricula and instruction. Consideration of historical development and changing functions of schooling in American society; school organization; schooling alternatives; problems in the management of educational change.

Mr. McNeil, Ms. Tyler


Mr. McNeil, Ms. Tyler

424A. The Social Studies in the Curriculum. Advanced study in social studies curriculum development; problems in defining objectives and organizing single and multidisciplinary programs; critical review of literature on cognitive and affective learning in social studies, with emphasis on experimental instruction models.

Ms. Crabtree

424B. Reading in the Curriculum. Prerequisite: course 210A. Study of reading curricula and instructional procedures, with emphasis on the rationale and relationship of reading therapy and reading research comparing their effectiveness.

Ms. McNeil

424C. Language in the Curriculum. Advanced study in the school language curriculum; application to the improvement of the curriculum in the field.
By any standard, the UCLA School of Law is recognized as one of the nation's great law schools. This reputation is based on excellence in scholarship, a rigorous educational program, and the quality of the faculty which includes eminent authorities in all major fields of law.

The educational program at the UCLA School of Law is rigorous and competitive, but it takes place in a humane environment where there is a genuine spirit of community. The student body of the school is intellectually distinguished, interesting, and culturally diverse.

The school's strong clinical program offers courses in lawyering skills such as interviewing, counseling, negotiation, and trial advocacy. UCLA students, alumni, and faculty have collaborated to pioneer clinical legal education. Students see more focus on the attorney/client relationship; they see more of what will ultimately face them as lawyers and policymakers.

An extensive and diversified student extern program, one of the most highly regarded moot court programs in the nation, and a basic philosophy that teaches law students to think clearly and analytically, but with compassion, all contribute to the distinction of the school.
General Information: 1242 Law, 825-4841

Admissions: 50 Dodd Hall, 825-2080

Professors
Benjamin Aaron, LL.B.
Richard L. Abel, LL.B., Ph.D.
Norman Abrams, J.D.
William P. Alfond, LL.B., J.D., Acting
Reginald H. Alleyne, Jr., LL.B., LL.M.
Alison Grey Anderson, J.D.
Michael R. Asimow, M.A., J.D.
John A. Bauman, LL.B., LL.M., J.S.D.
Pamela Blumberg, J.D.
David A. Bindler, LL.B.
Grace Blumberg, J.D., LL.M.
Richard Delgado, J.D.
David Dolin, J.D., Ph.D., Acting
Jesse J. Dukeminier, J.D.
Julian N. Eshle, J.D.
William E. Fort, J.D., Acting
Carole E. Goldberg-Ambrose, J.D., Associate Dean
Robert Goldstein, J.D., Acting
Kenneth W. Graham, Jr., J.D.
Joel F. Handler, J.D.
Harold W. Horowitz, LL.B., LL.M., S.J.D.
Edward A. Jones, Jr., LL.B.
Robert L. Jordan, LL.B.
Kenneth L. Karat, LL.B.
William A. Klein, LL.B.
Leon Letwin, LL.B., LL.M.
Wesley J. Liebeler, J.D.
Christine Littleton, J.D., Acting
Daniel H. Lowenstein, LL.B.
Henry W. McGee, Jr., J.D., LL.M.
William M. McGovern, Jr., LL.B.
Carrie J. Menkel-Meadow, J.D.
Herbert Morris, LL.B., B.Phil.
Stephen R. Munzer, B.Phil., J.D.
Melville B. Nimmer, LL.B.
Frances E. Olsen, J.D., S.J.D., Acting
Patrick O. Patterson, J.D., Acting
Susan Westerberg Prager, M.A., J.D., Dean
Arthur I. Rosett, LL.B.
Gary T. Schwartz, LL.B.
Murray L. Schwartz, LL.B., LL.D.
Steven H. Shifrin, M.A., J.D.
Stanley Siegel, J.D.
James D. Summer, Jr., LL.B., LL.M., J.S.D.
Phillip R. Trimble, M.A., LL.B., Acting
Jonathan D. Varat, J.D.
William D. Warren, J.D., S.J.D.
John S. Wiley, J.D., Acting
Stephen C. Yezzelli, M.A., J.D.
Eric M. Zolt, M.B.A., J.D., Acting
Richard C. Maxwell, LL.B. (Emeritus Connell Professor of Law)
David Mellinoff, LL.B., Emeritus
Rollin M. Perkins, J.D., S.J.D., Emeritus
Harold E. Verrall, M.A., LL.B., S.J.D., Emeritus
Kenneth H. York, LL.B., Emeritus

Lecturers
Thomas J. Allen, J.D.
Susan Cordell Gillig, J.D., Assistant Dean, Clinical Programs
Wendy R. Kamada, J.D.
Kristine S. Knaplund, J.D.
Michael Rappaport, J.D., Assistant Dean, Admissions
David W. Reiman, J.D.
Hermia S. Shephog-Whitlock, J.D.

Adjunct Professors
Charles M. Firestone, J.D.
Albert J. Moore, J.D.

The School of Law, the only academic unit at UCLA which operates on a semester (rather than quarter) system, offers a three-year curriculum leading to the J.D. degree. The school is accredited by the California Committee of Bar Examiners, is a member of the Association of American Law Schools, and is on the approved list of the American Bar Association. Graduates of the school are qualified to apply for admission to practice in any state of the United States.

The school is designed to produce lawyers who are well-prepared for the various private and public roles which are assigned to members of the legal profession. Students do not undertake a specific major but have the opportunity to enroll in a wide variety of courses dealing with various legal fields.

Degrees Offered
Juris Doctor (J.D.)
Master of Laws (LL.M.)

Juris Doctor Degree

Admission
Students beginning their professional work are admitted only in the Fall Semester. You must have received a bachelor's degree from a university or college of approved standing before beginning work in the school. You are also required to take the Law School Admission Test (LSAT). The admissions committee considers grades and test scores, and, in appropriate cases, such additional factors as ability in languages other than English; work experience or career achievement; previous positions of leadership or other special achievements; ethnic background; prior community or public service; unusual life experiences; overcoming a physical handicap or other disadvantage; career goals; economic disadvantages; and any other characteristic which may indicate that you will contribute to the educational and other benefits of a diversified student body.

For detailed information about the academic programs offered by the School of Law, the fees, and the semester-system calendar by which it operates, obtain the Announcement of the UCLA School of Law by contacting the Admissions Office, School of Law, 50 Dodd Hall, UCLA, Los Angeles, CA 90024.

Residence and Unit Requirements
The candidate for the degree of Juris Doctor must have pursued resident law school study for six semesters and successfully completed 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. In addition to the courses in the regular law school curriculum, students may take two courses for credit in other disciplines in the University. Graduate students may enroll in upper division law courses on a limited basis. Law courses are not open to non-UCLA students.

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 numerical scale of 50 to 100, 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 Anglo-American legal reasoning in a series of fields which have historically dominated legal
thought. In conjunction with these courses students also receive training in the use of legal bibliography and in effective legal writing and oral advocacy.

In the second and third years students have an opportunity to engage in a number of different fields of law and law-related study.

Cooperative Degree Programs

The School of Law offers three concurrent degree programs which allow you to fulfill the requirements of the J.D. and another graduate degree simultaneously.

M.A.-Architecture/Urban Planning/J.D.

The School of Law and the Graduate School of Architecture and Urban Planning offer a concurrent plan of study providing an integrated curriculum for those planning to specialize in the legal aspects of urban problems. Education in planning offers an overview of theories and methods that permit identification and treatment of urban problems; education in law offers insight into the institutional causes and possibilities for treatment of these problems. Students pursue studies in both schools and receive both the J.D. and M.A. degrees at the end of four years.

Students interested in the concurrent degree program must apply and be admitted to the School of Law, the Urban Planning Program, and the Graduate Division.

Education Program/J.D.

The School of Law and the Graduate School of Education offer a concurrent plan which allows students to design a program of study leading to the J.D. and any advanced degree in education (M.Ed., M.A., Ed.D., or Ph.D.). If the program meets the degree requirements in both schools, students will be awarded both degrees on its completion. (This program will not be offered in 1985-86.)

M.B.A./J.D.

The School of Law and the Graduate School of Management offer a concurrent program which enables students to prepare for careers where law and management overlap and where understanding of both fields is necessary. Examples of such areas would include public service, international trade, industrial relations, corporate law, and specialized areas of management consulting. The program makes it possible to earn the J.D. and M.B.A. in four academic years. Students interested in such a program should apply to both schools simultaneously.

Master of Laws Degree

The school offers a graduate law program leading to the Master of Laws (LL.M.) degree to outstanding American and foreign students interested in pursuing graduate studies. Law school graduates with outstanding records who may be interested in this program should contact the Admissions Office for further information.

Other Programs

Clinical Program

The school permits students to participate in clinical training. These activities consist of fieldwork in a variety of federal and state agencies accompanied by seminars in the school which seek to analyze and expand the agency experience.

Extern Program

The school offers an extern program which gives students the opportunity to work in legal agencies away from the school for as long as six months (including the summer), for which they receive academic credit. Extern programs have been offered in Washington, DC, San Francisco, New York, and Hawaii.

First-Year Courses

The first year of law school is designed to introduce students to legal analysis using a variety of substantive fields. Each of the following courses is required of all first-year students.

100. Contracts (5 units). The law governing private agreements. Analysis of the criteria for determining whether or not a particular promise or voluntary agreement is legally enforceable and a survey of the major legal issues affecting enforceable agreements. Problems of interpreting contract language, the role of contract in a market society, the conflict between the commercial need for certainty and the demands of individual fairness, and the relationship between contract law and other areas of law.

Mr. Asmow, Ms. Littleton, Mr. McGovern, Mr. Rosett, Mr. Summer

110. Legal Research and Writing (5 units). The year-long course teaches first-year students how to find the law, how to analyze it, and how to communicate their conclusions in writing. The course focuses on the skills of analyzing legal authority, developing arguments to solve specific problems where there is conflicting authority, and structuring legal writing which is clear, informative, and persuasive.

120. Criminal Law I (3 units). Selected topics in substantive criminal law. Consideration of principles underlying the definition of crime; an examination of various attempts to eliminate the requirement of mens rea and a consideration of such general doctrines as ignorance of fact and ignorance of law, causation, attempt, complicity and conspiracy, insanity, diminished capacity, and automatism. Emphasis on the basic theory of criminal law and the relationship between the doctrines of criminal law and the various justifications for imposition of punishment.

Mr. Abrams, Mr. Dolinko, Mr. Eule, Mr. McGee, Mr. M. Schwartz

130. Property (6 units). Analysis of property as it has developed within the Anglo-American legal tradition. The concepts and doctrines of property and their application to the legal problems of property, sale and financing of real estate, housing, landlord and tenant, and public and private land-use planning and development.

Ms. Blumberg, Mr. Dukeminier, Mr. Lowenstein, Mr. Munzer

140. Torts (5 units). Personal injury law as it has developed within the Anglo-American legal tradition. The nature of the legal rules of negligence, the duties of care, and the principles of liability for personal injuries resulting from the negligence of others. Analysis of the criteria for determining liability and damages for such personal injuries.

Mr. Abel, Ms. Anderson, Mr. Jones, Mr. M. Schwartz, Mr. Shiffrin

145. Civil Procedure (5 units). The processes that courts follow in deciding disputes in noncriminal cases. The way in which conflicts are resolved for courts, the stages through which litigation goes, the division of power among the various decision makers in the legal system and between the state and federal courts, the territorial limitations on the exercise of judicial power, the principles that define the consequences of a decision once a court has finished with a case, and the special opportunities and problems of litigations involving multiple defendants.

Mr. Delgado, Mr. Forbath, Ms. Goldberg-Ambrose, Mr. Graham, Mr. Letwin, Mr. Yeazell

Second- and Third-Year Courses*

All of the courses in the second- and third-year curriculum are elective with the exception of Law 312. Students must complete the professional responsibility requirement to graduate, either by preparing a paper in consultation with a faculty member or by completing one of the sections of course 312. The different sections vary in emphasis.

*The School of Law maintains its own course numbering system; course numbers as shown here do not correspond to Graduate Division course numbering definitions.

312. The Legal Profession (Section 1). The law of the lawyer as part of the system of justice. The role of the lawyer in society historically and today; unique professional responsibilities and ethical dilemmas; right to counsel and right to self-representation; and professional and societal measures taken to assure availability of counsel and the qualified performance of the role. A study and critique of the Code of Professional Responsibility and the California Rules of Professional Conduct; a wide and varying selection of contemporary problems facing the profession. The course satisfies the professional responsibility requirement.

Ms. Menkel-Meadow, Mr. M. Schwartz
Elective Courses

200. Constitutional Law I. Ways in which the United States Constitution (1) distributes power among the various units of government in the American political system and (2) limits the exercise of those powers. Structural limitations on government and the division of powers between the nation and the states in the federal system, and the separation of powers among the three branches (legislative, executive, and judicial) of the federal government are considered. The Constitution (13th, 14th, and 15th) as limits on the states and as sources of congressional power. The proper role of the judiciary in limiting the action of other branches of government.

Mr. Eule, Mr. Karst, Mr. Shiffrin, Mr. Varat

201. Constitutional Law II. The First Amendment's guarantee of the freedoms of speech, press, and assembly, and the First Amendment's prohibition of the establishment of religion and its guarantee of the free exercise of religion. The role of the federal courts in the review of governmental power. The place of individual liberties in a pervasively regulated social order.

Ms. Abrams, Mr. Asimow, Mr. Schwartz, Mr. Yeazell

202. Administrative Law. Public law with two emphases: (1) the processes by which federal agencies exercise their lawmaking and rule-making authority and limits on control of such executive action by the other two branches of government, particularly by the judiciary. The legal doctrines that define the power of courts to review administrative action and the constitutionality of administrative action. The federal administrative process itself. The place of individual liberties in a pervasively regulated social order.

Mr. Handler

203. Federal Taxation I. Fundamentals of federal income taxation, particularly as they apply to individuals. Gross income, the taxpayer to whom the income will be attributed, deductions and credits available in computing tax liability, the year in which income is properly reported and deductions properly taken, and characterization of income as ordinary income or capital gain. Issues of tax policy and reform and the political economy of taxation. The role of the federal courts in shaping tax policy.

Mr. Munzer

204. Federal Taxation II. Prerequisite: course 220. Course 230 may be taken concurrently. An application and extension of the principles of course 220 to the partnership and shareholder-corporation relationship. The nature of the partners and shareholders, their rights and obligations, and distributions to partners and shareholders, and liquidations and sales of partnership or shareholder interests. The tax implications of the restructuring and sale of partnerships and corporations.

Mr. Siegel, Mr. Zolt

205. Wills and Trusts. The law of wills, trusts, and future interests. The substantive law of wills and trusts. The administration of decedents' estates and trusts.

Mr. Dukeminier, Mr. McGovern, Mr. Sumner

206. Community Property. Community property laws of the eight states which follow the community property concept. Tax planning for marital property inherited from the Spanish law. The economic underpinnings of the California community property system. The economic aspects of transfer of interests in community property and policy choices. Ms. Blumberg, Ms. Prager

207. Real Property Secured Transactions. The use of land as security for debts, with the California cases and statutes as presented as an example of an operating system. The real estate security transaction process from the perspective of the consumer and the lender. The economic perspective used by modern antitrust law. Ms. Bookkeeping; underlying principles of accounting. Recommended for students with no prior accounting training. Basic concepts of financial reporting by business enterprises, bookkeeping, and principles of accounting. The basic principles of financial statements and the financial accounting aspects of each problem. The objective of the analysis is to prepare specific and comprehensive plans for dealing with each problem, considering both practical alternatives and justifying the choices made.

Mr. Siegel


Mr. Karst, Mr. Nimmer, Mr. Shiffrin, Mr. Varat

209. Trusts and Estates. Trusts. The law of wills, trusts and future interests. The law of trusts and wills. The administration of estates and trusts. Tax implications of the restructuring of business enterprises, primarily in the corporate form. The class analyzes four or five realistically complex problems, examining the state and federal corporate tax implications, the definition of taxable income, the computation of the tax liability, and the tax implications, and the financial and accounting aspects of each problem. The objective of the analysis is to prepare specific and comprehensive plans for dealing with each problem, considering both practical alternatives and justifying the choices made.

Mr. Siegel

230. Business Associations. The issues that must be addressed when people decide to form joint economic ventures and how these issues are resolved in the law of agency, partnership, and corporations. The economic features of the federal securities laws and their impact on planning for an operation of business ventures.

Ms. Anderson, Mr. Klein, Mr. Siegel


Mr. Varat

232. Antitrust I. Basic understanding of the federal antitrust law: the Sherman, Clayton, and Robinson-Patman Acts. Monopolies, cartel (price fixing, market division, boycotts), vertical restrictions (resale price maintenance, territory and customer allocation), mergers, price discrimination, joint ventures, tie-in arrangements, reciprocity, requirements contracts, etc. The economic perspective used by modern antitrust analysis.

Mr. Liebler, Mr. Willey

233. Antitrust II. Prerequisite: course 240. The economic underpinnings of oligopoly theory, which presumes the existence of a single dominant firm. Competitive behavior and the definition of the market under antitrust policy toward concentrated industries; the validity of the so-called "Market Concentration Doctrine." Current antitrust efforts aimed at monopoly and "shared monopoly." Internal market barriers.

Mr. Margo


Mr. Varat

235. Business Planning. Prerequisite: courses 220, 230. Course 221 may be taken concurrently. An introduction to the structure, planning, and restructuring of business enterprises, primarily in the corporate form. The class analyzes four or five realistically complex problems, examining the state and federal corporate tax implications, the definition of taxable income, the computation of the tax liability, and the tax implications, and the financial and accounting aspects of each problem. The objective of the analysis is to prepare specific and comprehensive plans for dealing with each problem, considering both practical alternatives and justifying the choices made.

Mr. Siegel


Mr. Siegel


Mr. Varat

238. Antitrust I. Basic understanding of the federal antitrust law: the Sherman, Clayton, and Robinson-Patman Acts. Monopolies, cartel (price fixing, market division, boycotts), vertical restrictions (resale price maintenance, territory and customer allocation), mergers, price discrimination, joint ventures, tie-in arrangements, reciprocity, requirements contracts, etc. The economic perspective used by modern antitrust analysis.

Mr. Liebler, Mr. Willey

239. Antitrust II. Prerequisite: course 240. The economic underpinnings of oligopoly theory, which presumes the existence of a single dominant firm. Competitive behavior and the definition of the market under antitrust policy toward concentrated industries; the validity of the so-called "Market Concentration Doctrine." Current antitrust efforts aimed at monopoly and "shared monopoly." Internal market barriers.

Mr. Margo


Mr. Varat

241. Business Planning. Prerequisite: courses 220, 230. Course 221 may be taken concurrently. An introduction to the structure, planning, and restructuring of business enterprises, primarily in the corporate form. The class analyzes four or five realistically complex problems, examining the state and federal corporate tax implications, the definition of taxable income, the computation of the tax liability, and the tax implications, and the financial and accounting aspects of each problem. The objective of the analysis is to prepare specific and comprehensive plans for dealing with each problem, considering both practical alternatives and justifying the choices made.

Mr. Siegel
265. Workers' Compensation and Workers' Injuries. The law of the workers' compensation system, developed in the early 20th century as an alternative to the tort system. The evolution of the leading concepts of workers' compensation law. Theoretical implications, the general theory of workers' compensation, arbitration cases are used. Each student works with three case files, functioning as a union advocate in one, an employer advocate in a second, and an arbitrator in the third. Each student prepares two briefs, one arbitration opinion and award, and a research paper.

266. Employment Discrimination Law. Laws prohibiting employers, unions, and employment agencies from discriminating on grounds of race, sex, religion, and national origin. Interplay between the federal Equal Employment Opportunity Act of 1964 (Title VII) and other related state and federal statutes and federal constitutional provisions. Employment discrimination cases, arbitration, and judicial actions. Mr. Jones

267. Indian Law. The special legal status of American Indians and the legal questions between moral/legal claims and political forces. The sources and scope of federal, state, and tribal power on Indian reservations; property law concepts unique to Indian tribes and Indian nations in relation to federal, state, and tribal governments and the federal trust relationship to Indians. Ms. Goldberg-Ambrose

268. Labor Law III. The rights and obligations of individual employees in collective bargaining units, especially of those who choose not to belong to a union, under present legislation, as well as some employment rights of employees of unorganized firms. The law of the Labor-Management Reporting and Disclosure Act of 1959, and its relationship to the regulations of internal union affairs. Mr. Aaron

269. Law, Foreign Policy, and National Security. Various legal considerations and restraints, both national and international, affecting the formulation of foreign policy and protection of national security. The decision-making process, including the constitutional balance of power and legislative and executive branches of government, the foreign relations power of the President, the War Powers Resolution and the Treaty Power. The role of bureaucratic politics. The congressional regulation of foreign policy and its attempts to subject intelligence agencies to oversight. Mr. Trimble

270. International Law. The role of law and legal institutions in international relations and in government foreign affairs decision-making, particularly on the part of the United States. Nature and source of international law and how it is applied in the relations of states. The allocation of responsibility for decision-making within the international system and how conflicts in the assertion of jurisdiction are resolved. Major limitations on the use of force by states, paramilitary groups, and international organizations. Mr. Trimble

271. International Business Transactions. Provides a critical understanding of the fundamental legal concepts unique to the conduct of international business and investment. The legal and financial institutional framework within which international business is conducted; national and international limitations affecting the movement of goods, the transfer of technology, and the flow of capital; the organization, financing, and protection of international business undertakings; the use of agents, distributors, and licensees; problems of contract negotiation and dispute resolution in an international setting; and foreign investment. Mr. Alford, Mr. Rossett
M285. Governance: State, Regional, and Local (2 to 3 units). (Same as Architecture and Urban Planning M202Z.) Legal problems involving local governmental entities; sources and extent of powers and duties with respect to personnel, finance, public works, community development, and related topics.

M286. Public Control of Land Development (3 units). (Same as Architecture and Urban Planning M202A.) Analysis of the legal and administrative aspects of the regulation and use and development, and the problems and techniques of urban planning; dwelling legislation, building codes, zoning, subdivision controls, public acquisition of land, tax controls, and the role of the City Attorney. Prerequisite or corequisite: course M202B. See M287.

M287. Urban Housing and Community Development (2 to 3 units). (Same as Architecture and Urban Planning M231.) The course comprehensively considers the rebuilding and construction of American cities, with the major emphasis on the "housing problem"—the way an sheltered and related facilities are created by the institutions which direct housing activities in urban areas. Students are encouraged to undertake research projects, with emphasis on field research, in lieu of a substantial portion of the final examination.

M289. Environmental Law and Policy (2 to 3 units). (Same as Architecture and Urban Planning M264.) The course first examines, from perspectives representing various legal fields, the natural environmental problems. It then considers the means by which law has responded, and can and should respond, to problems of environmental quality. Both common law and legislative and administrative measures are considered. The course uses the air pollution problem as the primary vehicle for study.

292. Water Law. The basic components of United States water law; the riparian system of allocating water used in the Eastern United States, the appropriate federal system of allocating water used in the Western United States, and the federal overlay of reserved rights, navigation power, and reclamation. Water use efficiency and protection, preservation of instream water uses, groundwater management, public rights to water and water rights. Prerequisite: course 201. See M293.

295. Criminal Procedure. The process by which courts decide the guilt or innocence of those accused of crime and the selection of an appropriate penalty. The right to trial and other devices by which accused persons may be protected and the criminal jurisdiction; how federal enforcement priorities are determined and by whom; enforcement techniques; witness protection programs; extradition and removal; double jeopardy and the Perle rule; and the problems involved in prosecutions under federal criminal statutes such as those relating to mail fraud; civil rights; Hobbs Act and RICO (Racketeer-Influenced and Corrupt Organizations). Mr. Abrams.

304. World Legal Systems. The international and national nature of enviroaled by courts to litigants in civil litigation. The theory and general principles governing the award of compensatory damages, equitable remedies, and restitution; the substantive law of restitution and the history of contract law.

305. Entertainment Law. The law of copyright in connection with literary, musical, and artistic works, including originality, types of works protected, duration and renewal, assignments, infringement actions, and remedies in the event of infringement; the laws of communications and artistic works, the protection of ideas by property, quasi-contract, express and implied contract theories, defamation and invasion of privacy, the right of publicity, and performers' rights. Mr. Nimmer.


326. Law and Psychiatry. The law affecting the many persons identified as seriously mentally ill. The role of the court in determining whether the imposition of legal rules on medical practices and related defenses; competence to stand trial; and criminal procedure in involuntary civil commitment; the different world views of psychiatrists and lawyers regarding the development of medical jurisprudence; the rights of those committed, including the right to treatment and to decline treatment; the rights of the family; child custody; adoption; medical treatment in the context of appellate advocacy. Students work on various aspects of discovery in major pieces of litigation under the supervision of experienced trial lawyers. Mr. Yeazell.

327. Communications Law. Legal issues associated with the regulation of electronic mass media. First Amendment differences between print and broadcasting, broadcast licensing and the content-oriented regulations and policies of the Federal Communications Commission. Industry structures, networking, and access to the media, public broadcasting, political broadcasting, fairness doctrine, and entertainment format changes. Regulation of cable TV and the merging of the media with new technologies, including telecommunications carriers, satellites, and fiber optics. Options for rewriting the Communications Act. Mr. Yeazell.

329. Women and the Law. A study of ways in which court decisions, statutes, and the operation of the legal system reflect ideas about what women and men are like and what their roles in life should be. "Protective" labor legislation, voting rights, equal protection of the laws, the Equal Rights Amendment, control of childbearing, employment discrimination, labor, exchangeable products. Mr. Goldstein.

330. Immigration Law. An overview of the immigration and naturalization process from the practitioner's point of view. The law, the immigration judge, deportation, exclusion proceedings, naturalization and citizenship, constitutional issues related thereto, and specific remedies available. Ms. Blumberg-Ambrose, Ms. Littleton.

332. Children and the Law. Judicial and legislative allocation of power and responsibility between parents and the state; the child's economic, educational, medical, and psychological needs; the child's right to treatment and to decline treatment; the right of privacy and protection of ideas by property, quasi-contract, express and implied contract theories, defamation and invasion of privacy, the right of publicity, and performers' rights. Mr. Nimmer.

333. Religious Legal Systems. The literature and institutions of a religious legal system. The course is offered from time to time by different instructors in Canon law, Islamic law, and the Rabbinic legal tradition. Mr. Abrams.

335. English Legal History. The growth of the Common Law and Trial by Jury in the period from 1167 to 1765. Mr. McGovern.

337. Legal History: Histories of Contract. The different accounts offered of this basic legal and economic institution with an eye to deciding who is right or what the major disagreements are. The role of common law, contract, doctrine of fair price, contract in a presupersidential framework, the role of procedure in contract enforcement. In a system that gives authority to precedent, is all legal writing a form of legal history? If not, what is special about legal history? Mr. McGovern.

400. Pretrial Litigation Process (Clinical). Provides training and practical experience in the full range of pretrial activities during the initial stages of the civil litigation process. The development of interviewing, case planning, fact-gathering, counseling, pleading, formal discovery, negotiation, and lawyer decision-making skills. Fieldwork offers an opportunity for employment in law firms or legal service offices. See M299.

401. Appellate Advocacy (Clinical). The concepts of logic and the principles of argument and persuasion in the context of appellate advocacy. Students gain practical experience by working in public civil and private law firms, students work on various aspects of discovery in major pieces of litigation under the supervision of experienced trial lawyers. Mr. Yeazell.

402. Fact Investigation and Discovery in Complex Litigation (Clinical). The process of developing and proving facts, the relationship between the discovery of facts and proof at trial, and the range of formal and informal discovery devices available for use in complex litigation. Through fieldwork in public, private law firms and private law firms, students work on various aspects of discovery in major pieces of litigation under the supervision of experienced trial lawyers. Ms. Binder, Ms. Gillig, Mr. Patterson.
403. Seminar in Criminal Law (Death Penalty). Limited to 15 students. Is the death penalty morally impermissible? Is it immoral even if it has a deterrent effect? Or are there situations in which it is morally improper not to apply the death penalty (even if it has no deterrent effect)? An answer to these questions, focusing on such topics as the allegedly arbitrary and discriminatory manner in which death sentences are carried out, the risk of executing the innocent, and whether retention or abolition of the death penalty better comports with respect for the sanctity of human life. Mr. Dolinko

503. Seminar in Criminal Law (Rape). The legal definition of rape, the procedural rules applied in the administration of rape statutes, and the sanctions provided for rape offenses. In order to determine and critically evaluate the empirical and moral responsibilities of prosecutors and defense attorneys, rape cases are also examined, as are civil alternatives to rape prosecutions. Ms. Goldberg-Amбросе


507. Seminar in Labor Law. Prerequisite: course 250 or equivalent. Mr. Aaron

511. Seminar in Health Law and Administration. Topics include definitions of health and health care; economics of health care, access to services, financing, medical education, health planning, health care workers, competitive alternatives, medical necessity, the quality of care and medical malpractice, informed consent, death and dying, and special health problems of women. Mr. Handler

516. Seminar in International Law: The Changing International Legal Order — A Chinese Perspective. Doctrines and practices of the People's Republic of China (PRC) regarding the role of law in various international contexts. Issues both of public international law and the law of international trade and investment. The nature and sources of international law, the role of the United Nations and other international organizations; national sovereignty; territoriality; the regulation of natural resources lying within and beyond territorial limits; international human rights standards; the international economic order; the regulation of foreign trade and investment; the resolution of disputes. Topics are considered in light of China's history and her present legal, political, and economic circumstances and as a means of tracing the changing international legal order. Comparisons are drawn to the doctrines and practices of Taiwan, Japan, the U.S., the U.S.S.R., and selected developing nations. Mr. Alford

M524. Seminar: Philosophy of Law. (Same as Philosophy M257.) Prerequisite: consent of instructor. Selected topics in the philosophy of law. May be repeated for credit by consent of instructor.

525. Seminar in Communications Law. Prerequisite: course 327. Students select specific topics in communications law, with emphasis on the effect of new technologies on the legal issues associated with a particular problem, and prepare one or more papers designed to address legislative or litigative solutions to the problem. Students' work may be used in ongoing litigation or in current legislative deliberations.

536. Seminar in Appellate Advocacy. Appellate practice and skills necessary for effective appellate advocacy. Problems in making and preserving a record in the trial court for use on appeal; factual and legal analysis and argument in appellate litigation; concepts of logic and persuasion in the appellate context; the operation of federal and state appellate judicial systems. Mr. Yeazell

553. Seminar in Critical Legal Theory. In the last five years a body of legal theory has emerged, here and in Europe, that draws on other radical traditions. This seminar examines new ways that literature, including bourgeois legal form, the relation of law and capitalism, the theory of the capitalist state, the meaning of the "rule of law" under capitalism and socialism, and law and ideology. It applies these theoretical insights to concrete issues in contemporary American law (e.g., in torts, contract, labor, family, and criminal law). It concludes with questions of the role of law in the transition to, and under, socialism. Mr. Abel

560. Seminar in Law and Management (Agency Law). Prerequisite: course 230. Recommended: familiarity with economics or the law and economics literature. A brief review of agency law and various aspects of the agency relationship drawing on both legal and economic histories. How race and gender gain gain practical experience by working in public or private law offices under the supervision of experienced appellate practitioners. Mr. Eule

565. Seminar in Legal History: Group Litigation. The history of the class action suit. The nature of representation, the phenomenon of class conflicts, the tendency of group litigation to escape formal legal norms, the effect of group structure on litigation patterns. Mr. Anderson

565. Seminar in Legal History: Black Slavery and Freedom, 1630-1965. The contested meanings and boundaries of "slavery" and "freedom" in the legal and political cultures of the North and South at critical moments in U.S. history, and the historical context in which significant planning problems exist that appear to be amenable to solution by careful analysis and application of legal tools. A number of case studies are selected so that students may choose one issue which directly interests them. For each case, a specific historical context is analyzed, providing the problem that client is facing and remains available through the course of the project for consultation; the end product for each case is the presentation of a form of legal analysis. Ms. Goldberg-Amбросе

570. Seminar in Labor Law. Prerequisite: course 250 or equivalent. Mr. Aaron

585. Seminar in Health Law and Administration. Topics include definitions of health and health care; economics of health care, access to services, financing, medical education, health planning, health care workers, competitive alternatives, medical necessity, the quality of care and medical malpractice, informed consent, death and dying, and special health problems of women. Mr. Handler

455. Planning and Drafting Small Estates (Clinical). The substantive and practical aspects of the process of negotiating transactions and disputes in our legal system. Negotiation theory, using both legal and behavioral science materials; differences between litigation and transactional negotiations; the context in which particular negotiation strategies and tactics are successfully employed; ethical and normative implications of negotiating; the role negotiation plays in our legal system; both in dispute resolution and in legal planning; negotiating, both from planning and drafting perspectives. Ms. Menkel-Meadow

465. Planning and Drafting Small Estates (Clinical). The substantive and practical aspects of the process of negotiating transactions and disputes in our legal system. Negotiation theory, using both legal and behavioral science materials; differences between litigation and transactional negotiations; the context in which particular negotiation strategies and tactics are successfully employed; ethical and normative implications of negotiating; the role negotiation plays in our legal system; both in dispute resolution and in legal planning; negotiating, both from planning and drafting perspectives. Ms. Menkel-Meadow

M526. Seminar: Urban Affairs. (Same as Architecture and Urban Planning M202C.) The purpose of the course is to explore in a concrete case setting the application of legal tools to the solution of planning and land-use problems. Real situations are selected in which significant planning problems exist that appear to be amenable to solution by careful analysis and application of legal tools. A number of case studies are selected so that students may choose one issue which directly interests them. For each case, a specific historical context is analyzed, providing the problem that client is facing and remains available through the course of the project for consultation; the end product for each case is the presentation of a form of legal analysis. Ms. Goldberg-Amбросе

SCHOOL OF LAW / 401
566. Seminar in Administration of Criminal Justice. Recent American decisions in criminal procedure concerning the rights of persons suspected or accused of criminal offenses are contrasted with the administration of justice in civil law legal systems, particularly those of Mexico and Spain. Comparison is made of the reaction by the American judiciary to the crisis of violent crime with that of Spanish law enforcement officials confronted with implementing the nation's new constitution while simultaneously attempting to suppress politically motivated violence. Finally, the gap between theory and practice, particularly in Mexico and Latin America, is considered.

Mr. McGee

567. Seminar in Antitrust Law. Mr. Liebeler

568. Seminar in Political Theory and the Law. Concentrates on the theory of public choice. Since World War II, much democratic theory had tended to center around two questions: (1) On what basis should it be decided whether a type of decision should be made collectively through the government or individually through the market? (2) In what sense are government institutions "representative"? While some earlier writers such as Edmund Burke and James Madison may be considered, attention focuses on contemporary writers, including David Truman, Anthony Downs, Richard Musgrave, Buchanan and Tullock, Moncur Olson, and Brian Barry. Mr. Lowenstein

572. Seminar in American Legal Education. Prerequisite: consent of instructor. Law schools as institutions in the legal establishment. Historical development of legal education; teaching methods; law school politics; recruitment of students and faculty; research and publications; class stratification in legal education; testing and evaluation of students and faculty; advanced legal education; comparative legal education; and the curriculum.

Mr. Bergman, Mr. Graham

573. Seminar in International Regulation of Military Power. The role of international law in the regulation of the use of force and the containment of military solutions to world problems. The original United Nations' plan, its invocation in resisting aggression, and its role in various peacekeeping ventures. Multilateral and bilateral arms control negotiations (such as the Comprehensive Nuclear Test Ban negotiations and SALT), the role of law in restraining military buildups and in achieving other national security objectives.

Mr. Trimble

574. Seminar in European Economic Community. The structures and institutions of the European communities, their lawmaking processes, and administration. The interaction and conflict between community law and national law and the growing role of the European court in mediating between the nations and the communities. The processes of the court and parallels between American constitutional development and that in Europe.

Mr. Rosett

575. Seminar in Business Planning. Prerequisites or corequisites: courses 220, 221, 230. The tax and corporate law aspects of important problems in the life of an enterprise, such as formation of a corporation, compensation of employees, recapitalization, stock redemptions, acquisitions, and corporate divisions.

Mr. Asimow

576. Seminar in Arms Control and Legal Process. The role of sanctions and dispute-settlement techniques in arms control agreements. The original plan of the United Nations against the role it has actually played in international peacekeeping. The recent arms control efforts such as the Nuclear Test-Ban Treaty, the Nonproliferation Treaty, and SALT, with a view to assessing the potential for enhancing compliance with these through international institutions. Comparison with the experience of the GATT and the IMF, as well as some of the more theoretical literature on the reasons why nations comply with international law.

Mr. Trimble

577. Seminar in Law and the Political Process. The ways in which the laws governing the political process affect and reflect political power relationships. Statutory reforms enacted in the past 10 to 15 years at the federal and state levels. Right to vote, reapportionment, political parties, bribery, campaign finance, incumbency, ballot propositions, lobbying and conflict of interest.

Mr. Lowenstein
Our society has become a world of information. Over half of the nation's workforce is now directly engaged in producing, processing, and distributing information in one form or another. Education, scientific and technical development, banking and financial management, government and corporate management — all depend increasingly on accurate, relevant, and readily available information. New technologies have produced a wealth of forms in which we may distribute and transfer information. Printed media have been supplemented by photographic, audiovisual, and computer processible forms. As a result, libraries and information systems of all kinds have become crucial agencies for the management of the resulting flood of information.

The field of library and information science is concerned with the processes involved in these information agencies and, more generally, in the use of information in our society. How are records with essential information, whatever their form may be, to be acquired, preserved, organized, retrieved, and made available? How is information best used in making decisions and in meeting the goals of society as a whole, as well as those of specific organizations?

Education in the field must provide competence with both old and new methods for the processing of information and old and new approaches to the management of libraries, information centers, and information systems in organizations of all kinds. It is this goal to which UCLA's Graduate School of Library and Information Science is dedicated.

Graduate School of Library and Information Science

120 Powell Library Building, 825-4351

Professors
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Russell Shank, D.L.S.
Elaine Svenonius, Ph.D.
Page Ackerman, B.A., B.S.L.S., Emeritus
Seymour Lubetzky, M.A., LL.D., Emeritus
Lawrence Clark Powell, Ph.D., Litt.D., L.H.D., H.D., Emeritus
Robert Vesper, M.A., LL.D., Emeritus
Raymund F. Wood, Ph.D., Emeritus

Associate Professors
Judy Kwan
Adjunct
Judith Kantor, M.L.S., Jon Greene, M.L.S., J. Denny Haythorn, J.D., Visiting
John Bidwell, J.D., Jorge Schement, Ph.D.

Assistant Professors
Dorothy J. Anderson, Ph.D.
Christine L. Borgman, Ph.D.
Donald C. Case, Ph.D.
William H. Fisher, Ph.D.
Stephen Stern, Ph.D.

Senior Lecturers
Elizabeth R. Eisenbach, M.L.S.
Elizabeth R. Baughman, M.L.S., M.A.
Betty Rosenberg, M.A.

Visiting Professors
Sheila S. Intner, Ph.D.
Karen Markley, Ph.D.

Visiting Associate Professor
Jorge Schement, Ph.D.

Adjunct and Visiting Assistant Professors
Mary Greco, Ph.D., Adjunct
Joseph J. Lauer, Ph.D., Adjunct
Cheryl Metoyer-Duran, Ph.D., Visiting

Adjunct and Visiting Lecturers
John Bidwell, M.L.S., Adjunct
Ronda Breitbard, M.L.S., Adjunct
Alison Bunting, M.L.S., Adjunct
Richard Chabran, M.L.S., Adjunct
Patricia Chittenden, M.L.S., Visiting
Barbara Duke, M.L.S., Adjunct
Jon Greene, M.L.S., Adjunct
J. Denny Haythorn, J.D., Visiting
Teresa L. Jacobsen, M.S.L.S., Adjunct
Judith Kantor, M.L.S., Adjunct
Linda Katsouleas, M.L.S., Visiting
Julie Kwan, M.L.S., Adjunct
Holy Millard, M.L.S., Visiting
Christopher Nolan, M.L.S., Adjunct
Constance W. Nyhan, M.L.S., Adjunct
Mary I. Purucker, M.L.S., Visiting
Ray Rees, M.L.S., Adjunct
Lisa Snyder, M.L.S., Adjunct

Robert Walters, M.L.S., Adjunct
Marie Waters, M.L.S., Adjunct
Nancy J. Young, J.D., Adjunct

Applicants may write to the Graduate School of Library and Information Science, 120 Powell Library Building, UCLA, Los Angeles, CA 90024, for the school's announcement and application materials.

Degrees Offered
Master of Library Science (M.L.S.)
Post-M.L.S. Certificate of Specialization
Ph.D. in Library and Information Science

Master of Library Science

Admission
Students are admitted in Fall Quarter only. In addition to Graduate Division requirements and application procedures (see Chapter 3), the school requires:

1) A statement of purpose.
2) An application for admission including an essay and letters of recommendation.
3) A report of an interview by the Dean of the school or by a person designated by the Dean as qualified to conduct the interview.
4) An official report of a score on the Graduate Record Examination (GRE) taken within the past five years. Applicants must have passed the General Aptitude Test of the examination with a minimum combined score (verbal and quantitative) of 900.
5) Three letters of recommendation.

Course Requirements

You are normally required to enroll in three courses per quarter in order to complete the program in six quarters. Part-time enrollment may be permitted if you are working in a library or information center.

Eighteen courses are required for graduation from the M.L.S. program. Coursework must provide evidence both of basic professional competencies and knowledge in a field of specialized competence.

Basic Professional Competence: The requirement is met by completing eight core courses: Library and Information Science 400, 402, 410, 411, 420, 421, 430, 441. In certain cases, prior coursework or work experience may justify replacing a core by a validation examination administered by the school, but this is not encouraged and should be used only for the purpose of increasing the extent to which you pursue a specialization.

Only in unusual cases will librarianship coursework taken elsewhere satisfy the basic competency requirements.

Specialized Competence: Completion of a course of study is required as evidence of knowledge of a field of specialization in librarianship, bibliography, or information science. The field of specialization and the specialized course program must be approved by a faculty advisor. The requirement ordinarily is met by the completion of ten additional courses in the school and/or in other departments.
During the second year, you may apply for an internship of one to three quarters either on campus or off campus at a library or information center. The internship is a regularly scheduled course and may be applied toward the 18 required courses.

No more than eight units of course 596 may be applied toward the total course requirement; only four units may be applied toward the minimum requirements of the Graduate Division. In order to enroll in any S/U graded course, including 500-series courses, you must be in good academic standing.

Comprehensive Examination Plan
A comprehensive examination consisting of two components is required. The written test component is offered in Fall, Winter, and Spring Quarters and is designed to demonstrate your understanding of library and information science services as a totality. It does not cover the basic professional competencies individually; rather, it deals with the field in a unified form. To be eligible to take the written test component, you must have satisfied all outstanding entrance requirements and have completed all eight core courses.

The specialization component of the comprehensive examination requires the completion of a paper or project in the area of your specialization, which demonstrates a considerable amount of work and thought and is of publishable quality. The paper or project is required even if you have an advanced academic degree in which a thesis or dissertation was a requirement and must be approved by your faculty adviser.

Cooperative Degree Programs
To participate in a cooperative program, you must make application to and be admitted by both this school and the other UCLA school or department. Fulfilling the combined set of program requirements normally takes three years.

M.A.-History/M.L.S.
This concurrent degree program of the Graduate School of Library and Information Science and the Department of History allows you to combine historical study with the tools of the information professional and to obtain two degrees — the M.L.S. and the M.A. in History. The best sequence of coursework should be discussed with the advisers from this school and the History Department.

M.A.-Latin American Studies/ M.L.S.
This specialization is an articulated degree program of the Graduate School of Library and Information Science and the Latin American Studies Program. You can obtain two degrees — the M.L.S. and the M.A. in Latin American Studies. However, no course may be used for credit toward more than one degree. The program provides broad training in library and information science, as well as the opportunity to explore and analyze on an advanced level the social, political, and cultural issues characteristic of Latin American societies.

M.B.A./M.L.S.
A concurrent degree program jointly sponsored by the Graduate School of Library and Information Science and the Graduate School of Management, this specialization is designed to provide an integrated set of courses for students who seek careers which draw on general and specialized skills in the two professional fields. Students should request all application materials from the M.B.A. Admissions Office, Graduate School of Management.

Post-M.L.S. Certificate of Specialization
The Post-M.L.S. Certificate of Specialization Program meets the need for specialized training in various areas of librarianship, information science, and bibliography, as well as research competence.

Admission requirements vary slightly for each field of specialization, but the basic requirements are a bachelor's (or higher) degree in letters and science, an M.L.S. degree from an ALA-accredited school, and unconditional admission to graduate standing by the UCLA Graduate Division.

Your course program may begin in any quarter of the academic year. If you are admitted for a preliminary quarter to complete prerequisite courses, that quarter will not be counted in the minimum residence requirements.

Part-time enrollment is encouraged to provide flexibility for the working librarian. Opportunities for relevant coursework outside the department and internships, both on and off campus, will be made available.

Three general areas of specialization have been authorized: librarianship, bibliography, and information science. Further specializations within these fields is possible. A minimum of nine courses (100-, 200-, 400-, and 500-series) must be completed in the Graduate School of Library and Information Science and other departments of the University.

In addition to taking coursework in your area of specialization, you must complete a paper or project in that area, which demonstrates a considerable amount of work and thought and is of publishable quality. The specialization paper or project is required even if you have an advanced academic degree in which a thesis or dissertation was a requirement and must be approved by your faculty adviser.

Ph.D. Degree
Admission
In addition to Graduate Division requirements and application procedures, the school requires:

(1) A master's degree or the equivalent from an institution of recognized standing, representing academic preparation equivalent to that required for a comparable degree from the University of California.

(2) Evidence of basic professional competence. This would be satisfied by an M.L.S. degree from a program accredited by the ALA or by completing Library and Information Science 400, 402, 410, 411, 420, 421, 430, 441.

(3) Satisfaction of the same entrance requirements as listed in item 6 under the M.L.S. degree.

(4) A statement of purpose which identifies your proposed area of specialization, accompanied by appropriate evidence of qualifications for pursuing a doctoral program.

(5) A total score of 1200 or better on the Graduate Record Examination (GRE) Aptitude Test, with at least 500 in each of the two parts (verbal and quantitative). The examination must have been completed within five years prior to application for admission.

(6) Three letters of recommendation.

(7) Interviews with two faculty members of the school.

(8) Application for admission provided in the school's announcement.

While work experience in a library is not a requirement for admission, consideration is given to such experience in evaluation of candidates.

Major Fields or Subdisciplines
You are expected to specialize in a subfield in one of three major fields:

(1) Information storage, organization, and retrieval.

(2) Communication and information transfer.

(3) Libraries and other information organizations.

The school strictly limits the specific subfields which, at any time, will be accepted for doctoral work.

Course Requirements
No courses are required for the Ph.D. other than those for admission. However, you normally take Library and Information Science 272 several times, as well as a variety of other courses, both inside and outside the school, relevant to your individual program.
Qualifying Examinations
You are required to pass written qualifying examinations in each of the three areas of study listed above, including coverage of the historical as well as technical aspects. These are scheduled during one week in a quarter. If you fail one of the sections of the three-part examination, it may be repeated. Should you fail two or three sections, all three must be repeated.

After passing the written examinations, you are required to pass the University Oral Qualifying Examination, which is based on your dissertation proposal.

You are encouraged to start work on your proposal while taking courses in preparation for the written qualifying examinations. The proposal should, in most cases, be completed at the same time or soon after the completion of the written examinations, but it must be completed and accepted within two years after passing the written examinations.

The oral examination covers the methodology and feasibility of your research, as well as the depth of your knowledge in the specific field of your proposed dissertation research.

Your doctoral committee will decide, after the oral examination, whether the proposal is accepted as written, is accepted with modification, or is not accepted. The committee also will decide whether the oral examination has been passed. If the proposal is not accepted, the examination may not be passed.

Dissertation Research and Final Oral Examination
The third formal requirement of the program is that you research, write, and defend a dissertation. The required final oral examination is administered by members of the doctoral committee, who also evaluate the dissertation.

Upper Division Courses
Upper division courses may not be applied toward the M.L.S. degree.

110. Information Resources and Libraries. Prerequisite: sophomore standing or consent of instructor. Not open for credit to M.L.S. students. Provides an introduction to bibliographic and information resources and relevant research methodology. Covers both general and specialized materials. Designed to facilitate knowledgeable use of libraries and efficient retrieval of information. Some sections focus on specific subject areas (such as science and technology).

111A-M111E. Ethnic Groups and Their Bibliographies. Introduction to bibliographic and research tools and methods for students with interests in ethnic groups. 111A is concerned with American Indian history and culture; 111B with Afro-American history and culture; 111C with Latino history and culture; 111D with Asian American history and culture; M111E with Jewish history and culture (same as Jewish Studies M111E). Sections on other ethnic groups may be added. Offered in collaboration with the several centers for ethnic studies. May not be repeated for credit.

124. Information Access Systems. Explores new and established channels for providing information to the general public, including videotex, electronic publishing, data bases, information utilities, computer mail, and public library bulletin boards. Conventional library operations. Each information technology is studied on the basis of its history, economics, technical characteristics, relation to other media, and potential for social change.

144. Computer Programming for Library Operations and Services. Lecture, one hour; laboratory, three hours. Prior knowledge of computers, programming, or MARC is not required. Introduction to programming languages suitable for librarians, students of language and literature, and similar disciplines. Concepts of text manipulation, file handling, and storage management are emphasized. Programs and examples emphasize processing of textual materials and bibliographic records (including Library of Congress MARC records). Practical experience with computers in processing such records.

Graduate Courses

M202A-M202B. Folklore Archiving (2 units each). (Same as Folklore M202A-M202B.) Prerequisite: Folklore 200 or equivalent. One quarter of lecture/demonstration in the principles and techniques of the classification and preservation of folklore collections, followed by one quarter of directed experience in archiving.

205. Historicography of Librarianship, Bibliography, and Information Science. Prerequisite: consent of instructor. Identification of historical source material. Comprehensive and critical review of the historical and bibliographical literature. Identification of areas in need of research or reinterpretation.

206. Seminar on Library History. Prerequisite: consent of instructor. Special studies in biography and history of librarianship. Relationships to contemporary social, cultural, and intellectual history. Research papers on topics identified in course 205.

207. Seminar on International and Comparative Librarianship. Library development and service patterns in European and other countries; comparisons of these with librarianship in the United States. International library organizations and programs.

210. Seminar in Descriptive and Bibliographic Cataloging. Prerequisites: courses 410, 411, or equivalent. Specialized studies in selected areas of descriptive and bibliographic cataloging (e.g., purposes, principles, instructional development, potentialities of automation). May be repeated once.

211. Seminar in Subject Control of Library Materials. Prerequisites: courses 410, 411, or equivalent. Study of selected problems in the design and use of verbal headings and classification systems. Manual and mechanized systems. May be repeated once.


214. Seminar in Abstracting and Indexing Services. Prerequisite: consent of instructor. Historical background and current situation, particularly in science and technology. Possibilities and present limitations of automation. Role in coordination of information services. Problems of standardization to achieve international coordination. Influence of changing needs.

221. Bibliography of Science, Engineering, and Technology. Prerequisites: courses 420, 421. Scientific and technical literature, with emphasis on special types of publications, research material, reference and bibliographical aids to the physical sciences. Importance, purpose, and nature of technical literature searches. Flow of information among scientists.

222. Bibliography of the Health and Life Sciences. Prerequisites: courses 420, 421. Literature of the medical and life sciences: reference and bibliographical works; periodicals and other serials; abstracting and indexing services; audiovisuals; notable books in the history of the biomedical sciences; organization and the literature; patterns of publication; applications of technological developments in the control of the biomedical literature.

223. Literature of the Social Sciences. Prerequisites: courses 420, 421. Seminar on the literature of the social sciences, including a review of the classics in the various fields, monumental source collections, periodicals, bibliographies, catalogs, indexes, abstracts, bibliographic and nonbibliographic data bases, etc. Trends in scholarly and popular writing. Interdisciplinary nature of the literature.

224. Literature of the Humanities and Fine Arts. Prerequisites: courses 420, 421. Seminar on the literature of the humanities and fine arts, including a review of the classics in the various fields, comparisons of editions, periodicals, bibliographical apparatus, and reviewing media. Trends in scholarly and popular writing.

M225. Latin American Research Resources. (Same as History M265 and Latin American Studies M200.) The course acquaints students with general and specialized materials in fields concerned with Latin American studies. Library research techniques provide the core of the course; information required for future bibliographic and research sophistication as the basis for enhanced research results.

228. Legal Bibliography. An introduction to the source materials of the law, with emphasis on primary authority, but covering as well secondary authority and the indexes and finding aids which the lawyer and professional law librarian use to gain access to legal information.


M229B. Africana Bibliography and Research Methods. (Same as African Area Studies M229B.) Problems and techniques of research methodologies related to Africana studies. Emphasis on relevant basic and specialized reference materials, using the full range of available information resources, including library catalogues, directories, and computerized data bases.


240. Principles of Information Systems Analysis and Design. Theories and principles of specialized information systems analysis and design, including determination of requirements, technical design and evaluation, and internal organization.
241. Measurement and Evaluation of Information Systems and Services. Prerequisite: a course in research methods. Recommended: a course in library automation. The course looks at information systems and services from the points of view of their cost and effectiveness in meeting desired objectives. Principles of costing and evaluation. The bulk of the course being given over to a study of the literature in which measures have been developed to evaluate the effectiveness of document collections, reference and information retrieval services, document delivery systems, networking, and technical services, including circulation, acquisitions, and document description.


243. Human/Computer Communication. Surveys issues relating to human/computer communication. The role of the computer in society, psychological aspects of user behavior, and applications of interactive computer systems are considered for their significance to systems design and user training. Students perform several on-line assignments and write a term paper on one of the topics covered in the course.

244. Data Base Management Systems. Prerequisites: course 101 or 102. Introduction to data base management systems with applications of data base management systems to library and information retrieval contexts. Emphasis on evaluation of alternative systems, with respect to library requirements, and on methods for implementation.

246. Social Aspects of Information-Oriented Societies. The seminar analyzes the social evolution of information-oriented societies. Historical factors and current trends are explored through discussion of selected international and domestic issues. Implications are drawn for information policy.

249. Seminar on Special Topics in Information Science. Prerequisites: course 240 and one from 240, 242, 243, or 405, or consent of instructor. Content varies from quarter to quarter to allow emphasis on specialized topics in information science, such as vocabulary development, file organization, searching procedures, indexing and classification, bibliographic and linguistic text processing, and measures of relevance and system effectiveness. May be repeated for credit by consent of instructor.

251. Reading and Reading Interests. Interests of the common reader, excluding children, with special reference to types of library patrons. Fiction and subject categories, popular and specialized. Religion, social sciences, art, music, literature, history, science. Influence of paperbacks, best sellers, and current interest books on reading habits.

253. Reading Interest of Children. Reading interests and correlative types of literature surveyed with reference to the growth and development of children. Emphasis on the role of the librarian in responding to the needs and abilities of children through individualized reading guidance.

260. Historical Bibliography. Early records and the manuscript period; history of the printed book and of periodical publications and newspapers, including materials, methods, and production. Parallel history of scholarship, the book trade, and book collecting in ancient, medieval, and modern Western civilization.


262. Seminar on Historical Bibliography. Prerequisite: course 260 or consent of instructor. Special studies in the history of librarianship and bibliography from quarter to quarter to allow emphasis on a particular historical period, geographical area, or other specific aspect, such as a form of publication, genre, or management of production (e.g., paper or type). May be repeated for credit by consent of instructor.

271. Seminar on Intellectual Freedom (2 or 4 units). Prerequisite: consent of instructor. Investigation of the idea of intellectual freedom: historical and contemporary aspects, bases and criteria; censorship and other restraints on freedom of speech, the press, the arts, and access to ideas and information. S/U grading.

272. Research Seminar in Library and Information Science. Prerequisite: doctoral standing or consent of instructor. Emphasis on recent contributions to the theory, research, and methodology. May be repeated for credit. S/U grading.

280. Information Seeking Behavior. Study of the 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 behavior.

281. Information Resources for Business (2 units). Prerequisites: courses 420 and 421, or consent of instructor. Introduction to the information needs of the business world. Encyclopedias, directories, yearbooks, indexes, loose-leaf services, government publications, data bases, and other sources of business literature are discussed.

282. Records Management (2 units). Principles of records control from creation to disposition. Course is designed as an overview of records and information management to instructors and students aware of the information processing problems of business and how a coordinated records and information management program can improve information access and utilization.

290. Research Methodology (2 or 4 units). Prerequisite: consent of instructor. Role of research in bibliography, librarianship, and information science. Identification and design of research problems. Historical, statistical, analytical, and descriptive techniques.

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for course content and instruction at the University. May be repeated for credit. S/U grading.

400. The Information Professions. Provides a historical and comparative overview of the information professions and the functions of libraries and librarians. The role of research in bibliography and information science is highlighted through discussions of computer applications to information storage and retrieval systems, natural language text processing, and the automation of various library processes.

402. Fundamentals of Bibliography. The development and fundamentals of the several branches of bibliography: historical, physical (analytical or critical, descriptive), numeric, or systematic; and the organization, control, and elements of bibliographical apparatus. New techniques and tools, theory, methods, and trends in bibliographic research in relationship to librarianship.

405. Automation of Library Processes. Prerequisite: course 404, or course 300 with consent of instructor. Preferably PL/I or IBM System 360 assembly language. Principles of application of data processing techniques to library procedures. Problems in the design, implementation, and testing of mechanized systems of information retrieval. Study of programming languages for library applications, with emphasis on PL/I.


412. Cataloging and Classification of Nonbook Materials. Prerequisites: courses 410, 411. Problems in cataloging and classification of selected nonbook materials (e.g., films, maps, pictorial works, sound recordings) as separate collections and integrated collections.

413. Introduction to Subject Access: Thesaurus Construction (2 units). (Formerly numbered 411C) Overview of major thesaurus in use in manual and on-line environments. Emphasis on their construction and evaluation and the principles underlying their design.

414. Principles of Indexing and Abstracting (2 units). Basic professional techniques, concepts, and methods of indexing, indexing, serials, and specialized materials, of preparing informative and indicative abstracts, and of analyzing secondary abstracting and indexing services as library reference tools.


421. Information Resources and Services II. Prerequisite: course 420. Additional sources of information: dictionaries; bibliographical, geographical, and statistical sources; government documents. Special types of information service and service in different types of libraries and information centers. Evaluation of sources and services: standards. Economic aspects of service.

425. Computer-Based Information Resources. Prerequisites: courses 420, 421. Emphasizes the use of reference and resource data bases. File structure and hardware requirements are reviewed. Included are analyses of the information needs of scientists and business/industry, coupled with investigations into specific applications to those needs.


431. Special Problems in the Selection of Material and Evaluation of Collections. Prerequisite: course 430. Subject and area collecting; special collections and rare books; building new collections. Evaluating and weeding collections. Cooperative collecting — regional, national, and international. Storage and indexing of information. Special format materials: films, maps, sound recordings, etc. Copying methods; facsimile reprinting; changing character of research collections.

433. Serials (2 units). Prerequisites: courses 410, 420. The course examines this form of publication, including problems of recognition, acquisition, cataloging, analysis, and corporate entry. Language barriers, automation, and standardization are also explored.

441. Management Issues in Libraries and Other Information Agencies. Prerequisite: consent of instructor. Principles of management, emphasizing management techniques applicable to libraries of various types and to library systems. Special attention to the management of human as well as technical resources.

442. Library Personnel Administration. Covers the basic principles of personnel management. Provides a survey of current personnel practices in libraries. Discusses how the basic principles apply or need to be modified to fit the library setting.

444. Information Networks. Problems in the formulation, administration, and operation of information networks. A survey of some of the major networks, including institutional and computer systems.

446. Library Services for Youth. Provides an overview of programs and services which are of interest to young adults (12 to 18 years old). Discusses special problems in working with young people and the psychology of the teenager as it influences library programs.

447. Library Space Planning (2 units). Introduction to space planning and programming techniques and how they apply to libraries. Emphasis on use of existing space, but planning new buildings is included. Reading blue prints, use of scales, contracts, use of consultants.

448. College, University, and Research Librarianship. Organization, administration, collections, facilities, finances, and problems of college and university libraries and their relationships within the institutions of which they are a part. Functions of research libraries and work of their staffs in serving scholars.

449. Public Libraries. The government, organization, and administration of municipal, county, and regional public libraries; developments in the changing patterns of public library service.


455. Library Services and Programs for Children. Philosophy and objectives of children's services in public and school libraries. Emphasis on storytelling, puppetry, nonprint media, etc.

456. Storytelling to Children and Adults. Oral Interpretation of Literature. Practical storytelling to children and adults in various situations, with emphasis on the folklore and oral interpretation with emphasis on modern imaginative literature. Readings and discussions of the forms of folklore and fantasy in literature, society, child development, and library programming. Students are required to choose, learn, and tell stories in class and in a library or community setting and to read stories aloud.

457. Seminar on Current Topics in Public Library Administration. Prerequisite: course 456 or consent of instructor. Special studies in public librarianship, with strong emphasis on techniques and problems of public library administration. Topics, which vary to allow in-examination of current issues and individually selected concerns, emphasize those aspects of management which are distinctive of public libraries. Particular attention to funding and budgetary matters, the impact of new technologies, and the marketing of public library services.


467. Health and Life Sciences Libraries. Organization, administration, services, and problems of health and life sciences libraries; relationships with institutions of which they are a part and with the community. Several field trips are scheduled.

472. Law Librarianship. An introduction to the profession of law librarianship; the organization of the professional associations and their activities; the character and distribution of law libraries throughout the United States; the distinctive characteristics of law library problems and their solutions.

479. Government Information. Introduction to the nature and scope of government information promulgated by the federal government, as well as by state, municipal, international, and foreign governments. Problem-oriented approach.

485. American Archives and Manuscripts. Prerequisite: consent of instructor. Identification, description, subject analysis, and organization of records contained in archives and manuscript collections. Administration. User requirements. Problems of acquisition, legal title, literary property, preservation, accessibility, and use.

486. Issues and Problems in Preservation of Library Materials. Topics include history of paper production and book structure in relation to the present endangerment of library materials; past and current practices in library storage, retrieval, and use; environmental controls, housekeeping; binding standards; collection processing and handling; rare book curatorial concerns; cooperative conservation programs; conservation ethics; disaster preparedness and recovery.

487A-487Z. Special Studies in Library and Information Science (2 to 4 units). Examination of specialized topics of professional interest. Topics and units vary according to subject and may include conservation of materials, business information sources, problems in library management, current issues in cataloging, etc.

487C. Advanced Legal Bibliography. Examination of legal materials and research techniques not covered in course 228. Included are current and historical English legal materials, foreign and international law sources, administrative law materials, and special subject areas such as taxation, labor, securities, anti-trust. Special emphasis on legislative history sources and research techniques and computer-assisted legal research. New legal research techniques and legal history are evaluated.

487D. Seminar on Current Issues in Librarianship. Prerequisite: consent of instructor. Identification, analysis, and discussion of critical issues currently facing the profession. May be repeated once.

489. Library Service to Special Population Groups. Prerequisite: consent of instructor. Special problems encountered by school, public, academic, special, and research libraries in meeting the needs of minority groups in urban and rural settings. Library service to the aging, the physically handicapped, and the institutionalized population.

490. Professional Communication (2 units). The course is designed to increase librarians' sensitivity to language in different contexts. Students explore the range of stylistic and syntactic options open to them for presenting proposals, reports, and research results. Such study covers all aspects of professional communications: written, oral, and visual, including computer-generated. S/U grading.

491. Interpersonal Communication Issues in Library Systems. Examination of interpersonal communication patterns in library management and staff relations, in resource sharing, and in providing information services. Emphasis on relationships within an organizational environment and on effective communication styles in decision making, managing conflict, and implementing change.

495. Training and Supervision of Teaching Assistants (2 units). Hours to be arranged (twenty hours per quarter). Prerequisite: appointment as a teaching assistant or Extension Division instructor. Orientation, preparation, and supervision of graduate students who are involved in the teaching of an undergraduate or Extension course. Syllabus revision and materials preparation. Classroom observation. S/U grading.

497. Fieldwork in Libraries or Information Organizations (4 or 8 units). Supervised field experience in an approved library or information organization. Concentration must be on managerial or other professional problems of the site. Students spend full time in the field for most of the period. S/U grading.

498. UCLA Internship. Prerequisite: consent of instructor. Supervised professional training in one or more departments or units of the UCLA Library System or other University information centers. Minimum of 120 hours per quarter, including weekly critiques of bibliographical, administrative, and service problems. May be repeated twice. S/U grading.

499. Off-Campus Internship. Prerequisite: consent of instructor. Supervised professional training in a library or information center approved by the faculty of the school. Minimum of 120 hours per quarter, including weekly critiques of bibliographical, administrative, and service problems. May be repeated twice. S/U grading.

596. Directed Individual Study or Research (2 to 8 units). Prerequisite: consent of instructor. Directed special studies in the fields of bibliography, librarianship, and information science. Variable conference time depending on nature of study or complexity of research. S/U grading.


Because the world is changing rapidly and unpredictably, today's professional manager must learn the concepts and principles of management that make adjustments to new conditions possible. At the UCLA Graduate School of Management (GSM), consistently ranked among the best in the nation, people prepare to become first-rate managers with 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 in the private, public, and not-for-profit sectors.

GSM's specific objectives, then, are to train professionals who have these qualities, to offer the business community a wide range of continuing education programs providing state-of-the-art information in a variety of fields, and to advance the art and science of management by engaging in, and educating scholars capable of conducting, basic research designed to study fundamental issues and implement a new knowledge.

Students come to GSM from a variety of professional and educational backgrounds; their career goals are as diverse as the business and nonprofit communities themselves. Whether they choose to pursue the professional M.B.A., the academic M.S., or a Ph.D. in Management, they will graduate with a broad understanding of people and organizations and with a sound technical background in the economic and mathematical concepts of management planning and decision making.
Graduate School of Management

3250 Graduate School of Management, 825-7935

Professors
Robert B. Andrews, Ph.D. (Production and Operations Management; Public/Not-for-Profit Management)
John W. Buckley, Ph.D. (Arthur Young Professor of Accounting)
Ewald S. Buffa, Ph.D. (Times Mirror Professor of Management Strategy and Policy)
Fred E. Case, D.B.A. (Urban Land Economics)
Samuel A. Cubert, Ph.D. (Behavioral and Organizational Science)
Louis E. Davis, M.S. (Behavioral and Organizational Science)
David K. Eiteman, Ph.D. (Finance, Arts Management)
Donald Erlenkotter, Ph.D. (Management Science; Production and Operations Management)
Eric G. Flamholtz, Ph.D. (Accounting-Information Systems; Human Resource Management and Industrial Relations)
Walter A. Fogel, Ph.D. (Human Resource Management and Industrial Relations)
Arthur M. Geoffrion, Ph.D. (Management Science)
Glenn W. Graves, Ph.D. (Management Science)
Martin Greenberger, Ph.D. (IBM Professor of Computers and Information Systems)
Alfred E. Hofflander, Ph.D. (Finance)
John E. Hutchinson, Ph.D. (Human Resource Management and Industrial Relations)
James R. Jackson, Ph.D. (Management Science)
Harold H. Kassarjian, Ph.D. (Marketing)
Larry J. Kimbell, Ph.D. (Business Economics)
Paul Kircher, Ph.D., C.P.A. (Accounting-Information Systems)
Archie Kleingartner, Ph.D. (Human Resource Management and Industrial Relations)
J. Clayburn La Force, Ph.D. (Business Economics), Dean
Bennet P. Lientz, Ph.D. (Computers and Information Systems)
Steven A. Lippman, Ph.D. (Management Science)
James B. MacQueen, Ph.D. (Management Science)
Robert Hal Mason, Ph.D. (Operation and Strategic Studies; International and Comparative Management)
Fred Massarik, Ph.D. (Behavioral and Organizational Science)
David Meyers, Ph.D. (Finance)
John J. McDonough, D.B.A. (Behavioral and Organizational Science; Accounting-Information Systems)
Bill McKeelvey, Ph.D. (Organization and Strategic Studies)
Bruce Miller, Ph.D. (Accounting-Information Systems)
Daniel J. B. Mitchell, Ph.D. (Human Resource Management and Industrial Relations)
Frank G. Mittelbach, M.A. (Urban Land Economics)
Robert T. Nelson, Ph.D. (Production and Operations Management)
Alfred Nicos, Ph.D. (Business Economics)
William A. Niskanen, Jr., Ph.D. (Public/Not-for-Profit Management)
William G. Ouchi, Ph.D. (Organization and Strategic Studies), Vice Chair
Anthony P. Paia, Ph.D. (Behavioral and Organizational Science; Organization and Strategic Studies)
Richard W. Roll, Ph.D. (Allstate Professor of Insurance and Finance)
John P. Shelton, Ph.D. (Finance)
R. Clay Sprotts, Ph.D. (Computers and Information Systems)
George A. Steiner, Ph.D., Litt.D. (Emeritus Harry and Elsa Kunin Professor of Business and Society)
J. Fred Weston, Ph.D. (Warren C. Corder Professor of Money and Financial Markets; Business Economics; Finance)
Harold M. Williams, J.D.
James Q. Wilson, Ph.D. (Organization and Strategic Studies)

Emeritus Professors
William F. Brown, Ph.D.
John C. Clendenin, Ph.D.
Ira N. Frisbee, M.B.A., C.P.A., L.L.D.
Leo Grebler, Ph.D.
Raym. B. Jessen, Ph.D.
Erwin M. Keithley, Ed.D.
Fredric Meyers, Ph.D.
George W. Robbins, M.B.A.
Harry Simons, M.A., C.P.A.
Robert Tannenbaum, Ph.D.
Robert Williams, Ph.D.

Associate Professors
Theodore A. Andersen, Ph.D. (Finance)
Joseph D. Carrabino, Ph.D., P.E. (Organization and Strategic Studies)
Lee G. Cooper, Ph.D. (Marketing)
Thomas E. Copeland, Ph.D. (Finance), Vice Chair
Bradford Cornell, Ph.D. (Finance)
Robert Geske, Ph.D. (Finance)
Richard A. Goodman, D.B.A. (Organization and Strategic Studies)
Michael E. Granfield, Ph.D. (Business Economics), Chair and Associate Dean
Dominique M. Hanssens, Ph.D. (Marketing)
Ephraim R. McLean, Ph.D. (Computers and Information Systems)
Frank E. Norton, Ph.D. (Business Economics)
Alfred E. Osborne, Jr., Ph.D. (Business Economics)
Richard P. Rumelt, D.B.A. (Organization and Strategic Studies)
Rakesh K. Sarin, Ph.D. (Production and Operations Management)
Hans Schollhammer, D.B.A. (Organization and Strategic Studies; International and Comparative Management)
Carol A. Scott, Ph.D. (Marketing), Vice Chair
E. Burton Swanson, Ph.D. (Computers and Information Systems), Assistant Dean

Assistant Professors
Sriniwasan Balakrishnan, Ph.D. (Organization and Strategic Studies)
Jay S. Kogut, Ph.D. (Organization and Strategic Studies)
Paul J. Beck, Ph.D. (Accounting-Information Systems)
David M. Boje, Ph.D. (Behavioral and Organizational Science)
Renato F. Broderick, M.A., Acting (Human Resource Management and Industrial Relations)
Gregory S. Carpenter, Ph.D. (Marketing)
Robert J. Chambers, M.S., Acting (Production and Operations Management)
Imran S. Currin, Ph.D. (Marketing)

The UCLA Graduate School of Management 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, as well as a 21-month Executive M.B.A. Program designed for working managers who are moving...
from specialized areas into general management. A Ph.D. in Management is also offered, as are a certificate Executive Program and research conferences and seminars for experienced managers. For information about these programs, call 825-7935.

The school does not offer an undergraduate major in management; however, several undergraduate courses in management are offered. Enrollment in Management 120, 122, 124, 130, 133, and 140 is open only to students in the Economics/Business program (see Chapter 5 for details on this program). Enrollment in other courses, although open to all University students who have completed the prerequisites, is limited, and non-GSM students are advised not to count on gaining admission to them in order to meet the requirements of other departments or programs.

Foreign applicants who hold degrees from universities or colleges where English is not the primary language are required to take the Test of English as a Foreign Language (TOEFL).

You must complete the M.B.A. Application, which includes the application for admission to graduate standing. Admission is for the Fall Quarter only; completed applications, with full documentation, must be filed with GSM by March 15. Applicants for the arts management program must specify their wish to be considered for admission in that field.

Consideration is given to your academic record; score on the GMAT, and, for applicants whose native language is not English, score on the TOEFL; potential for management as evidenced by work experience and community, extracurricular, or other experience; and letters of recommendation. Preference is given to applicants who have had full-time management-related work experience since completing their bachelors' degrees. Students admitted directly from baccalaureate programs who choose to work before entering graduate school will have their admission honored for three years.

Small group information sessions are offered by the M.B.A. Admissions Office several days a week from July through mid-March on an appointment basis. Call 825-8874 to arrange attendance.

Applications and information about the M.B.A. program are available in the M.B.A. Program Office, 3371 Graduate School of Management, UCLA, Los Angeles, CA 90024.

Areas of Study
Accounting/information systems; arts management; behavioral and organizational science; business economics; computers and information systems; finance; human resource management and industrial relations; international and comparative management; management science; marketing; organization and strategic studies; production and operations management; public/not-for-profit management; urban land economics.

Course Requirements
The four required elements of the M.B.A. program are the nucleus, the management core, the area electives, and free electives, totaling at least 24 courses (96 units). The nucleus develops professional problem-solving and decision-making skills through experiences ranging from laboratory simulations to consulting projects in ongoing organizations. Management core subjects cover the fundamentals of disciplines which underlie the practice of management. The area of study (area electives) provides specialized knowledge and skills for a particular field of management work. Free electives permit students to pursue additional subjects of personal interest.

Nucleus: The nucleus is a series of three required courses that develops those interpersonal and decision-making skills essential to the practice of management. The first-year nucleus course (Management 440) utilizes experiential teaching methods to guide students in defining problem-solving skills from a personal perspective.

The second-year portion of the nucleus consists of a two-quarter management field study project in which teams of four or five students serve as management consultants to business firms or other organizations. Conclusions are summarized in a report which serves in lieu of a thesis or comprehensive final examination for the members of the team. The field study is judged by standards applicable to professional management consulting.

Management Core: The management core consists of ten courses on subjects basic to the practice of management. It is divided into three parts: five courses in management, including Management 402, 403, and three courses from 404, 405, 406, 407; three courses in functional fields selected from 408, 409, 410, 411; and two courses in management processes (Management 412 and 420).

Area Electives: These focus on one or more fields of specialization within the broad realm of management. Students design programs of study to meet their specific academic needs and professional goals. Eight area electives are required, and you are encouraged to emphasize two or more areas of study.

Free Electives: You must select at least three free electives, subject only to general University regulations. These electives normally must be taken while enrolled in the program. They may support or complement the remainder of your program of study.

A maximum of two four-unit 596 courses may be applied toward the 96-unit requirement.

Extracurricular Activities
A variety of student organizations promote both professional competence in many areas and the development of contacts among students, alumni, faculty, and business executives. Many opportunities are presented for students to become involved in planning events with executives in both the public and private sectors, to participate in day-long programs at various organizations, and to meet with company representatives and alumni. Extracurricular activities are an integral part of life at GSM, and all students are encouraged to participate.

Cooperative Degree Programs
J.D./M.B.A.
The Graduate School of Management and the School of Law offer a concurrent program which enables students to prepare for careers where law and management overlap and
where understanding of both fields is necessary. Examples of such areas would include public service, international trade, industrial relations, corporate law, and specialized areas of management and consultancy. The program makes it possible to earn the J.D. and M.B.A. in four academic years. Students interested in such a program should apply to both schools simultaneously.

**M.S.-Computer Science/M.B.A.**
The Graduate School of Management and the Department of Computer Science in the School of Engineering and Applied Science offer a concurrent degree program which enables students to complete requirements for the M.S. in Computer Science and the M.B.A. in three academic years. Students should request all application materials from the M.B.A. Admissions Office, Graduate School of Management.

**M.S./M.B.A.**
A concurrent degree program jointly sponsored by the Graduate School of Management and the Graduate School of Library and Information Science, this specialization is designed to provide an integrated set of courses for students who seek careers which draw on general and specialized skills in the two professional fields. Students should request all application materials from the M.B.A. Admissions Office, Graduate School of Management.

**M.P.H./M.B.A.**
The Graduate School of Management and the School of Public Health, Division of Health Services, offer a three-year concurrent degree program designed for students who desire a management career in health care and related fields and who wish in-depth professional preparation for such a career. The program reflects the combined interest of employers, faculty, and students who have recognized the increasing challenges facing managers in the health care industry and the need for individuals who are skilled in dealing with these challenges. Students should request all application materials from the M.B.A. Admissions Office, Graduate School of Management.

**M.A.-Latin American Studies/ M.B.A.**
The Graduate School of Management and the Latin American Studies Program jointly sponsor a concurrent degree program designed for individuals preparing for careers in international management with a special focus on the Latin American region. Establishment of the program was predicated on the belief that individuals employed in the area of international business and management are better equipped to meet the challenges of their employment with complementary preparation in language and regional studies. Students should request application materials from the M.B.A. Admissions Office and the Latin American Studies Program.

**M.A.-Architecture/Urban Planning/M.B.A.**
The Graduate School of Management and the Graduate School of Architecture and Urban Planning offer a three-year concurrent degree program designed for students who seek careers which draw on general and specialized skills in urban planning and management. By providing knowledge of the workings of both the private and public sectors, the program enables individuals who have acquired these skills to move easily between careers in private industry and public service. Students should request all application materials from the M.B.A. Admissions Office, Graduate School of Management.

**Executive M.B.A. Program**
Designed for mid-career managers with strong records of achievement, the Executive M.B.A. Program enables executives to obtain high quality advanced management education while continuing in their full professional roles. The program is limited to 50 participants with superior academic records and a minimum of eight years of combined work and managerial experience.

The intensive 21-month course of study leads to a regular M.B.A. degree. The emphasis is on general management training; increased competence in management specialties, organizational and interpersonal skills; and sophisticated understanding of the integration of businesses and their environments.

Classes are held at GSM on alternating Fridays and Saturdays, with three five-day, off-campus residential sessions at the beginning, middle, and end of the program. Further information and application materials may be obtained by writing to the Assistant Dean, Executive M.B.A. Program, 4383 Graduate School of Management, UCLA, Los Angeles, CA 90024.

**M.S./Ph.D. Programs**

**Admission**
All applicants are required to take the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE). Foreign applicants who hold a degree from a non-English-speaking university are required to take the Test of English as a Foreign Language (TOEFL). Three letters of recommendation must be submitted with the completed application. All application materials, including transcripts, should be sent directly to the Doctoral Office, 3379 Graduate School of Management, UCLA, Los Angeles, CA 90024.

Applications are accepted for Fall Quarter admission only; the deadline for submission of applications and complete documentation is January 31.

Program information and application materials may be obtained from the Doctoral Office.

All applicants to the M.S. or Ph.D. program are strongly urged to arrange an interview with at least one faculty member of their proposed area of concentration or major field area. The interview should take place before February 1.

**Master of Science Degree**
The academic master's program is a full-time program which leads to the Master of Science degree in Management. Some students will enter the program with the goal of eventual acceptance into the doctoral program; others, the M.S. will be a terminal degree. In either case, the program's emphasis is on advanced specialized training and the development of research capability.

**Major Fields or Specializations**
Business economics, management science.

**Course Requirements**

**Business Economics:** A maximum of 17 courses may be required. It is possible to waive the seven prerequisite courses on the basis of prior coursework. Nine graduate courses (the required and elective major field courses plus four units of Management 598) are required and cannot be waived.


2. Specialization (eight courses; deviations may be approved by the chair of the business economics academic unit): Five required courses from Management 201A, 201B, 201C, 202A, 202B, plus three electives (illustrative courses and course sequences) selected from one of the following groups: Industrial organization — Management 202A, 202B; M203A, M203B, M203C, 231A, 231B, 231C; Economics 204A-204B-204C-271, 272; techniques for analysis — Economics 245A-245B-245C; 247, 248; Management 240A, 240B; economic forecasting — Management 210B, 210D, 205B, 205C; 230.


**Management Science:** A maximum of 16 courses may be required. The four prerequisite courses and three managerial core course requirements may be waived on the basis of prior coursework. Nine graduate courses (methodological core, depth field, and four units of Management 598) are required and cannot be waived.

1. Prerequisites (four courses): Mathematics 32B, 152A-152B, and two quarters of computer programming.
field or research and teaching proficiency. Three of these courses may be waived by prior coursework. They must be completed before taking the oral qualifying examination.

There is no formal major field course requirement. Students, in consultation with a major field advisor, design a course of study which will prepare them to pass the major field examination.

Qualifying Examinations

Proficiency in the major field area is determined by a written examination, supplemented in some areas by an oral examination. The major field examination must be passed by the end of the Spring Quarter of your third year of study.

You are required to present the substance of your dissertation proposal in a formal seminar to which all Ph.D. students and faculty are invited.

When all the preliminary requirements have been fulfilled (coursework, research paper, major field examination, seminar), the University Oral Qualifying Examination can be held; if passed, you are advanced to candidacy. The oral qualifying examination must be passed within four and one-half years of the date of entrance into the program.

Ph.D. Degree

The doctoral program is a research-oriented degree program which leads to the Ph.D. in Management. The program includes intensive training in research methods applicable to problems of organizations in the public and private sectors. It prepares students for careers in university teaching and research or as staff specialists in business firms and other organizations. The program offers students substantial opportunities to discover their own, unique scholarly focus and competence.

Major Fields

Accounting/information systems; behavioral and organizational science; business economics; computers and information systems; finance; human resources management and industrial relations; international and comparative management; management science; marketing; organization and strategic studies; production and operations management; urban land economics.

Course Requirements

The research preparation requirement consists of two parts: (1) a course requirement and (2) a research paper. You are required to take five research courses which are not part of the major field area. These courses must be completed before taking the oral qualifying examination and may not be waived by prior graduate work. The research paper must be submitted to and accepted by the research paper committee no later than the Spring Quarter of your third year of study.

The breadth requirement consists of eight courses which are clearly outside your major field area. You should use these courses to become more knowledgeable about the basic elements of several other management disciplines and functional areas or to define a minor field or research and teaching proficiency. Three of these courses may be waived by prior coursework. They must be completed before taking the oral qualifying examination.

Graduate Courses

Graduate courses are ordinarily open to students admitted in graduate standing. As a condition for enrollment, you must submit to the instructor in charge of the course evidence of satisfactory preparation for the work proposed.
200A. Techniques of Business Economics Analysis: Marginalist Models. Seminar, three hours. Prerequisite: course 405 or consent of instructor. Contemporary business economic principles of resource allocation and the price system are developed. Classical optimization and static models are set forth and applied to the models of consumer choice and firm and general production-exchange equilibrium models.

Mr. Osborne

200B. Techniques of Business Economic Analysis: Econometrics. Prerequisite: consent of instructor. Standard topics in applied econometric modeling are developed. The assumptions underlying the classical normal linear regression model, special problems in application, and interpretation of results are stressed. Practical applications are extensively developed in student projects. Mr. Kimbell


201B. Industry Forecasting. Prerequisite: course 201A. Evaluation of existing forecasting methodologies found useful in preparing industry forecasts; differences between short- and long-range forecasting techniques, etc.

201C. Regional Economic Forecasting. Prerequisite: course 201A. Forecasting of economic activity in a region, emphasizing special problems such as population and industry migration; the effects of external forces on the regional economy.

201D. Economic Policy and Business Environment. Prerequisite: consent of instructor. Analysis of economic policies stemming from business rationalization of policy instruments; structural policies for efficiency and progress; policy needs for the future. Treats policy formation and administration as well as design.

202A. Economic Theories of Business Behavior: Marginal, Managerial, and Behavioral. Prerequisite: course 200A. The economic behavior of the firm and firm groups is considered. Theories extending from those which retain marginal analysis to treat alternative corporate objectives to those viewing the firm as an adaptive mechanism with limited cognitive and information processing capabilities.

202B. Principles of Industrial Organization. Discussion, three hours. Prerequisite: course 405. The course applies the principles of microeconomics to actual firm behavior in order to better understand various firms' strategies for success. Topics include horizontal and vertical integration, mergers, the role of advertising, and price discrimination.

Mr. Granfield, Mr. Weston

202C. Empirical Studies in Industrial Organization. Prerequisite: course 202B. Analyses of factors influencing the size of industries, their size distribution, and the conditions of entry and exit are investigated. Implications of such industry characteristics are derived for decisions having to do with firm output, prices, advertising, and research and development.

Mr. Weston

202D. The Organization of Industry and Business Policy. Prerequisite: consent of instructor. Analysis of economic aspects of long-range planning of firms with respect to horizontal expansion, vertical integration, and diversification, especially the review of individual, group, business, and government. Consistent behavior in terms of personal utilities and probabilities. Multivariate value theory. Departures from consistency: descriptive theories of behavior and resulting models.

Mr. Erlenkotter, Mr. Sarin

M203B. Economics of Information. (Same as Economics M203B.) Discussion, three hours. Prerequisites: rudiments of economic theory, calculus, and probability of statistics. Norms and facts of decision-making in the household, business, and government. Consistent behavior in terms of personal utilities and probabilities. Multivariate value theory. Departures from consistency: descriptive theories of behavior and resulting models.

Mr. Lippman, Mr. Mamer

210A. Network Flows and Integer Programming. Prerequisite: course 210A. Theory and techniques of discrete and network-related mathematical programming models in management science. Applications to various allocation, coordination, operating, and planning problems. Emphasis on mathematical models, techniques, computational methods, and the keys to successful practical applications.

Mr. Geoffrion

211A. Nonlinear Mathematical Programming. Prerequisite: course 210A, Mathematics 32A, or equivalent. Theory, methods, and application of the optimization of nonlinear systems. Review of classical optimization methods; optimality and duality theory for convex programs; main computational approaches to convex programming; survey of current computer codes and computational experiences.

Mr. Geoffrion, Mr. Graves

211B. Large-Scale Mathematical Programming. Prerequisite: course 210A or equivalent. Theory and computational methods for optimizing large-scale linear and nonlinear programs. Exploitation of special structures with combinatorial, dynamic, multidimensional, and stochastic aspects to obtain practical solution procedures in spite of large numbers of variables and constraints.

Mr. Geoffrion, Mr. Graves

212A. Management Science Models I. Prerequisites: courses 407, Mathematics 31B. A broad survey of deterministic models, how to solve them, and their application in the management sciences. Solution techniques include linear programming, network optimization, integer programming, nonlinear programming, games, and dynamic programming. Application areas include allocation, corporate planning, distribution, finance, operations management, production, and project management.

Mr. Erlenkotter, Mr. Geoffrion

212B. Management Science Models II. Prerequisites: courses 212A, Mathematics 32A, or equivalent. A broad survey of nonlinear, time-staged, and probabilistic models for managerial decision making. Application areas include finance, marketing, production, facilities design, and energy systems.

Mr. Erlenkotter, Mr. Mamer

212C. Management Science Models III. Prerequisites: courses 212A, 212B. In-depth reviews of actual management science applications. Emphasis on the professional skills needed for successful practical applications.

213A. Intermediate Probability and Statistics. Prerequisite: course 402 or equivalent. An introduction to probability theory and hypothesis testing. Emphasis applied to management. SAS programs are used in this course and its sequel.

Mr. Mamer

213B. Statistical Methods in Management. Prerequisite: course 213A or consent of instructor. An introduction to parameter and interval estimation, simple and multiple linear regression and correlation, fixed, random, and mixed effects analysis of variance models and nonparametric tests, all as they apply to management studies.

Mr. Cooper, Mr. Hanssens

213C. Introduction to Multivariate Analysis. Prerequisite: course 213B or consent of instructor. An introduction to the 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); a survey of multivariate statistical procedures (e.g., multiple discriminant analysis, multivariate analysis of variance, canonical correlation, and confirmatory factor models).

Mr. Cooper, Mr. Hanssens

214B. Behavioral Science Models. Prerequisite: consent of instructor. Formulation, analysis, and interpretation of mathematical models in the behavioral sciences. Emphasis on stochastic process models for aspects of individual and group behavior such as learning, problem solving, classification, communication, bargaining, and social exchange systems.

Mr. MacQueen
215D. Time-Series Analysis. Prerequisite: course 213B or consent of instructor. Univariate Box-Jenkins analysis, transfer functions, and intervention analy-
sis. Relationship between econometric and time-se-
ries models, Granger causality, multiple time-series analysis. Numerous computer applications in modeling
and forecasting. Mr. Hansens
215E. Statistical Design of Surveys. Prerequisite: course 213B or equivalent. Mathematical theory and
practices of statistical survey design and analysis.
216A. Simulation of Operational Systems. Discus-
sion, three hours. Prerequisite: background in Fortran, PL/1, PL/C, or other batch computing lan-
guage available on campus and in basic statistics
(course 402 or equivalent) and modeling (course 407
or equivalent). Computer simulation methodology, in-
cluding design, validation, operating procedures, and
analysis of results of simulation experiments. Appli-
cations of simulation to management problems. Mr. Nelson
216B. Advanced Computer Simulation. Prerequi-
site: course 216A. Advanced use of computer simulati-
on techniques. Major term projects are undertaken, either singly or in groups, with the object of develop-
ing in students the ability to accomplish all phases of
the design and execution of computer simulation.
Mr. Nelson
217A. Statistical Decision Theory. Prerequisite: course 212A or equivalent. Relating economic and sta-
tistical decision theory, game theory, and classical statistical inference, with emphasis on sequential
analysis and dynamic decision processes; axiomatic foundations, Bayes’ and minimax solutions, applica-
tions to selected models of dynamic decision prob-
lems in business. Mr. MacQueen
217B. Game Theory. Prerequisite: course 212A or equivalent. Nature of models for rational behavior in
presence of conflicts of interests, zero-sum and nonzero-sum games, two-person and many-person games,
design, validation, operating procedures, and anal-
ysis of results of simulation experiments. Applica-
tions of simulation to management problems. Mr. Nelson
218A. Selected Topics in Management Science (1
to 4 units). Prerequisite: consent of instructor. Newly
developing topics and viewpoints. Topics have includ-
med reliability and optimal maintenance theory, large-
scale distribution/inventory systems, and Markovian
decision procedures under uncertainty. May be re-
peatability for credit.
218C. Selected Topics in Business Statistics (1 to
4 units). Prerequisite: consent of instructor. Special
topics in statistical methods. Current developments in
statistical theory and practice. Analysis of recent lit-
erature. Topics and instructors announced in ad-
van. May be repeated for credit.
220A. Intermediate Financial Accounting I. Pre-
requisite: course 212A or consent of instructor. The
first of a two-course sequence that deals with the con-
cepts and principles of financial accounting, with em-
phasis on the pronouncements of the Financial Ac-
counting Standards Board, the Securities and Ex-
change Commission, and other authorities.
Ms. Hughes, Mr. Miller
220B. Intermediate Financial Accounting II. Pre-
requisite: course 220A or consent of instructor. The
second of a two-course sequence that deals with the con-
cepts and principles of financial accounting, with em-
phasis on the pronouncements of the Financial Ac-
counting Standards Board, the Securities and Ex-
change Commission, and other authorities.
Ms. Hughes, Mr. Miller
222C. Advanced Financial Accounting. Prerequi-
site: course 220B or consent of instructor. A contin-
uation of course 220B, the course emphasizes a range of
topics, which include accounting for pollution con-
sumption, mergers, combinations, and parent-subsidiary rela-
tionships. Litigation procedures are reviewed, includ-
ing reorganizations, receiverships, and bankruptcy.
Mr. Miller
221. Current Issues in Accounting Information
Systems. Prerequisite: consent of instructor. Using a
colloquium format, the course provides a forum for the
discussion of contemporary issues in accounting and
information Systems. Drawing on prominent speakers
in the field, the course requires the student to formulate a paper position on each topic pre-
sented. Mr. Buckley, Mr. McDonough
222. Cost Accounting. Prerequisite: course 403. The
nature, objectives, and procedure of cost acc-
224A. Computer Systems. Discussion, three hours. Prerequi-
sites: courses 225A and either 413A or 413B, or consent of instructor. The specification and
configuration of computer-based systems for man-
agement applications. Methods for costing system
hardware and software and for assessing computer
performance. Trade-off analysis of comparative com-
puter configurations. Case materials and/or actual
examples are used. Mr. Frand, Mr. Lientz
224B. Management of Computer-Based Informa-
tion Systems. Discussion, three hours. Prerequi-
sites: courses 224A and 224C, or consent of instruc-
or. In-depth coverage of the problems in managing
computer-based information systems. Focuses on the
definition, evaluation, installation, and continuing management of EDP systems. Issues of planning and
control, as well as the organizational impact of com-
puter systems, are stressed. Mr. Swanson
224C. Systems Analysis for Computer-Based In-
formation Systems. Discussion, three hours. Prerequi-
site: course 225A or consent of instructor. The
detailed design and specification of computer-based management information systems. Includes studies of
-of-existing systems, economic and organizational
analyzes of alternatives, and tools for determining user requirements. Case materials and/or actual
examples are used. Mr. Sprows
224D. Generalized Data Base Management Sys-
tems. Discussion, three hours. Prerequisite or coreq-
usite: course 224C or consent of instructor. Exam-
ines the features and capabilities of generalized data
base management systems. Includes system classifi-
cation, comparison of specific systems, and evalu-
ation of specific systems. Emphasis on management
uses of such systems. A field study project may be
required. Mr. Sprows
224E. Computer Simulation for Management
Discussion, three hours. Prerequisite: course 413A or
Computer Science 20 or consent of instructor. Intro-
duction to computer simulation and to general pur-
pose simulation languages (e.g., GPSS, SIMSCRIPT,
DYNASIM). Emphasis on the managerial impor-
tance and the development of computer-based mod-
els for problem solving and policy analysis. Program-
mapping assignments are included.
2224. Telecommunications and Computer Net-
works. Prerequisite: course 224A or consent of in-
structor. Distributed processing. Networked minicom-
puters and large mainframes. Data communication and
security in computer networks. Cost/benefit analysis
for the design, configuration, and implementation of
computer networks. Applications to computer utili-
ties, and in international, commercial, and govern-
ment networks. Mr. Lientz
224G. Special Topics in Computing. Prerequisite:
consent of instructor. An examination in depth of is-
-ssues or problems concerned with the theory and prac-
tice of computational and the current management of
EDP systems. Course may have a single theme or
may deal with a number of topics. May be repeated
for credit.
225A. Introduction to Information Systems. Pre-
requisite: course 214A or consent of instructor. Basic
concepts and uses of information systems in organi-
zations. Fundamental design considerations. The
role of data processing. Examples of information sys-
tems in profit and not-for-profit organizations.
Mr. Farrell
225B. Information Systems for Planning and Con-
trol. Prerequisite: course 224A or consent of instructor. Design of systems to produce information for plan-
ning and control. Survey of approaches and tech-
niques, stress on communication and management
and operational levels. Special consideration of account-
ng and budgeting methods. Impact of planning and
control information on human behavior.
Mr. Greenberger, Mr. McDonough
225C. Measurement in Information Systems. Pre-
requisite: familiarity with basic statistics, probability
theory, set theory, and accounting, or consent of in-
structor. A study of the role of measurement in ac-
counting and information systems, from the stand-
point of both statistical, economic, behavioral, and or-
- ganizational consideration. Mr. Swanson
225D. Special Topics in Information Systems. Pre-
requisite: doctoral standing or consent of instructor. An examination in depth of problems or issues of current
interest among information systems. Emphasis on recent contributions to theory, research, and method-
ology. Of special interest to advanced Ph.D. candi-
dates, academic staff, or distinguished visiting fac-
ulty. May be repeated for credit.
226. International Accounting. Prerequisite: course 102 or
Research in Information Systems (1, 2 units). Discussion, two hours. Prerequisite: doctoral standing. A year-
long sequence associated with the Computers and
Information Systems Colloquium Series. Regularly scheduled for presentation of current research and
state-of-the-art developments in the information sys-
tems field. Study and discussion of the research pre-
sented. May be repeated for credit. S/U grading.
Mr. Swanson
226. International Accounting. Prerequisite: gradu-
ating standing. Comparative analysis of accounting
corps and practices in other countries; study of contr-
tains between various systems; problems of ac-
counting for international corporations, including
the impact of funds and income measurement; ac-
counting influences on economic development.
Mr. Kircher
227A. Tax Accounting. Prerequisite: course 403. A
study of the fundamentals of income taxation, with
emphasis on problems in federal and state income,
franchise, gift, and estate taxes; study of source ma-
terial and research methods for ascertaining current
rulings and trends in laws and regulations.
227B. Taxation and Business Policy. Tax systems,
tax shifting, and impact of tax law and theory on business decisions. Corporate tax planning. The businessman and tax reform.
229A. Accounting Theory. Prerequisite: course 220B. A
survey of accounting literature, with empha-
sis on the development of basic accounting concepts. An attempt is made to explain contemporary
practice as it has evolved in accordance with basic theory and expanding demands for accounting informa-
tion.
Mr. Farrell
229B. Research Methodology in Accounting. Prerequisite: course 229A or consent of instructor. Design of empirical and theoretical research in accounting. Sources of research problems. Research conduct and methodology in accounting and other fields of interest. May be repeated for credit. Mr. Trueman

229C. Special Topics in Accounting. Prerequisite: doctoral standing or consent of instructor. An examination in depth of problems or issues of current concern in accounting. Emphasis on recent contributions to theory, research, and methodology. Of special interest to advanced graduate students in accounting or distinguished visiting faculty. May be repeated for credit. Mr. Trueman

229Y/229Z. Accounting and Information Systems Workshop (1 unit, 1 unit, 2 units). Discussion, two hours. Prerequisite: doctoral standing. The course is designed to develop an ability to critically evaluate research in fields relevant to the study of accounting. Papers are presented in a colloquium format by leading scholars in accounting. Active participation and intellectual interchange are encouraged through discussion of the papers in sessions prior to the workshop, as well as during the colloquium. May be repeated for credit. S/U grading. Mr. Trueman

230. Theory of Finance. Prerequisite: course 408. Concerned with decision-making under uncertainty, the theory of asset prices, and the efficiency of capital markets. Develops the most recent theoretical concepts and applies them to fundamental issues in corporate financial management (such as capital budgeting, capital structure, and dividend policy). Mr. Copeland, Mr. Grinblatt, Mr. Titman

231A. Profit Sector Financial Policy. Prerequisite: course 230. Identifying and solving financial problems through the use of cases. Stresses the application of financial theory and financial techniques to business problems, using written reports and classroom discussion. Mr. May, Mr. Titman, Mr. Weston

231B. Nonprofit Sector Financial Policy. Discussion, three hours. Prerequisite: course 408. 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 a criterion, and sources of funds for nonprofit organizations. Cases are used. Mr. Eiteman

231C. Working Capital Management. Lecture, three hours. Prerequisite: course 230. The advanced coverage of the short-range problems of financial management. Coverage of current assets, current liabilities, and their interrelationships. Mr. Luna

232A. Security Analysis. Prerequisite: course 230. Primarily a course in stock market investing, but approach is applicable to all investment assets. Includes techniques of security analysis and security valuation based on financial statements of the organization. Mr. Mayers, Mr. Roll

232B. Portfolio Management. Prerequisite: course 230. Focus on entire portfolios rather than individual assets. Review portfolio theory as applied to portfolio decision making and the evaluation of achieved portfolio performance. Case studies of portfolio construction. Mr. Grinblatt, Mr. Roll

232D. Option Markets. Prerequisite: course 230. The course deals exclusively with the organization and role of organized put and call markets, arbitrage and pricing relationship valuation. Emphasis is on the implementation of option trading strategies, the perspective of corporate securities as options, the function of options in securities markets, and innovations in option markets. Students learn fundamentals of option strategy and characteristics. Analysis and solving of current issues in the implementation of option trading strategies. Mr. Geske

233A. Money and Capital Markets. Prerequisite: course 230. Application of interest theory and flow funds analysis to the price determination process in the markets for bonds, mortgages, stocks, and other financial instruments. Study of funds flow from credit markets. Advanced analysis under growing and solving of current industries. Mr. Cornell, Mr. Masulis, Mr. Roll

233B. Financial Institutions. Prerequisites: courses 230, 233A. Study of the financial policies and practices of commercial banks, savings and loan associations, pension funds, insurance companies, and other major financial institutions. Review of current and major problems facing senior managers of these financial institutions. Mr. Andersen, Mr. Masulis, Mr. Roll

233C. Speculative Markets. Prerequisite: course 230. Study of theoretical evidence and capital market efficiency, including the stock market, the bond market, commodity future markets, the options market, money markets, and foreign exchange markets. Mr. Copeland, Mr. Hirschfield

234A. Multinational Business Finance. Lecture, three hours. Prerequisites: course 408 and either 205A or 205B. Financial problems in the management of multinational businesses. Includes the international aspects of financial techniques and daily operation of a multinational firm. Mr. Eiteman

234B. Advanced Studies in International Finance. Prerequisites: courses 230, 234A. Study of current and important issues of international financial management. Major focus on the interrelation of advanced theoretical concepts and their implications for the business firm in its international financial management decisions. Mr. Hofflander

235A. Problems in Insurance Management. Discussion, three hours. Prerequisite: consent of instructor. Advanced consideration of the theory of risk and risk bearing. The analysis of alternative ways of meeting risk under uncertainty, the scope and limits of insurance, and the economics of insurance. Mr. Hofflander

235C. Topics in Finance. Prerequisite: course 230, consent of instructor. Advanced consideration of financial Management. The treatment of actuarial, underwriting, investment, marketing, and regulatory problems relating to insurance activities. Mr. Hofflander

235B. Risk and Risk Bearing. Lecture, three hours. Prerequisite: consent of instructor. Advanced consideration of the theory of risk and risk bearing. The analysis of alternative ways of meeting risk under uncertainty, the scope and limits of insurance, and the economics of insurance. Mr. Hofflander

236A. Theory of Exchange. Lecture, three hours. Prerequisite: second-year graduate standing or consent of instructor. Foundations of the theory of exchange are developed as an introduction to theoretical literature on the pricing of capital assets. Primarily intended for Ph.D. students, but well-prepared master's students may find the course useful in their career preparation. Mr. Geske

239B. Theory of Investment Under Uncertainty. Prerequisites: courses 230 and 239A, or consent of instructor. Advanced treatment of the theory of investment under uncertainty. Emphasis on the modeling of investment decisions, with special attention to questions of exchange and allocative efficiency. Primarily intended for Ph.D. students, but well-prepared master's students may find the course useful in their career preparation. Mr. Mayers

239A. Theory of Exchange and Uncertainty. Prerequisites: courses 230, consent of instructor. Foundations of the theory of exchange are developed as an introduction to theoretical literature on the pricing of capital assets. Primarily intended for Ph.D. students, but well-prepared master's students may find the course useful in their career preparation. Mr. Geske

239D. Ph.D. Seminar in Finance. Prerequisites: consent of instructor. Advanced topics in finance theory and empirical research. May be repeated for credit with instructor change.

239Y/239Z. Finance Workshop (1 unit, 1 unit, 2 units). Discussion, 90 minutes. Prerequisite: doctoral standing. The course is designed to develop an ability to critically evaluate finance research. Papers are presented in a colloquium format by leading scholars in accounting. Active participation and intellectual interchange are encouraged through discussion of the papers in sessions prior to the workshop, as well as during the colloquium. May be repeated for credit. S/U grading. Mr. Mayers

240A. Aggregate Planning and Workforce Scheduling. Prerequisite: course 410. Management tools for short-term capacity planning and scheduling in aggregate terms. Theoretical models and management practices in manufacturing and service organizations. Tutorial that allocates use of regular and overtime labor, inventories where appropriate, backordering shortages, and outside capacity. Mr. Sarn

240B. Scheduling and Control of Operations. Prerequisites: courses 407 and 410, or consent of instructor. Detailed short-term scheduling and control of productive (production or service) operations. Identification of objectives and performance criteria for evaluating scheduling and control procedures. Comparison of static versus dynamic schedules. Scheduling problems and solution approaches for different types of systems. Mr. Nelson

240C. Design of Operational Systems. Prerequisite: course 410. Issues in selection of the capabilities and configuration of systems for a manufacturing system as part of overall strategy for attaining organizational goals; planning of capacity, location, processes/technologies, facilities, organizations, and tasks. Mr. Andrews

241. Technology and Values of Jobs and Organizations. Prerequisite: consent of instructor. Theoretical and practical considerations of operating systems and jobs; productive system design models; behavioral models underlying operating system design; technology, and social system design; operating system variability, control, and measurement.

242A. Planning for Facilities Systems. Prerequisite: course 212A or equivalent. Planning of location, expansion, and replacement for interdependent systems of facilities. Examination of spatial and dynamic economic considerations. Applications in selected industries and public systems. Mr. Erikenkotter

243A. Project Management. Prerequisite: course 407 or equivalent. Management of development projects. Discussion, network analysis, scheduling, and control of development projects. Sequential and aggregate development decisions.

243B. Inventory Theory. Prerequisite: course 210B or consent of instructor. General discussion of inventory models, with emphasis on characterizing the form of optimal policies and efficient computational methods. Deterministic, stochastic, discrete, and continuous time models are considered.

243C. Scheduling Models for Intermittent Systems. Prerequisite: course 407. Scheduling models and results for single machine, flow shop, job shop, and resource-constrained project networks. Approaches include classical models, recent heuristic approaches, current research in coordinated interaction of computer models, and man-machine interaction.

244. Operations Strategy and Policy. Discussion, three hours. Prerequisite: second-year graduate standing. Discussion of the role and scope of operations management and its relation to competition, strategic importance of productivity and its amplification in global competition, positioning the system to match market requirements, capacity decisions, product and process technology, development of facility and layout design, strategic design and coordination of operations decisions, suppliers and vertical integration. Case analyses involving strategic issues in manufacturing and nonmanufacturing situations. Mr. Bufla
245A. Special Topics in Operations Management. Studies of advanced subjects of current interest in operational management. Emphasis on recent developments and the application of specialized knowledge to operational problems. Topics vary each quarter. May be repeated for credit with topic change.

245B-245C. Survey of Operations Management. Prerequisite: graduate standing. Survey and research literature in operations management. Seminar reports dealing with special topics.

245X-245Z. Production and Operations Management Seminar (1 unit, 1 unit, 2 units). Discussion, 90 minutes to three hours. Prerequisite: doctoral standing. Required of all students in the production and operations management concentration during the first two years of their Ph.D. work. Student and faculty presentations of ongoing research. May be repeated for credit.

246A. Policy Analysis in the Public/Not-For-Profit Sector. Prerequisite: completion of the management analysis requirement for the M.B.A. program. Application of several analytic techniques for policy analysis. See application of subjective methodologies to writing, multiple objective decision making, cost analysis, risk/benefit analysis, and social experimentation. Limitations of methodologies are examined and concepts illustrated through current applications and cases.

246B. Budgeting and Resource Allocations in the Public/Not-For-Profit Sector. Prerequisites: courses 246A, 403, and 408, or consent of instructor. Examines resource allocation objectives/techniques used in governmental, state, and local government. Budget analysis was a planning device, vehicle for allocational decision making, financial control mechanism, crucial for political choice. Provides some insight into staff functions performed by those responsible for resource allocation.

246C. Policy Implementation in the Public/Not-For-Profit Sector. Prerequisites: courses 246A and 246B, or consent of instructor. Emphasizes problems, strategies, techniques involved in bringing plans to life in the organizational context. Relates public interest needs for accountability and responsibility to the organizational/managerial needs for security and advancement. Includes consideration of public sector entrepreneurship, public personnel management, public sector consulting. Prerequisite: Mr. Zumeta.

247A. Interorganizational Strategies in the Public/Not-For-Profit Sector. Prerequisite: consent of instructor. Consideration of public/not-for-profit organizational member, focal point, and the methods of view of strategies for managing the entire network, and managerial implications for an individual, focal organization. System structure, transactions, levels of collaboration, competition, and dependency. Prerequisite: Mr. Boje.

248. Special Topics in Public/Not-For-Profit. Prerequisite: consent of instructor. Studies of advanced subjects of current interest in public/not-for-profit management. Emphasis on recent developments and the application of specialized knowledge to public/not-for-profit problems. Topics vary each quarter. May be repeated for credit with topic change.

250A. Behavioral Foundations of Human Resource Management. (Formerly numbered 250B.) Lecture, three hours. Prerequisite: course 250B or consent of instructor. Topics include development and training; human resources accounting; behavioral foundations of participating management; motivation, productivity, and satisfaction; designing reward systems; and evaluation of organization effectiveness. Emphasis on understanding, predicting, and influencing human behavior in organizations.

251. Managing Human Resources. (Formerly numbered 250A.) Lecture, three hours. Prerequisite: course 250B or consent of instructor. Topics focus on the management of people in organizations, is intended for managers as well as personnel specialists, and is organized at three related but distinct levels: (1) the processes of managing human resources and the impact of people as organizational resources to achieve optimal productivity, satisfaction, retention, and development; (2) the personnel management function or system that performs specialized human resources functions; and (3) the issues facing top management which involve the management of human resources, including strategic planning for human resources, union-management relations, and design of corporate strategy.

252. Systems of Employee-Management Participation. (Formerly numbered 250C.) Lecture, three hours. Prerequisite: consent of instructor. Course is designed to provide understanding of systems of employee-management participation around the world (apart from traditional collective bargaining systems). Specific concepts such as worker participation in decision making, industrial democracy, joint consultation, workers’ councils, profit sharing are covered.

253. Conflict Resolution in Labor-Management Relations. (Formerly numbered 251B.) Lecture, three hours. Prerequisite: graduate standing. Analysis of conflict in the employment relationship; theoretical and empirical findings. Principles and philosophies that underlie resolution of labor-management impasses are considered, with emphasis on grievance procedures, arbitration, mediation, and fact-finding.

254. Analysis of Labor Markets. Prerequisite: consent of instructor. Problems of verifying hypotheses concerning labor market behavior and the application of data to managerial problems. Problems of operationally defining labor market concepts. Critical evaluation of available labor market data. Course studies applying these data to managerial problems.

255. Comparative Industrial Relations. Prerequisite: course 409 or elementary knowledge of labor economics. At national and international levels, historical and contemporary analytical comparison of industrial relations systems within their political, social, and economic environments. Included are the institutions, philosophies, and ideologies of labor, management, and government, and the interaction of their power relationships; the substance and manner of determination of “web of rules” governing the rights and obligations of the parties; and the resolution of conflicts.


257. Labor-Management Relations in Public and Nonprofit Sectors. Prerequisite: graduate standing. Analysis of labor-management relations in government, including public education, and in nonprofit institutions (i.e., artistic, cultural, recreational, and health care). Emphasis on negotiations and group relationships rather than on public personnel administration.

258. Selected Topics in Industrial Relations (1 to 4 units). Prerequisite: doctoral standing or consent of instructor. An advanced and experimental examination of problems or issues of current concern in industrial relations. 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.

Mr. Hutchinson

259A. Employment Planning and Evaluation. Lecture, three hours. Prerequisite: course 254. Development of programs and practices to meet the human resource needs of organizations, including staffing, training, management development, career progression, and evaluation.

259B. Equal Employment Opportunity Management. Lecture, three hours. Prerequisite: course 254. The development and administration of programs which provide equal employment opportunities in employing organizations. Current statutory and case law and administrative agency requirements are covered.

Ms. Broderick

260A. Advanced Marketing Management. Prerequisite: course 411 or consent of instructor. A decision-oriented course concerned with the solution of product, price, promotion, and distribution channel problems. Extensive use of case studies.

Ms. Scott

260B. Marketing Strategy and Planning. Prerequisite: course 260A or consent of instructor. A systematic approach to market selection and strategic planning for work for strategic marketing planning is developed. The cornerstone are the analysis of a few, yet powerful conceptual frameworks which have broad applicability to the various decision elements in the strategic planning process. Key elements in the annual marketing planning process are developed.

Ms. Kahn

261A. Management in the Distribution Channel. Prerequisite: course 260A or consent of instructor. An examination in depth of decisions in the distribution channel. Issues of power in the distribution channel and the trade-offs between alternative channel systems are discussed.

261B. International Marketing Management. Prerequisite: course 260A or consent of instructor. Opportunity, distinctive characteristics, and emerging trends in foreign markets are analyzed. Includes an exploration of alternative methods and strategies; organizational planning and control; impact of social, cultural, and economic differences on marketing problems of adapting American marketing concepts and methods.

Mr. Hanssens

262. Price Policies. Prerequisite: course 260A or consent of instructor. Consideration of such concepts as product classification, demand, competition, and costs, and their application to price making. The theory of price leadership, geographical pricing, price discrimination, price warfare, and leader pricing are also studied in relation to the price-making process.

In addition, attention to the price policies of individual firms in which these concepts are applicable.

263A. Consumer Behavior. Prerequisite: course 411 or consent of instructor. A study of the nature and determinants of consumer behavior. Emphasis on the influence of sociocultural factors such as personality, small groups, demographic variables, social class, and culture on the formation of consumers’ attitudes, consumption, and purchasing behavior.

Mr. Kassarjian, Mr. Nakamoto, Ms. Scott

263B. Theory of Consumer Information. Prerequisite: course 263A. Analysis of factors influencing consumer demand. Techniques for stimulating demand are evaluated in relation to specific marketing objectives. Material is drawn from economics, psychology, social psychology, anthropology, and marketing research.

264A. Marketing Research: Design and Evaluation. Prerequisite: course 411 or consent of instructor. Methods of measuring and predicting the forces affecting marketing, including quantitative aspects of demand, consumer reaction to product characteristics, effectiveness of advertising and other promotional devices, influence of rewards and organizational systems on sales efficiency, and effectiveness of competitors’ strategies.

Mr. Currim, Mr. Meyer
264B. Mathematical Models in Marketing. Prerequisite: course 260A or equivalent or consent of instructor. A study of the utilization of models for the solution of marketing problems. Discussion on models concerned with such problems as brand switching, media selection, pricing, competitive strategy, scheduling, allocation problems, and waiting time.

Mr. Hanssens

264C. Seminar in Multidimensional Scaling. Prerequisite: consent of instructor. A seminar providing for the study of recent developments in metric and nonmetric multidimensional scaling. Mr. Cooper

265A. Marketing and the Law. Prerequisite: course 260A or consent of instructor. A detailed study of the legislative enactments (federal, state, or local) which influence the operation of institutions engaged in marketing activities, together with an analysis of the judicial decisions which have interpreted these laws.

Mr. Kassarjian

265B. Social Issues in Marketing. Prerequisite: course 260A or consent of instructor. Environmental impact of marketing in society; study of theories, methods, and relationships for evaluating transaction behavior in a scientific and humanistic context; macroanalytic perspectives in marketing.

266A. Product Management. Prerequisite: course 260A. The course deals with the selling and appraising of alternative growth strategies for the firm. Product addition, modification, and deletion decisions are examined, and the processes by which these decisions can be made is an important matter discussed.

Mr. Currin, Mr. Meyer

266B. Advertising Policy. Prerequisites: courses 260A and 263A, or consent of instructor. A study of the formulation of advertising policies, involving an analysis of cases dealing with the role of advertising in marketing, the development of advertising objectives, strategy, appropriation policy, media selection, evaluating advertising results, and the organization of the advertising function.

Mr. Nakamoto

266C. Sales Force Management. Prerequisite: course 411 or consent of instructor. The course develops a logical framework for the solution of problems in sales force management. It covers the role of selling in the marketing mix, the selling interaction, and key problems in planning, organizing, evaluating, and controlling the sales force.

267. Macromethodological Issues in Research on People. Prerequisite: consent of instructor. The course provides a systematic approach to the special issues concerning research on people: criteria for evaluating macro research design, development of scientific concepts, models, theories, and law; the problem of private report, and the question of data language.

268. Selected Topics in Marketing (1 to 6 units). Prerequisite: course 260A or consent of instructor. A study of selected areas of marketing knowledge and thought. Specific subjects vary each quarter depending on the particular interests of the instructor and students. Individual projects and reports. May be repeated for credit.

269A. Theory in Marketing. Prerequisite: consent of instructor. The course serves a two-fold purpose. At one level it serves as a mechanism to introduce the student to the development of marketing thought. In addition, issues pertaining to the general topic of theory development and testing are addressed. The general goal is to prepare the student for conducting theoretically grounded research in marketing.

Mr. Nakamoto

269B. Research in Marketing Management. Prerequisite: consent of instructor. Intended for Ph.D. students. Study of research issues associated with marketing management decisions. Recent research in the area of strategic marketing, market segmentation, new product development and introduction, pricing strategies, channel policy, promotion decisions, and sales force management is examined critically. Both quantitative and behavioral approaches to studying these issues are reviewed.

Mr. Hanssens, Ms. Scott

269C. Quantitative Research in Marketing. Prerequisite: consent of instructor. Intended for Ph.D. students in management and related fields. Students are assumed to have a good background in market research principles and to be familiar with probability, statistics, experimental design, and econometrics. The purpose is to review a range of quantitative models as applied in marketing research.

Mr. Currin, Mr. Hanssens, Ms. Kahn, Mr. Meyer

269D. Behavioral Research in Marketing. Prerequisite: consent of instructor. Empirical research in consumer behavior is surveyed and critically evaluated from theoretical as well as practical perspectives. Intended for Ph.D. students who will be conducting research in consumer behavior or related areas.

Mr. Kassarjian, Mr. Nakamoto, Ms. Scott

269E. Special Research Topics in Marketing. Prerequisite: doctoral standing. 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.

270. Environment of the Art World. Prerequisite: consent of instructor. Consideration and analysis of the political, social, economic, and environmental forces in American society as they affect the existence and development of arts institutions in the U.S. The aim is to explore present policies and trends and potential future developments.

271. Law and the Arts. Prerequisite: consent of instructor. Exploration of the way in which law and the arts relate, the role of the lawyer vis-a-vis artist and arts manager, policy underpinnings of the law and effect on the arts, and unresolved problems and issues in areas of interaction.

272. The Role of Management in Artistic Decision Making. Prerequisite: consent of instructor. A descriptive study of the criteria for decision making in artistic institutions, including the role of the institution in society, the economic environment of the arts, and the artistic values systems of arts organizations.

274. Current Issues in Arts Management. Prerequisite: consent of instructor. The quarter is viewed as the major vehicle integrating the academic program and current issues in the management of artistic institutions. Relevant combinations of lectures, discussions, case studies, and team research projects are employed.

275A. Urban Issues and Problems. Discussion, three hours. Prerequisite: course 205 or consent of instructor. Identification and analysis of emerging issues and problems in turbulent urban environments: land utilization and regulations, transportation, real estate and building industries, urban sprawl, taxation, city size and efficiency, environmental pollution, and related topics.

Mr. Mittelbach

275B. Urban Land Markets. Discussion, three hours. Prerequisite: course 175, 405, or consent of instructor. Development and use of economic and management principles and methods to analyze and project urban land uses and land values; study of demand for and supply of commercial, community, retail, and residential space in the context of urban growth, structure, and change.

Mr. Mittelbach

275C. Alternative Urban Futures. Discussion, three hours. Prerequisites: completion of first-year M.B.A. requirements, consent of instructor. Intended primarily for students seeking a course which specifically relates real estate analysis to the array of management courses taught at GSM. Case studies are used to examine various managerial strategies for creating or acquiring and managing private real estate projects intended to respond to anticipated alternative urban futures. Business and economic principles are used to define new areas of potential growth and to prepare financial, marketing, and management plans for realizing these potentials through private residential, commercial, or industrial development.

Mr. Case, Mr. Mittelbach

276A. Theory of Urban Property Valuation. Discussion, three hours. Prerequisite: course 406 or equivalent. A systems approach to the feasibility and valuation studies which systematically analyze the factors which create value in private or public property developments. Analysis is focused on the particular social, economic, political, and physical forces which impact property values. Students are encouraged to use computer-based analysis.

Mr. Case, Mr. Mittelbach

276B. Comparative and International Urban Land Studies. Discussion, three hours. Analysis of private and public forces influencing urban growth and change in developed and developing nations. Emphasis on economic, social, and institutional forces influencing urban structure, land-use patterns, and growth distribution of jobs and people in the built environment.

Mr. Case, Mr. Mittelbach

276C. Urban Dynamics: Degeneration and Regeneration. Discussion, three hours. Prerequisite: consent of instructor. The local urban area is used as a laboratory to identify its forces which have caused changes — good and bad — in the area and to prepare market and financial feasibility studies of private development opportunities in such areas. Fieldwork is an integral part of the course, with students encouraged to organize into development teams.

Mr. Case, Mr. Mittelbach

277A. Housing Market Systems. Discussion, three hours. Prerequisite: consent of instructor. Concepts, models, and methods to study and forecast local, regional, national, and international markets; consumer and investor behavior; real estate land development and building; primary and secondary residential mortgage markets; private and public forces influencing housing and private markets. Mr. Case, Mr. Mittelbach

277B. Housing Policy. Discussion, three hours. Prerequisite: consent of instructor. Alternate housing strategies, policies, and programs; housing for low and moderate income groups; urban renewal; community services to improve housing environment; stimulating innovation and efficiency in production, distribution, and delivery of residential capital and housing services; the roles of private enterprise.

Mr. Case, Mr. Mittelbach

278A. Urban Real Estate Financing and Investing. Discussion, three hours. Prerequisite: consent of instructor. An investor-oriented course in which real estate and business trends are evaluated to determine alternative real estate investment opportunities. Current topics and investment techniques to real estate investment opportunities are used in case studies and short case problems to illustrate the development of investment strategies.

Mr. Case, Mr. Mittelbach

278B. Sources, Uses, and Flows of Real Estate Capital. Discussion, three hours. Analysis of sources of real estate capital, and mortgage markets to determine the potential availability and costs of mortgage money from alternative sources. Various sources of funds are evaluated to determine factors influencing the decisions to make mortgage loans. All types of lending instruments, particularly mortgage instruments, are examined for their impacts on real estate investment decisions.

Mr. Case, Mr. Mittelbach
273A. Special Studies in Urban Land Economics. Limited to master's or Ph.D. candidates. Investigation of a thesis- or dissertation-related research. May be repeated for credit. Mr. Case

279B. Selected Topics in Urban Land Economics. Discussion, laboratory, and fieldwork. Prerequisite: special committee's standing or consent of instructor. Designed for students who wish to pursue a particular topic in housing, real estate, or urban land economics in depth on an individual or cooperative basis. All work is computer-based; however, students are provided an introduction to the use of computers (preferably PCs) in various kinds of real estate analysis. May be repeated for credit.

279X-279Y-279Z. Urban Research and Development (2 to 4 units each). Prerequisite: graduate standing or consent of instructor. Exploration of urbania and its problems; prospects and prescriptions for the delivery of a quality life. The exploration is both macroscopic and microscopic as related to problems of a selected urban area.

280A. Important Studies in Human Systems. Prerequisite: doctoral standing or consent of instructor. Surveys seminal studies of human systems. Summarizes and critiques literature local to the evolution and current status of the field. Reviews such topics as personality, motivation, group and intergroup behavior, systems theory, and organizational design and development. Mr. Massarik

280B. Survey of Research Philosophies and Methods. Prerequisite: doctoral standing or consent of instructor. Exposes student to research paradigms, constructivist and subjectivist philosophies of science, and the psychology and sociology of science. Critiques laboratory and field experiments; field studies, analytical and descriptive methods; interview, participant observation, questionnaire, and unobtrusive methods of data collection.

280C. Personal and Professional Development. Prerequisite: doctoral standing or consent of instructor. Provides a setting where students may explore their own professional values in the process of testing and learning the values and standards important in the human systems Ph.D. program and held by the broader community of system researchers and developers.

280D. Research Design for Human Systems Studies. Prerequisite: course 280A or 280C or consent of instructor. Acquaints students with temporal and logical sequences in the process of designing studies of human systems, including optimizing the fit of research topic, observation, and data collection methods and data analysis techniques. Actively involves students in the preparation of research proposals.

280E. Tutorial in Human Systems Research. Prerequisite: course 280D or consent of instructor. Provides an opportunity for students to plan and conduct constructive comment on the design, data analysis, and writing of their Ph.D. research papers.

280F. Human Systems Research Seminar. Prerequisite: course 280D or consent of instructor. Exploration of various research methods and problems encountered in applying them. Students are actively involved in seminar reports and in class critique of course members' dissertation research designs. May be repeated for credit.

281A. Sociotechnical Systems. Prerequisite: graduate standing. Introduces systems concepts and views work organizations as interacting social and technical systems open to forces from the surrounding environment. Focus on developing the socio-technical systems approach and understanding the advantages of this approach for designing and managing organizations. Mr. Davis

281B. People in Organizations. Prerequisite: graduate standing. Extensive examinations of factors affecting the effectiveness of individuals in their roles as members of work groups in various organizational settings. Emphasis on the factors leading to satisfaction and productivity in the work setting. Ms. Lasko

281C. Situational Factors in Management. Prerequisite: graduate standing. Surveys seminal studies of human systems. Summarizes and critiques literature local to the evolution and current status of the field. Reviews such topics as personality, motivation, leadership, conflict management, and design of jobs and organizations. Develops a diagnostic way of thinking that is fundamental to managerial effectiveness in diverse organizational situations.

282. Task Group Processes. Prerequisite: course 281A or 281B or consent of instructor. Focuses on the structures, processes, and interrelations of work groups in sociotechnical systems. Emphasizes understanding of how group activities interrelate with the physical/technical environment. Imparts a practical knowledge of task group functioning through class exercises and field observations. Mr. Culbert

283A. Environmental Settings of Sociotechnical Systems. Prerequisite: consent of instructor. Focuses on the complexity and uncertainty of organizational environments. Analyzes environments along social/cultural, political, and economic dimensions; their interrelationships, and their relations to technology. Diagnoses organizational designs necessary to various environments. Mr. Davis

284A. Organization Design. Prerequisite: course 281A or consent of instructor. Survey of organizational design theories and methods, including bureaucratic, contingency, or "all depends" perspectives for understanding human behavior. Theories and concepts important for understanding human behavior in organizations are presented as well as managerial implications of individual, group, and social dynamics. Students develop their understanding of satisfaction and productivity in the work setting.

285A. Leadership, Motivation, and Power. Prerequisite: course 281B or consent of instructor. Theories of leadership, motivation, and power in organizations. Emphasizes the situational and contingency approaches to leadership, with special emphasis on sociotechnical and different motivational theories. Develops specific leadership behaviors and interpersonal skills required to develop effective leadership styles. Mr. Goodman

285B. Managerial Interpersonal Communication. Prerequisite: course 281B or consent of instructor. Focuses on organizational, interpersonal, and personal factors affecting managerial communications. Analyzes styles and modes of communication in one-to-one and group settings. Offers opportunities to deepen understanding of one's own communication styles and skills. Mr. McDonough

287. Sensitivity Training Groups and Their Facilitation. Prerequisite: consent of instructor through prior or application to the department. Develops cognitive and experiential understanding of the dynamics of sensitivity training groups and their facilitation. Analyzes relevant theory, research findings, and case studies; stresses translating these inputs into practice.

288A. Special Studies in Managing Organization Behavior. Prerequisite: M.B.A. standing or consent of instructor. An examination in depth of problems or issues of current concern in managing organizational behavior. Emphasis on recent theories, research findings, and professional applications of special interest to M.B.A. students and faculty. May be repeated for credit. Mr. Davis

288B. Selected Topics in Behavioral Science. Prerequisite: doctoral standing or consent of instructor. Focuses on the relationship of human behavior fundamental to the study of individual, group, organizational, and cultural behavior. Explores in depth selected theoretic positions, extending and comparing the behavior of the student and his knowledge and applications. May be repeated for credit. Mr. Tannenbaum

288C. Current Issues in Sociotechnical Systems and Organization Design. Prerequisite: doctoral standing. Surveys seminal studies of human systems. Summarizes and critiques literature local to the evolution and current status of the field. Reviews such topics as personality, motivation, leadership, conflict management, and design of jobs and organizations. Explores in depth selected theoretic positions, extending and comparing the behavior of the student and his knowledge and applications. May be repeated for credit.

288D. Current Issues in Human Systems Change and Development through Consulting. Prerequisite: doctoral standing or consent of instructor. Explores current topics in philosophy, art, and technology of improving organizations and increasing managerial effectiveness through consulting interventions. Explores development of consultant and entering, diagnostic, planning, communication, and change raising, team building, values, etc. depending on student and faculty preferences. May be repeated for credit.

288E. Selected Topics in Organization Theory. Prerequisite: doctoral standing or consent of instructor. An examination in depth of problems or issues of current concern in managing organizational behavior. Explores current topics in philosophy, art, and technology of improving organizations and increasing managerial effectiveness through consulting interventions. Explores development of consultant and entering, diagnostic, planning, communication, and change raising, team building, values, etc. depending on student and faculty preferences. May be repeated for credit.

288F. Selected Topics in Organizational Behavior. Prerequisite: doctoral standing or consent of instructor. An examination in depth of problems or issues of current concern in managing organizational behavior. Explores current topics in philosophy, art, and technology of improving organizations and increasing managerial effectiveness through consulting interventions. Explores development of consultant and entering, diagnostic, planning, communication, and change raising, team building, values, etc. depending on student and faculty preferences. May be repeated for credit.

288G. Current Issues in Human Systems Studies. Prerequisite: doctoral standing or consent of instructor. Explores current topics in philosophy, art, and technology of improving organizations and increasing managerial effectiveness through consulting interventions. Explores development of consultant and entering, diagnostic, planning, communication, and change raising, team building, values, etc. depending on student and faculty preferences. May be repeated for credit.

288X-288Y-288Z. Behavioral and Organizational Intervention Seminars (1 unit, 1 unit, 2 units). Discussion, two hours. Prerequisite: doctoral standing. Designed to expose Ph.D. students to the research within the field while at the same time requiring that each Ph.D. student develop a critical framework for evaluating and integrating recent research. May be repeated for credit. S/U grading. Mr. Massarik

290. Organization Theory. Prerequisite: course 423 or consent of instructor. Analysis of the theory and practice of the organizational management of organizations. Covers theoretical models, empirical findings, and applications of such topics as attitudes and values, cognitive and perceptual processes, behavioral and organizational change. May be repeated for credit.

291. Planning and Control. Prerequisite: course 423 or consent of instructor. Analysis of the theory and practice of the organizational management of organizations. Covers theoretical models, empirical findings, and applications of such topics as attitudes and values, cognitive and perceptual processes, behavioral and organizational change. May be repeated for credit. S/U grading. Mr. McKelvey

292A. Research and Development Policy. Examination of research and development as a process and as an element of a goal-oriented organization. Factors affecting invention and innovation; transfer of knowledge and technology; organizational and behavioral considerations; shaping of science and technology; and organizational goals, assessing of forecasting technological futures. Mr. Goodman
292B. Models of Organization Behavior. Prerequisite: consent of instructor. Theoretical frameworks for developing explanatory and predictive models of complex organizations. Exercises in constructing formal models, usually in mathematical or stochastic form and, where appropriate, using materials from field studies to develop empirical tests. These models may be used to discover implications for the systems changes recommended in the sociotechnical field study.

292C. Comprehensive Planning in the Public Sector. Prerequisite: consent of instructor. Evolving modes of planning under complexity, with particular emphasis on the 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.

292D. Management in the Not-for-Profit Sector. Prerequisite: graduate standing. A study of the not-for-profit sector, the institutions within it, and its relationship to the governmental and business sectors. Special emphasis on management problems peculiar to the not-for-profit sector. Mr. Andrews

293. Business and Society. Prerequisite: consent of instructor. A study of the business enterprise as a social institution, with emphasis on the changing purposes of social action. Adjustments of the firm to changes in the social environment. Ethical problems in management. Social responsibilities of the business manager.

294A. Strategy Formulation and Implementation. Prerequisite: consent of instructor. Case course dealing with strategy decisions and their implementation, executive action, and administrative behavior involved in managing total enterprises. The student is confronted with complex company situations to develop ideas essential to overall managerial direction.

294B. Environmental Impacts on Management. Prerequisite: consent of instructor. Examination of ways in which business, government, labor, and consumer organizational managers might respond to external environmental problems. Methods are studied for developing and evaluating alternative managerial solutions which permit organizations to assist in improving current and future environmental quality.

295A. Entrepreneurship and Venture Initiation. Prerequisite: consent of instructor. An exploration in entrepreneurship particularly concerned with the formation and operation of new business ventures. Significant and crucial aspects of exploring new business opportunities and starting a business. Mr. Schöllhammer

295B. Small Business Management. Prerequisite: consent of instructor. Exploration of crucial aspects in managing small business enterprises. Emphasis on the identification and analysis of characteristic operating problems of small firms and the application of appropriate methods or techniques for their solution. Mr. Schöllhammer

296A. International Business Management. Discussion, three hours. Prerequisite: course 205A or consent of instructor. Identification, analysis, and resolution of managerial issues of policy and action within the context of a multinational corporation, with emphasis on problems of adaptation to different sociological, cultural, legal, political, and economic environmental characteristics on planning, the structuring of organizational relationships, coordination and control in multinational firms. Mr. Schöllhammer

296B. International Comparative Management Research. Prerequisite: doctoral standing or consent of instructor. In-depth study of theory and research pertaining to international business and comparative management. Emphasizes recent research developments and methodological issues. Imparts knowledge on the design and the conduct of international/comparative management research. Mr. Mason

297A. Comparative and International Management. Prerequisite: course 412 or consent of instructor. A comparative study of the practice of management in selected foreign countries, as affected by their social environments and the development of management theory.

297B. International Business Policy. Prerequisite: course 205A, consent of instructor. Analysis of key managerial problems encountered in a multinational corporation. Concepts and theories acquired in other courses in international business and comparative management are applied to a series of complex cases and simulations of international business operation.

297C. International Business Law. Prerequisites: courses 205A, 296A. Legal environments in which international business operates; overseas business relationships and organizations; antitrust, taxation, transfer of capital, and technology regulations; patent, trademark, and copyright safeguards; arbitration of international business disputes; expropriation of foreign investments; international business and government relations.

297D. International Business Negotiations. Prerequisite: course 296A. Exploration of international business negotiations of multinational enterprises with governmental agencies and foreign-based firms on a wide range of issues, such as establishment/disolution of joint ventures, extent of foreign ownership/management control, terms/conditions for technology transfer, investment incentives.

298A. Special Topics in Management Theory. Prerequisite: doctoral standing or consent of instructor. An 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.
402. Data Analysis, Statistics, and Decision Making. Prerequisite: graduate standing. An introduction to statistics for graduate students who have had no previous course with emphasis on application to business problems.

403. Managerial Accounting. Prerequisite: graduate standing. Emphasis on cost-volume-profit analysis, financial statements, and systems in which cost and pricing information are used. An introduction to systems and procedures in financial and managerial accounting, with emphasis on income measurement, margin analysis, standard and direct costing. An object of the course is to provide a firm understanding of how to read and interpret published financial statements. 

404. Managerial Computing. Prerequisite: graduate standing. An introduction to the use of computers for management applications. Computer hardware, software, and programming concepts are discussed. Programming problems are assigned, using both batch and interactive approaches.

405. Managerial Economics: The Organization. An introduction to the use of computers for management applications. Computer hardware, software, and programming concepts are discussed. Programming problems are assigned, using both batch and interactive approaches.

406. Managerial Finance. Analysis of main decision areas in managerial finance. An introduction to the principles, methods, and tools of financial management. Emphasis on financial planning and control, sources of funds, developing objectives and standards which lead to effective allocation and use of the organization's resources.


410. Production and Operations Management. Prerequisite: course 407 or equivalent. Principles and decision analysis related to the effective utilization of the factors of production in manufacturing and non-manufacturing activities for both intermittent and continuous systems. Production planning, systems and methods, facilities design, and the design of control systems for production operations. 

411. Elements of Marketing. A study of institutions and functions as they relate to the distribution of goods and services, emphasizing the viewpoint of management in terms of planning, execution, and measurement of marketing activities and strategies, and the viewpoint of society in the analysis of cost, impact, and results. 

412. Management of Organizations. Prerequisite: graduate standing. An introduction to the management of organizations. An appreciation of the systems approach to the theory and practice of management. Mr. Andrew, Mr. McKelvey, Mr. Spender

413A. Business Computer Programming. Prerequisite: course 404 or Computer Science 10C or 105 or equivalent experience. Programming business and management applications in a general purpose programming language. Choice of language used (e.g., FORTRAN, COBOL). Emphasis on program structure, input, output, and editing considerations; data and file structures; and characteristics of commercial data processing. Extensive programming assignments.

420. Management Policy. Prerequisite: course 412. Evaluation and formulation of organization's overall policies and strategies. Economic, heuristic, and social process approaches to decision formulation, environmental analysis, and organizational appraisal. Senior management role in managing the policy process.


444A-444B. Management Field Study. Must be taken in two consecutive quarters in the second year. Supervised study of an organization, including establishment of client organization/student consultant relationship, identification of problem, design of study, collection and analysis of data, development and reporting of implementable recommendations. In progress grading.
Executive M.B.A. Program

Admission to the Executive M.B.A. program is prerequisite for enrollment in the following courses:

461. Managerial Problem Solving (2 units). The course focuses on individual problem-solving and decision-making skills. Alternative conceptual frameworks are presented for augmenting the individual's diagnostic and decision-making skills. Readings, cases, decision simulations, and discussions are used to explore the areas of charting job and career progression, working with others, and shaping the work culture.

462. Economic Analysis for Managers. The course focuses on policy-oriented problems in antitrust, tax securities, and environmental regulation. Concepts of microeconomics may be used adapted. Topics include traditional antitrust regulations, new trends in antitrust, private versus government antitrust, securities regulation, environmental regulations, and a business firm's optimal response to regulation.

463. Data Analysis and Management Decisions Under Uncertainty. The course surveys statistical model building, with emphasis on the managerial interpretation of the statistical summary of data. Classical statistics are covered through multiple regression to support the courses in finance and marketing that follow. The fundamental approaches to decision making under uncertainty are presented.

464. Managerial Accounting. The course familiarizes the manager with the functions of accounting by focusing on the use of external financial reports for evaluating corporate performance and the use of accounting information for internal planning and control.

465. Quantitative Methods for Managers. A survey of modeling approaches to managerial planning and decisions. Emphasis on the ability to recognize situations when models can be used and the ability to work effectively with model building specialists, and to make good use of models once they have been developed.

466A-466B. Financial Policy for Managers (4 units to 12 units). Modern financial management deals with decision making under uncertainty for corporate financial management, for portfolio investment decisions, for financial institutions, and for international financial management. The course focuses on learning and applying the theoretical tools and applying and control in casework.

467. Management Information Systems (2 units). Information systems for management decision making. Emphasis on support of strategic planning and management control functions; computer-based decision support systems; organizational arrangements for performance measurement and control; programming and budgeting systems.

468. Economic Forecasting (2 units). The course is concerned with macroeconomic theory and its application to business forecasting. It covers major economic indicators and their historical description of the U.S. economy; theoretical tools that business economists use to analyze the impacts of monetary and fiscal policy; macroeconomic techniques applicable to business decisions.

469. Management of Human Resources. The course provides an introduction to the major areas of human resource management — personnel management, labor law, and labor relations. This is accomplished by examining some of the major concepts, theories, and research related to each of these topic areas, as well as some of the practical problems for managers posed by each.

470A. Introduction to Action Research and Policy Analysis (2 units). Provides methods of organizational and strategic analysis to determine the relationship of the organization with its environment. Techniques for action research such as experimental design, survey design, and research methods are also explored.

470B-470E. Action Research and Policy Analysis Project (2 units, 1 unit, 2 units, 2 units). Four quarters of supervised study of an organization in relation to complex environmental changes. Competitive and environmental analysis of the organization. Development of an action research project and managerial policy scenarios; examination of their organizational implications; and recommendations for managerial and organizational response to deal with environmental changes.

472. Marketing Strategy and Policy. The course focuses on diagnostic marketing research sessions, including the development of marketing objectives and strategies and the implementation of these strategies through pricing, channel, promotion, and new product decisions.

473. Managerial Organizational Processes. The goal is to assist each student in developing an understanding of the workings of large, complex organizations. The focus is on the macroanalytic, rather than the microanalytic, approach.

474. Production and Operations: Systems, Strategies, and Policies. Analysis of strategic and operating policies and decisions for systems that produce goods and services in enterprises. Examination of the role of broad-level planning, inventories, scheduling of resources, organization of resources, distribution systems, system location. Comprehensive operating problems.


476. Competitive Strategy and Business Policy. The study of the general management task of forming a corporate competitive strategy. Emphasis on the economics of business rivalry with a variety of individual settings and the implications of changing environments on business strategy.

477. The Manager and Business/Society Relationships. While organizations may, to some extent, choose their immediate environments, there are broad environmental factors and trends that affect most, if not all, organizations. The course examines emerging trends in key areas of government regulation, labor relations, international trade, the basic economic structure, and social responsibility.

478. Seminar in Management Strategy and Policy (2 units). Addresses broad policy issues relevant to strategic planning and management. Involves group methods of problem solving and includes a case study involving the top management team from a prominent corporation in an analysis of the corporation's competitive environment and strategic planning.
The profession of social work is one of the principal helping professions. Social workers are employed as policymakers, managers, and practitioners in all of the human services, including physical and mental health, education, income security, housing and the social services, family and child welfare, manpower development and training, corrections, etc. Social work services are offered under public auspices, at all levels of government, under private-for-profit and not-for-profit auspices, and in the workplace. In each setting social work concerns focus on the restoration of impaired social functioning of individuals, groups, communities; the provision of resources, social and individual, which will enhance social functioning; and the control of factors which threaten effective and satisfying social functioning. Social work is also concerned with the causes, treatment, and prevention of personal and social ills and with the broader social and economic issues in society.

In its professional education and practice, social work collaborates with disciplines in the field of health, including physical, mental, and public health programs; law, including the areas of corrections, civil rights, and social legislation; education, with reference to social work in the schools, special needs of handicapped children, and programs developed for children in deprived areas. There is also close collaboration with the applied social sciences in the study of social institutions and social change.

UCLA's School of Social Welfare is considered among the top schools of its kind in the country based on the quality of its programs, its research grants, and its publications. The school's primary objective is to prepare graduate students not only for successful careers but also for imaginative leadership in the social welfare field.
School of Social Welfare

200 Dodd Hall, 825-2892

Professors
Rosina Becerra, Ph.D.
Jerome Cohen, Ph.D., Associate Dean
Maurice F. Connery, D.S.W.
Jeanne M. Giovannoni, Ph.D.
Doris S. Jacobson, Ph.D.
Alfred H. Katz, D.S.W.
Harry H. L. Kitano, Ph.D.
Manuel R. Miranda, Ph.D.
Jack Rothman, Ph.D.
Alex J. Norman, D.S.W.
Wanda Houck, M.S.S.W., Visiting
Adjunct and Visiting Lecturers
Nathan E. Cohen, Ph.D.
Harry H. L. Kitano, Ph.D.
Maurice F. Connery, D.S.W.
Joseph Nunn, M.S.W.
Harry Wasserman, D.S.W.
Elliot T. Studt, D.S.W., Emeritus

Associate Professors
Warren Haggstrom, Ph.D.
Alex J. Norman, D.S.W.
Harry Wasserman, D.S.W.

Assistant Professors
Diane de Anda, Ph.D.
James E. Lubben, D.S.W.
Laura S. Wiltz, Ph.D.
Ruth Zambrana, Ph.D.

Adjunct and Visiting Lecturers
Louise Arquelles, Ph.D., Visiting
Margaret Bonnief, M.S.W., Visiting
P. Fred Delliquadri, M.S.S., Visiting
Mary Ann Fraser, M.S.W., Visiting
Paula Gelber-Dromi, M.S.W., Visiting
Manuel Houtak, M.S.W., Visiting
Maxine Jackson, M.S.W., J.D., R.N., Visiting
Mary Ann Jimenez, Ph.D., Visiting
Rosalie Kane, D.S.W., Visiting
Barrie Levy, M.S.W., Visiting
Richard Metzner, M.D., Visiting
Rose Montero, M.S.W., Visiting
Susan Price, Ph.D., Adjunct
Terrence J. Roberts, Ph.D., Visiting, Assistant Dean

Fieldwork Consultants
Cheryl Cromwell, M.S.W.
Katherine M. Koldziezki, Ph.D., Coordinator
Jane E. Kurohara, M.S.W.
Joseph Nunn, M.S.W.
Winfred E. Smith, M.S.W., Emeritus

Degrees Offered
Master of Social Welfare (M.S.W.)
Doctor of Social Welfare (D.S.W.)

The UCLA School of Social Welfare offers an M.S.W. program in Social Welfare and a doctoral program of study leading to the D.S.W. The programs are designed to prepare candidates who wish to train for careers in teaching, research, administration, and practice positions. Courses are scheduled in the School of Social Welfare and in schools and departments of related disciplines and professions.

Master of Social Welfare

Admission
In addition to University minimum graduate admission requirements, the master's program of the School of Social Welfare requires a minimum of five courses in the social science or social welfare subjects as prerequisite undergraduate preparation for graduate study in the field of social work. Completion of courses in psychology and sociology is desirable, and a course in statistics is required.

A grade-point average of 3.0 or better is required in all courses taken during the junior and senior years. However, applicants with a GPA below 3.0 may be considered when there is clear evidence of capacity for academic achievement and professional development. In addition, the school applies the following criteria in the selection of candidates: personal suitability for professional education and a potential for successful social work practice, a satisfactory state of health, and an adequate financial and personal plan to permit completion of degree requirements.

The Aptitude Test of the Graduate Record Examination (GRE) is required, as are official transcripts from all undergraduate institutions attended. GRE results must be submitted prior to any evaluation of the application for admission. GRE scores must be more recent than five years old and may be repeated to achieve a higher score, if desired. The highest GRE Aptitude score achieved will be evaluated for admission. In addition, foreign students whose native language is not English and whose higher education was not obtained in an English-speaking country are required to take the Test of English as a Foreign Language (TOEFL). The school may request that you take specified examinations to assist in the assessment of candidacy for admission.

Three letters of recommendation are required. In addition, an autobiographical statement and a professional concepts and goals statement must accompany the application.

Admission to the school requires simultaneous application to (1) the School of Social Welfare and (2) the Graduate Division. Both applications and the school brochure can be obtained by writing to the School of Social Welfare Admissions, 200 Dodd Hall, UCLA, Los Angeles, CA 90024, or by calling 825-7737.

Major Fields or Subdisciplines
Direct social work practice with individuals, families, and small groups, community organization, and social welfare administration are offered as concentrations in social work methods. Options are available in child and family welfare, health and aging, and mental health.

Course Requirements
Note: The School of Social Welfare is examining the Master of Social Welfare curriculum with a view to its revision. Students admitted for the 1986-87 academic year are advised to check with the school for any changes in requirements.

A total of 76 units in courses in the School of Social Welfare is required, including three courses in social welfare policy and services, five courses in the human behavior and social environment sequences, six courses in methods of social work practice, four courses in social welfare research, plus six quarters of field instruction. Appropriate substitutions or waivers may be made by the Dean. You may, by consent of the Dean, take courses in other graduate schools of the University in fulfillment of the degree requirements.

With the consent of the instructor and the Dean, you may substitute tutorial studies of comparable material in the 500 series for either required or elective courses. Only Social Welfare 596A and 597A may be taken. A maximum of nine units of 500-series courses may be applied toward the entire graduate course requirement for the degree.

Practicum Requirements
During the first year, concurrent placement for 25 weeks (two to two and one-half days per week) is required; during the second year concurrent placement for 25 weeks (three days per week) is required.

Thesis Plan
While no University-approved master's thesis is required for the M.S.W. degree, the curriculum requires theoretical courses in research methodology. As a component of the second-
year research course, the satisfactory completion of an individual research project, or participation in a group research project concerned with a social welfare problem, is required.

Comprehensive Examination Plan
All M.S.W. candidates must pass an oral comprehensive examination in the Spring Quarter of the second year of study. The examination may cover the entire range of the program.

Doctor of Social Welfare

Admission
In addition to the University minimum requirements, the school requires completion of an M.S.W. degree program with a superior record from an accredited school of social work. This requirement may be waived if an applicant possesses a postgraduate degree and professional experience in a related field. Such candidates, however, are required to fulfill specified requirements in the M.S.W. program in addition to the normal doctoral requirements.

Admission criteria include the quality of your performance in previous undergraduate and graduate study, capacity for doctoral-level scholarship, ability to express yourself clearly in writing, success in professional employment and other pertinent experience, results of the Graduate Record Examination (GRE), and personal qualifications indicating suitability for advanced study and research.

The Aptitude Test of the GRE is required, as are official transcripts from every school attended since high school. In addition, foreign students whose native language is other than English and whose higher education was not obtained in an English-speaking country are required to take the Test of English as a Foreign Language (TOEFL). The school may request that you take specified additional examinations to assist in the assessment of candidacy for admission.

Five letters of recommendation and a typewritten statement of professional and educational objectives are required. To exemplify your communication skills, you may submit any of the following: published articles, master’s thesis, or other theoretical/research-oriented unpublished papers.

Although a personal interview is not required as part of the application procedure, whenever possible a conference is arranged with a member of the doctoral faculty.

Prospective students must apply separately to the School of Social Welfare and to the Graduate Division. Both applications and the school brochure are available by writing to the School of Social Welfare Doctoral Program, 200 Dodd Hall, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines
The core curriculum is the same for all students. Programs of specialized study relevant to the substantive area of the dissertation, which include courses in other schools and departments of the University as well as seminars and tutorials within the school, are developed in consultation with the adviser.

Course Requirements
Courses required for the degree normally cover a two-year span of study. All first-year course requirements must be completed before taking the qualifying examinations.

Required courses for the first year are Social Welfare 225A-225B, 245A-245B-245C, and 286A-286B-286C. In addition, a one-quarter course may be required in an area to be selected by the doctoral program committee, depending on the educational needs and interests of the first-year class.

Required courses for the second year are Social Welfare 210A-210B. A third course, which may be a seminar or individual or small group tutorial, is also required.

In addition to these requirements, you must take a minimum of three quarters in a graduate school or department outside the School of Social Welfare in an area related to your professional objectives, with consent of your adviser. In exceptional instances, you may obtain either a waiver of or substitution for a required course. Ordinarily, students in full-time study are expected to enroll in at least 12 units of study each quarter during the first two years and at least eight units per quarter thereafter.

A practicum may be required as a component of one or more courses, although it is not a general program requirement.

Qualifying Examinations
Before the formation of a doctoral committee, you must pass a written qualifying examination in each of the three core areas, as follows:

1. Social welfare policy, history, and philosophy;
2. Social work practice theory;
3. Research and scientific inquiry (philosophy and values, research methodology, research design, and behavioral concepts utilized in social welfare).

The emphasis in these examinations is on your ability to integrate the knowledge gained from the several substantive areas for dealing with problems and issues of the field of social welfare at various levels - theoretical, operational, and evaluative.

The written qualifying examinations are graded on a pass/fail basis. In case of failure with permission to retake one or two of the three examinations, you are required to retake only the examination(s) which was failed. You ordinarily are required to take the examinations in June of your first year of study; any retaking of examinations ordinarily takes place in September.

The University Oral Qualifying Examination for advancement to candidacy covers the dissertation proposal and related areas, and is administered by your doctoral committee. The written qualifying examinations must be successfully completed prior to the oral examination.

Final Oral Examination
A final oral examination may be required at the option of the doctoral committee.

Graduate Courses
201A-201B-201C. Dynamics of Human Behavior I, II, III (2 units each). Biopsychosocial factors associated with individual and group behavior and development as applicable in the social functioning of individuals and groups. Emphasis on theoretical issues and research evidence which contribute to a unified theory of human development.

202A-202B. Dynamics of Human Behavior: Deviance IV, V (2 units each). Prerequisites: courses 201A-201B-201C. The course deals with deviations and pathologies or stresses in the physical, emotional, and social areas of human functioning as these problems relate to the role and function of the social worker.

203. Integrative Theory and Research in Human and Social Behavior (2 units). An integrative course which brings together the preceding courses in the human behavior and social environment series by examination at an advanced level of the major theoretical strands and the identification of problem areas requiring further research.

204A. Social Systems in Social Welfare (2 units). The application of social system theory to the problems of social welfare and social work. Analysis of the network of community relationships, values, stratification, institutions, and subcultures as related to the premises and services of social work.

204B. Small Groups in Social Welfare (2 units). Application of theory and knowledge of small group functioning to problems of working with groups in social work settings. Analysis of group formation, structure of interaction and communication, and leadership and morale problems. Application to family, peer, and special-purpose groups.

205. Group Conflict and Change (2 units). Study of the phenomena of group conflict and change as they appear in the social welfare matrix of groups, communities, and social institutions; relationship between conflict and social and cultural change; major research contributions in understanding of these phenomena.

210A-210B-210C. Social Ecology. Lecture, two hours. Prerequisites: doctoral standing and/or consent of instructor. Exploration of data, theories, and research from the biological and policy sciences regarding ecological relationships. Review of current social, cultural, demographic, and political changes as they affect human society, its institutions and, more particularly, social welfare needs and the study of them.

220. History and Philosophy of Social Welfare (2 units). The history of social work as a field: body of knowledge, method and process, and point of view analyzed within the context of the economic, political, social, philosophical, and scientific climate of the period.

231A. Social Welfare Policy and Services I (2 units). Nature, roles, and history of welfare institutions in different societies; applicable social system theory with special reference to values as seen by different components of the welfare system; theory and research about needs and not met, about various welfare policies and organizational forms, and about social change to prevent needs.
221B. Social Welfare Policy and Services II (2 units). Understanding of the significant theoretical constructs and relevant empirical evidence dealing with how services and systems are organized and their functions. Develops beginning skill in organizational analysis. Special attention to organizational analysis of social welfare services.

222A-222B-222C. Social Welfare Administration I, II, III (2 units each). Prerequisites: graduate standing and/or consent of instructor. Study of methods by which welfare policies are formulated and translated into action; the nature of organizational and research processes involved in welfare administration; role of welfare agency personnel in policy formulation, implementation, and evaluation.

223. Seminar on the Social Work Profession (2 units). The nature and role of social work in contemporary society; relationships with other professions; probable future trends in the profession; social work ethics, professional organizations, certification licensing; professional responsibility for continued self-criticism and improvement of the profession.

224A-224B-224C. Advanced History and Philosophy of Social Welfare. Prerequisites: doctoral standing and/or consent of instructor. Analysis of long-term trends in welfare policies and programs in relation to political, economic, and other relevant factors. Philosophical foundations underlying social welfare theories, programs, and methods are explored and values, assumptions, and attitudes historically affecting social welfare examined.

225A-225B-225C. Social Welfare Systems. Prerequisites: doctoral standing and/or consent of instructor. Analysis of theories of organizational behavior affecting social welfare systems (including supranational systems transcending national boundaries), their directions, goals, values, and relationships to social work. Application of organizational theory to planning, organizing, and administering welfare agencies is stressed.

227A-227B-227C. Comparative Social Welfare Theories and Programs. Prerequisites: doctoral standing and/or consent of instructor. Analysis of interrelationships between nations' welfare services and the social, economic, religious, and broader cultural milieu within which they develop. Special attention to social theories, value systems, and other elements of culture which particularly affect welfare programs.

230A-230B-230C. Theory of Direct Social Work Practice I, II, III (2 units each). Corequisite: required social work practicum. An introduction to the theory of social work with individuals and small groups and to the principles of practice which are derivative of this and related theory.

231A-231B-231C. Advanced Theory of Direct Social Work Practice IV, V, VI (2 units each). (Formerly numbered 231A-231B-231C.) 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.

240A-240B-240C. Theory of Social Work Practice in Community Organization I, II, III (2 units each). Corequisite: required social work practicum. Historical and theoretical developments in community organization; understanding the community as a social system; role of the practitioner in identification, analysis, and evaluation of needs, existing programs, policies, structures, and strategies of intervention.

241A-241B-241C. Advanced Theory of Social Work (Community Organization) IV, V, VI (2 units each). (Formerly numbered 241A-241B-241C.) 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 the context of community planning; emerging patterns of physical, economic, and social planning within the framework of social change theory.

M242. Counseling Families of Handicapped Children (2 units). (Same as Psychiatry M254.) Prerequisite: consent of instructor. Techniques and issues in counseling families through evaluation, feedback, and treatment. Social and psychological stresses on family unit, professional's reactions, community resources, and issues of genetic counseling, placement, and developmental crises. Ms. Gottlieb (W)

245A-245B-245C. Development of Social Work Practice Theory. Lecture, two hours. Prerequisites: doctoral standing and/or consent of instructor. Critical analysis of social work practice theories and selected social sciences theories in historical, social, and scientific contexts, with attention to how theory becomes modified over time.

258. Critical Problems in Social Welfare. Prerequisites: doctoral standing and/or consent of instructor. Current problems in the field of social welfare. Specific topics vary depending on the research and educational interests and needs of the class. May be repeated for credit.

M275. Family Process: Psychological and Social Perspectives on the Family. (Same as Psychology M275.) The course reviews various theoretical perspectives applicable to the analysis of family structure and dynamics. Critical issues in the application of family constructs to clinical problems receive particular attention.

Mr. Cohen, Mr. Goldstein

280. Social Welfare Research (2 units). Sources, nature, and uses of social work theory and research-based knowledge and of broader social data relevant to social welfare activities. Critical analysis of major methods of developing scientific knowledge.

281A-281B-281C. Advanced Social Welfare Research (2 units each). Individual or group research projects requiring intensive examination and analysis of a problem area, directed toward the development of research knowledge and techniques for social work practice. In Progress grading.

285A-285B-285C. Research in Social Welfare. Prerequisites: doctoral standing and/or consent of instructor. Review of areas of research of concern to social workers, with special attention to design, instrument construction, data collection, data processing, data reduction, analysis, and interpretation. Designs studied include survey, panel, experimental observation, and theory development research.

286A-286B-286C. Survey of Research Methods. Prerequisites: doctoral standing and/or consent of instructor. 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.

290A-290B-290C. Seminar in Social Work (2 units each). A series of seminars dealing with trends in social work and social welfare, with focus on current social problems affecting individuals, groups, and communities and new patterns of intervention based on recent demonstrations and research.

401A-401B-401C. Practicum in Social Work. Laboratory, twenty hours. Educationally directed practicum conducted in selected health, welfare, and educational facilities. The major objective is to provide opportunities for students to test their theoretical knowledge and to acquire a disciplined practice foundation in the profession. In Progress and S/U grading.

402A-402B-402C. Advanced Practicum in Social Work (6 units each). Laboratory, twenty-four hours. Prerequisites: courses 401A-401B-401C. Practicum in social work is arranged for students in keeping with their major field of study, in Progress and S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate advisor and Graduate Dean, and host campus instructor, department Chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596A. Special Study and Research for M.S.W. Candidates (2 to 8 units). Individual programming for selected students to permit pursuit of a subject in greater depth.

596B. Special Study and Research for D.S.W. Candidates (2 to 8 units). Prerequisites: doctoral standing and/or consent of instructor. S/U or letter grading.

597A. Preparation for M.S.W. Comprehensive Examination (2 to 8 units). Prerequisite: consent of instructor.

597B. Preparation for D.S.W. Qualifying Examination (2 to 8 units). Prerequisites: doctoral standing and/or consent of instructor.

599. D.S.W. Dissertation Research (2 to 8 units). Prerequisites: doctoral standing and/or consent of instructor.
One of the most recent health science teaching programs at UCLA, the School of Dentistry is growing rapidly in stature and reputation. Challenging educational and training programs prepare the dental student for a professional career dedicated to patient treatment and service. The curriculum is carefully designed to prepare students for changes in treatment modalities and health care delivery systems. Students become actively involved in preventive dental care early in their training and soon make valuable contributions to the clinical health team. The clinical instruction system emphasizes a patient care approach in which each patient is treated comprehensively. Students interact with their colleagues, faculty, and dental auxiliary personnel in much the same way as they will do in a private or group practice.

Opportunity exists for dental students to undertake programs designed to meet their special needs; senior-year electives encourage more advanced training in an area of particular interest. In addition to basic and applied research programs within the school, students participate in community service programs such as the Venice Dental Clinic and the Mobile Dental Clinic, the latter in conjunction with the University of Southern California. Postdoctoral study can be undertaken in one of several dental specialties, and an active continuing education program through University Extension provides a variety of short courses for members of the dental profession and their auxiliaries.
School of Dentistry

A3-042 Dentistry, 825-6141

The UCLA School of Dentistry, which occupies facilities in the Center for Health Sciences, offers a D.D.S. (Doctor of Dental Surgery) degree program, a number of postdoctoral programs, and an Oral Biology M.S. degree program. Concurrent D.D.S. and M.S. or certificate programs are also available. This catalog provides detailed information only on the M.S. program in Oral Biology, for which admission to the School of Dentistry is not required.

D.D.S. Degree Program

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 two required summer quarters between the sophomore/junior and junior/senior 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 science courses, didactic dental courses, and clinical experience. The first two years of the curriculum are chiefly devoted to didactic coursework in the basic health and dental sciences. 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 further details on the D.D.S. program and a listing of the courses offered, see the Announcement of the UCLA School of Dentistry, available from the Office of Student Affairs and Admissions, School of Dentistry, A3-042 Dentistry, UCLA, Los Angeles, CA 90024. You are also referred to Chapter 5 for details on the three-year predental curriculum offered by the College of Letters and Science.

Postdoctoral Programs

The School of Dentistry offers the following opportunities for postdoctoral study: a one-year general practice residency program; a one-year residency in maxillofacial prosthodontics; a three-year oral and maxillofacial surgery residency training program; a three-year combined orthodontic-pediatric dentistry program; and two-year programs in the specialties of orthodontics, pediatric dentistry, periodontics, and prosthodontics.

Information on these postdoctoral programs can be obtained by writing directly to their respective directors, UCLA School of Dentistry, Los Angeles, CA 90024.

Oral Biology

63-050 Dentistry, 825-1955

Professors

George W. Bernard, D.D.S., Ph.D.
John Beumer, III, D.D.S., M.S. (Restorative Dentistry)
Angelo A. Caputo, M.S., Ph.D. (Biomaterials Science)
Fermin A. Carranza, Jr., D.D.S., Dr. Odont. (Periodontics)
Spirio J. Chaconas, D.D.S., M.S. (Orthodontics)
Andrew D. Dixon, D.D.S., M.S., Ph.D., D.Sc. (Orthodontics)
Colin K. Franken, Ph.D.
Louis J. Goldberg, D.D.S., Ph.D., Chair
Douglas Junge, Ph.D.
E. Barrie Kenney, D.D.S., M.S. (Periodontics)
Frank J. Kratochvil, D.D.S. (Removable Prosthodontics)
Carol M. Newton, M.D., Ph.D. (Biomathematics)
George R. Riviere, D.D.S., M.S., Ph.D. (Pediatric Dentistry)
Max H. Schoen, D.D.S., M.P.H., Ph.D. (Public and Preventive Dentistry)
G. Douglas Silva, F.D.S., M.R.C.S. (Oral Medicine)
Robert P. Thye, D.M.D., M.S., Clinical (Restorative Dentistry)
Stuart C. White, D.D.S., Ph.D. (Oral Radiology)
Alfred Weinstock, D.D.S., Ph.D. (Periodontics)
John A. Yagiela, D.D.S., Ph.D.
Fred Herzberg, D.D.S., M.S., Ementus
Norman S. Simmons, D.M.D., Ph.D., Ementus

Associate Professors

Russell Christensen, D.D.S., M.S. (Oral Diagnosis)
Glenn Clark, D.D.S., M.S. (Gnathology)

Joseph P. Cooney, D.D.S., M.S. (Restorative Dentistry)
Donald F. Duperon, D.D.S., M.Sc. (Pediatric Dentistry)
Jay Gershon, D.D.S., Ph.D. (Pediatric Dentistry)
No-Hee Park, D.M.D., Ph.D.
Patrick Turley, D.D.S., M.Ed. (Orthodontics)

Assistant Professor

Lawrence Wolinsky, D.D.S., Ph.D.

Adjunct Professor

Bernard G. Sarnat, M.D., D.D.S.

Adjunct Associate Professor

Michael G. Newman, D.D.S. (Periodontics)

Scope and Objectives

The M.S. program in Oral Biology is intended to prepare students for teaching and research careers in dentistry or simply to introduce them to modern approaches to research in the biology of the oral-facial area. The core curriculum is made up of basic science courses in embryology and histology, microbiology, immunology, physiology, neurophysiology, biology of bone, biochemistry of caries, pharmacology, and therapeutics, all directly related to oral-facial problems. In addition, students take concurrent courses in research methods and scientific writing, a course in biostatistics, and any of several electives in related areas.

All students carry out a thesis project, working in a laboratory in the School of Dentistry, Dental Research Institute, or other divisions of the Center for Health Sciences. Each is exposed to modern research methodology and is supervised by a faculty member with research experience. Many students are in cooperative D.D.S./M.S. programs or resident programs in specialty areas, and many are dentists trained in other countries.

Master of Science Degree

Admission

Applicants are expected to have an acceptable bachelor's degree with a strong background in the biological and chemical sciences or a Doctor of Dental Surgery degree or the equivalent (i.e., D.M.D.) from an accredited university. The Graduate Record Examination (GRE) and the Dental Aptitude Test (DAT) are not required but may be submitted. Three letters of recommendation are required as part of the admissions packet. There is no separate application
form other than that required by the Graduate Division. Foreign students are considered individually after evaluation of their curriculum and training and must take an English language proficiency examination. For further information, contact the Graduate Adviser, Oral Biology Section, School of Dentistry, 63-050 Dentistry, UCLA, Los Angeles, CA 90024.

**Major Fields or Subdisciplines**

Areas of specialization or subdisciplines which may be followed to complement or complete the degree requirements include anatomy, biological chemistry, cell biology and virology, immunology, microbiology, pharmacology, and physiology.

**Course Requirements**

The program requires a total of nine courses, five of which must be at the graduate level. Seven graduate core courses are required: Oral Biology 202, 204, M205, M206, 207, 208, M214. These should be taken during the first year of graduate study. Course 490, which focuses on the preparation of scientific writing and communication, and Biomathematics 170A are both required for completion of the degree.

Courses 596 and 598 are required 500-series courses. You are eligible to take two to eight units at a time on an S/U grading basis as many times as needed. A maximum of eight units of 500-series courses may be applied toward the total course requirement, of which four units may be applied toward the minimum graduate course requirement.

**Thesis Plan**

The master’s thesis is intended to demonstrate your ability to design and carry out a research project, and analyze and present the resulting data. Publishable scientific results are thus not required, although the thesis must be prepared according to high standards of experimental design and data analysis. The subject of the thesis must be approved by the graduate adviser and by the faculty member who will direct the work of the thesis. After completing course requirements, you should prepare and send to your graduate committee a brief description of the proposed research project. The committee will then discuss the proposal with you and make suggestions.

The thesis should be prepared mainly in consultation with the sponsor, although other committee members will be available for assistance. At least two weeks should be allowed between completion of the thesis and termination of the program, to allow committee members to read and comment on the manuscript.

**Articulated Degree Program**

The M.S. degree in Oral Biology has been structured so that students pursuing a dental degree or certificate in the UCLA School of Dentistry have an opportunity to participate in the program. These students must submit a separate application to the Graduate Admissions Office.

**Graduate Courses**

**202. Principles and Methods of Research.** Lecture, one hour; laboratory, three hours. Designed to familiarize the student with the experimental method and its application to basic and applied research. It includes experimental method and design and interpretation of data. The student is exposed to research instrumentation and the advantages and limitations of various investigative tools.

Mr. Junge and the Staff (W)

**M203. Oral Embryology.** (Same as Anatomy M203.) Lectures and laboratory instruction in the development and histological structure of the facial region and the oral and peri-oral organs and tissues.

Mr. Bernard and the Staff (Sp)

**204. Antibiotics and Antimicrobial Agents (2 units).** A summary of current information on the chemistry, synthesis mode of action, and mechanism of resistance for generically grouped antimicrobial substances. Emphasis also on pharmacokinetic complications of antibiotic usage.

Mr. Franker (F)
enteric immunity is discussed in terms of recent ex-
the intestines, and the related lymphatic and blood
organ-level and cellular physiology of the following
M203. Lecture, one hour; discussion, one hour. The
phasis on the unique properties of SIgA. The ability to
vascular systems are reviewed in reference to the
normal time-course of development of various
systems is discussed, in a somewhat flexible frame-
(2) dental
ments (el, with emphasis on the biosynthesis of collagen,
cells of connective tissue in general, as well as enam-
process of growth; general and craniofacial (mandible,
state of knowledge
stages in
discussion. Mr. Wolinsky (Sp)
were required to present seminars on assigned topics
which aid their understanding and analysis of the
course content that has application to their specific
Ms. Gregory (W)
Gross Postnatal Craniofacial Growth and De-
Prerequisites: strong background in histology and embryology. Students ac-
from scientific literature relevant to the course
an appreciation of the dynamic complexity of
at session students
and conflicting hypotheses. Students are encouraged to pursue their particular interest.
Mr. Sarnat (Sp)
which are of significance to the clinical dental special-
Mr. Sarnat (Sp)
598. Thesis Research and Preparation (2 to 4
units). S/U grading.
Mr. Dixon and the Staff (F, W)
A modern school of medicine exists in many minds and in many places. It includes many more disciplines than all those available to such physicians as Copernicus and John Locke, famous for discoveries well beyond medicine then or now. UCLA School of Medicine faculty and students may be found in the Molecular Biology Institute and in the Department of Physiology, in the clinics, wards, and operating rooms of UCLA Medical Center and Los Angeles County Harbor-UCLA Medical Center, in the Health Sciences Computer Center, in the Biomedical Library, and in dozens of other clinical and scientific facilities.

Regarded by many physicians and medical faculty to be among the best in the nation, UCLA’s School of Medicine encompasses a wide range of clinical specialties, including neurology, obstetrics and gynecology, ophthalmology, pediatrics, radiation oncology, and surgery. Graduate work leading to the M.S. and/or Ph.D. degrees is offered through the Graduate Division, either separately or in conjunction with the M.D. program, in 11 different disciplines.

Each department of the school is staffed by a distinguished faculty of respected researchers and practitioners. They have at their disposal some of the most technologically advanced equipment and facilities, including one of the nation’s eight hospital-based biomedical cyclotrons producing shortlived radioisotopes for research and diagnostic nuclear medicine procedures.

Photo: Technician operates UCLA’s biomedical cyclotron.
School of Medicine

12-109 Center for Health Sciences, 825-6081

The UCLA School of Medicine offers an M.D. degree program, several allied health programs in affiliation with other hospitals and universities, and a number of postgraduate medical training programs. In addition to specialties in medicine, neurology, obstetrics and gynecology, ophthalmology, pediatrics, radiation oncology, and surgery, which lead to the M.D. degree, a range of master’s and doctoral degrees is offered through the Graduate Division.

M.D. Degree Program

The four-year curriculum leading to the degree of Doctor of Medicine (M.D.) at UCLA is designed to develop a comprehensive scientific and humane 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.

During the first two years, which are devoted mainly to the basic sciences with only periodic, brief clinical exposure, instruction is primarily in the form of lectures and laboratory sessions, demonstrations, and tutorials. In the last two years, instruction in patient care is given in the form of required and elective clinical clerkships at the UCLA Medical Center or at one of many affiliated hospitals.

All of the medical school departments participate in the medical curriculum leading to the M.D. degree. If you are interested in details on the M.D. curriculum and a listing of courses offered in each department, or if you wish to make application to the M.D. program, you are urged to obtain a copy of the Announcement of the UCLA School of Medicine from the Office of Student Affairs, School of Medicine, 12-109 CHS, UCLA, Los Angeles, CA 90024. You are also referred to Chapter 5 of this catalog for details on the four-year premedical studies program offered by the College of Letters and Science.

Graduate Programs

Master’s and/or doctoral degrees are offered through the Graduate Division in the following fields: anatomy, nurse anesthesia, biological chemistry, biomathematics, biomedical physics (Department of Radiological Sciences), microbiology and immunology, neuroscience, experimental pathology, pharmacology, physiology, and psychiatry and biobehavioral sciences. Detailed information on these programs, for which admission to the School of Medicine is not required, is provided in the departmental listings which follow.

Additional Programs

Cooperative Degree Programs

The School of Medicine offers an articulated degree program in conjunction with the Graduate Division which allows you to earn both the M.D. and Ph.D. in six to seven years, depending on your course of study and research. The Ph.D. may be awarded in one of several medical science fields. For more information, contact the Associate Dean for Education in Medical Science at 891-2335.

In addition, an arrangement with the School of Public Health enables you to pursue the M.P.H. degree while attending medical school. Interested students should consult the Student Affairs Office in the School of Public Health.

Allied Health Programs

Programs in allied health include animal care technician, dental assistant, dental hygienist, dietetics technician, emergency medical technician, social work, pharmacy, respiratory therapist, vocational nurse, medical technologist, nurse anesthetist, operating room nurse, physician’s assistant, physical therapist, prosthethist-orthotist, radiologic electronics specialist, radiologic technologist, radiation therapy technologist, and ultrasound technologist.

Information relative to these programs may be obtained from the Office of Allied Health in the UCLA Center for Health Sciences (825-6711).

Postgraduate Medical Training Programs

Postgraduate training programs, including residencies, are available at several off-campus sites in addition to those offered at the UCLA Medical Center. Programs offered at the allied 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 Office of Student Affairs, UCLA School of Medicine.

Graduate Degrees Offered

<table>
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<th>Field</th>
<th>M.S.</th>
<th>C.Phil.</th>
<th>Ph.D.</th>
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<td>Anatomy</td>
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<td>Anesthesiology (Nurse Anesthesia)</td>
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<td>Biological Chemistry</td>
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<td>Biomathematics</td>
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<td>Microbiology and Immunology</td>
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<td>Neuroscience</td>
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<td>Pathology (Experimental Pathology)</td>
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<td>Pharmacology</td>
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<td>Physiology</td>
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<td>Psychiatry and Biobehavioral Sciences</td>
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<tr>
<td>Social Psychology</td>
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<td>M.S.P.**</td>
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<tr>
<td>Clinical Psychology Internship</td>
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<td>Certificate</td>
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<tr>
<td>Radiological Sciences (Biomedical Physics)</td>
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*The department admits only applicants whose objective is the Ph.D.

**Not admitting new students at this time.
Scope and Objectives

The Department of Anatomy offers advanced training leading to the Ph.D. degree. The great majority of students graduating with a doctoral degree in anatomy can look forward to an academic career in medical or dental schools and, in accord with this, the department strives to produce graduates soundly qualified both for teaching of anatomical subjects at this level and for the conduct of productive research in morphology or in some related area. An M.S. degree is also available to individuals whose major interests and training lie in allied fields. The department does not offer an undergraduate degree. An informational brochure may be obtained by writing to the Vice Chair, Department of Anatomy, 73-235 CHS, UCLA, Los Angeles, CA 90024.

Requirements for Graduate Degrees

Admission

Applicants must have a bachelor’s degree in a physical or biological science or in a premedical curriculum. Introductory courses in zoology, one year of general and organic chemistry, and one year of college physics are required. Courses in comparative anatomy, embryology, cell biology, genetics, elementary statistics, and the philosophy of science are highly recommended. You must submit (1) transcripts of grades for all college-level work; (2) the results of the Graduate Record Examination (GRE), including the Advanced Test in Biology or in your undergraduate major; (3) at least three letters of recommendation from professors stressing potential for successful completion of graduate studies and creative independent research; and (4) an essay describing your background, work experience, interests, and career goals. Selected applicants will be asked to an interview with an admissions committee of faculty and graduate students.

Major Fields or Subdisciplines

The major fields in which graduate research may be undertaken include (1) neuroanatomy and neurophysiology, (2) neuroendocrinology, and (3) cell biology, including immunology.

Master of Science Degree

The M.S. degree in Anatomy is available to applicants who have specialized objectives (e.g., students in bioengineering, medical illustration, physical therapy, and other paramedical specialties), as well as to foreign students who can plan only a limited stay in this country. Provision can also be made for medical and dental professionals at the postdoctoral level who wish to pursue a limited research project and will satisfy all requirements of the program.

Course Requirements

A total of 36 units of coursework is required, 20 of which must be in graduate-level courses. Eight units of Anatomy 598 may be applied toward the total requirement, but only four units may be applied toward the minimum graduate course requirement. All M.S. candidates must take two courses selected from 101 (eight units), M206A (five units), M206B (seven units), and 207A-207B (12 units); one departmental seminar; other courses essential to the student’s program; courses in the minor field (for those under the comprehensive plan).

Thesis or Comprehensive Examination Plan

You may elect either the thesis or examination plan. For the thesis plan, a committee of the adviser and two department members approves the thesis proposal, usually at the start of your second academic year. All members participate in criticism and approval of the eventual thesis; there is no oral defense. Under the comprehensive examination plan, you must demonstrate in a written examination a grasp of the general principles of anatomy, as well as an understanding of some related field that is relevant to your objectives.

Ph.D. Degree

Course Requirements

(1) Basic knowledge of the fields of gross and microscopic anatomy and of the physiology and biochemistry of the mammalian organism. Normally this requirement is satisfied by successful completion of these major courses: (a) human gross anatomy, (b) human microscopic anatomy, (c) neurosciences, (d) mammalian physiology, and (e) biological chemistry.

(2) Participation in at least two departmental seminars.

(3) Completion of such other courses as are essential for your research interest.

(4) Completion of a “breadth requirement” which consists of the equivalent of eight units of work selected to augment the dissertation project. This may be satisfied by a foreign language examination.

Teaching Experience

Since the anatomy profession generally imposes relatively heavy teaching obligations, it is strongly recommended that students seek opportunities to gain teaching experience in the major anatomy courses, gross anatomy in particular.

Qualifying Examinations

The written comprehensive examination is intradepartmental and intended to evaluate your capacity to organize and integrate information gained in the major core courses. All students are required to take the examination at the end of the second year. After passing
this examination and spending perhaps a year in a laboratory, taking seminars, and reading in the field of research interest, you must take a University Oral Qualifying Examination which evaluates your knowledge of the research field and ability to formulate a practicable and significant research program.

The Anatomy Department may decline to admit any student to the qualifying examination if, in its judgment, the student is inadequately prepared, is not sufficiently interested in those fields of research in which the department can offer qualified and sufficient guidance, or is for other reasons not adaptable to the program.

Candidate in Philosophy Degree

You are eligible to receive the C.Phil. degree on advancement to candidacy for the Ph.D.

Final Oral Examination

After you complete the research and writing of the dissertation, you must defend it in a final oral examination before the doctoral committee in closed session. You are also expected to give a final public seminar on your findings.

Upper Division Courses

101. Microscopic Anatomy and Cell Biology (8 units). Twelve-week laboratory; four three-hour sessions. Prerequisite: medical student standing or consent of instructor. Microscopic study of the structure and functioning of tissues and cells, with special reference to the human body.

Ms. Dirksen, Mr. Young, and the Staff (F)

102A-102B. Gross Anatomy of the Human Body (2 units, 8 units). Lecture, one hour; laboratory, four hours (Winter). Lecture, four hours; laboratory, twelve hours (Spring). Prerequisite: student standing in the course. Systemic and topographical anatomy, with dissection of the human cadaver. Emphasis on head and neck. In Progress grading.

Mr. Harper and the Staff (W,Sp)

103A-103B. Basic Neurology (1 unit, 3 units). Lecture, laboratory, one four-hour session and two one-hour sessions (Winter — last six weeks); one two-hour, one three-hour, and two one-hour sessions (Spring). Prerequisite: medical student standing or consent of instructor.

Corequisites: Physiology 103A-103B. Lectures, conferences, demonstrations, and laboratory procedures necessary for an understanding of the functions of the human nervous system. In Progress grading.

Mr. Schleg and the Staff (W,Sp)

104. Mammalian Histology (6 units). Lecture/laboratory three-hour sessions. Prerequisite: medical student standing or consent of instructor. Lectures, demonstrations, and laboratories dealing with the structural organization of tissues and organs at the microscopic level.

Mr. Campbell and the Staff (F)

105A-105B. Gross and Developmental Anatomy for Medical Students (Units, 4 units). Lecture/laboratory, four four-hour sessions (Fall — twelve weeks); one to two-hour sessions (total of twenty hours) on an irregular schedule (Winter — first four weeks). Prerequisites or corequisites: course 103A or 103B, or equivalent, consent of instructor. Systemic and topographical anatomy, with dissection of the human cadaver. Emphasis on head and neck. In Progress grading.

Mr. Cooper, Mr. Young, and the Staff (F, W)

106. Functional Neuroanatomy. Lecture/laboratory, three two-hour sessions. Prerequisite: dental student standing or consent of instructor. Lectures, demonstrations, and laboratories dealing with the structure and functional organization of the nervous system.

Mr. Adinolfi and the Staff (W)

199. Individual Special Studies (2 to 8 units). Prerequisite: consent of instructor. Studies in anatomy and related subject areas appropriate for the training of particular students, which may include reading assignments or laboratory work leading to a final oral or written report: S/U or letter grading.

Graduate Courses

201. Structure and Function of Cells and Tissues (2 units). Lecture, one hour; discussion, one hour. Prerequisites or corequisites: course 101, consent of instructor. Current topics on structural and functional aspects of microscopic anatomy. May be repeated for credit.

S/U grading. Mr. McGinnis (F)

203. Oral Embryology. (Same as Medical Biology 203.) Lectures and laboratory instruction in the development and histological structure of the facial region and the oral and pen-oral organs and tissues.

Mr. Bernard and the Staff (Sp)

206A. Neuroscience. The Introductory Course for Graduate Students (5 units). (Same as Neuroscience M206A). Lecture, four hours; laboratory, four hours; demonstrations, three hours. Prerequisites: a college-level course in biology or zoology, some familiarity with the subjects of electron microscopy and embryology, and an introduction to the principles of organization and function of the nervous system, intended for graduate students in relevant disciplines and as background for more specialized courses for students specializing in the neurosciences.

Mr. Decima, Mr. Scheibel, Mr. Segundo (W)

206B. Neuroscience: The Intermediate Course for Graduate Students (7 units). (Same as Neuroscience M206B). Lecture, six hours; laboratory, two hours; tutorial contacts. Prerequisites: course 206A or 103A-103B, or equivalent, consent of instructor. Neuronal excitability and integration, sensory mechanisms, and motor control as related to behavior.

Mr. Decima, Mr. Segundo, Mr. Segundo (Sp)

207A-207B. Gross and Developmental Anatomy for Graduate Students (8 units, 4 units). Lecture/laboratory, four four-hour sessions (Fall); one to two-hour sessions (total of twenty hours) on an irregular schedule (Winter — first four weeks). Prerequisite: consent of instructor. Gross anatomy, embryology, and radiological anatomy of the human body as taught by lectures, demonstrations, and dissection.

207A covers the trunk and extremities; 207B covers the head and neck. Each course may be taken independently for credit.

F/W grading.

208A-208B. Electronics for Neuroscientists. Lecture, two hours; laboratory, four hours. Prerequisite: consent of instructor. To develop an understanding of electronic methods used in neuroscience. Basic principles of passive networks, operational amplifiers, semiconductor theory, digital logic, waveform generation, signal conditioning, data acquisition methods, and neuropsychological instrumentation systems.

S/U or letter grading. Mr. Whitmoyer (F, W)

211. Cellular Basis of Learned Behavior (2 units). Lecture/discussion, one two-hour session; laboratory, to be arranged. Prerequisites: microscopic anatomy, mammalian physiology. Anatomy and physiology of the central nervous system. Prerequisite: consent of instructor. S/U grading.

213. Multigene Families (2 to 4 units). Formerly numbered M213.) Lecture, one to two hours; discussion, one to two hours. Prerequisite: consent of instructor. Analysis of the molecular structure, development, regulation, and evolution of multigene families. Topics include the hemoglobins, immunoglobulins, histones, ribosomal RNAs, satellite DNAs, and transcriptase antigens. S/U or letter grading.

Mr. Campbell (W)

224A-224B. Structure and Chemistry of Connective Tissue (2 units each). (Same as Oral Biology M224A-M224B). Prerequisites: histology, biochemistry. A seminar course designed for graduate students in dentistry, medicine, or basic science. Functional information on the fine structure and chemical composition of bone, dentin, cementum, cartilage, and cells of connective tissue in general, as well as details, with emphasis on the biosynthesis of collagen, noncollagenous proteins, and glycoproteins, and glycosaminoglycans (mucopolysaccharides). The possible roles of cellular and noncellular elements in the processes of biological mineralization and controlled biological processes to periodontal pathology. In Progress grading.

Mr. Weinstock and the Staff (F, W, alternate years)

225. Biology of Bone (2 units). (Same as Oral Biology M214.) Lecture, two hours; discussion, two hours. Prerequisite: consent of instructor. Embryology of bone tissue; bone as an organ; growth and development of specific bones; biochemistry and physiology of bone; remodeling of bone; crystallography of hydroxyapatite; pathological calcifications; pathology of bone; mechanisms and lineage of calcification; clinical correlations.

Mr. Bernard (W)

226. Brainstem Control of Rhythmic Movements. (Same as Kinesiology 243.) Lecture is the same as Oral Biology 207, which is two units only. Lectures, two hours; discussion, two hours. Discussion of the central nervous system mechanisms which coordinate and control the contraction patterns of the muscles which are involved in behaviors such as sucking, chewing, swallowing, speech, respiration, and locomotion. Emphasis on the interaction among brainstem reflexes, pattern generators, and "voluntary" control centers.

Mr. Chandler, Mr. Goldberg (Sp)

233. Gut and Brain Peptides (2 units). (Same as Neuroscience M225 and Physiology M235.) Prerequisite: consent of instructor. Current knowledge of gut and brain peptides is presented by surveying their chemistry, anatomy, and physiology. Experimental approaches used to study biologically active peptides are discussed. In current addition, current information about each of the major gut and brain peptides is reviewed. S/U or letter grading.

Mr. Brecha, Mr. Reese, Ms. Tache (W)

251. Problems in Developmental and Comparative Immunology. Prerequisite: consent of instructor. Review of current literature emphasizing early development and evolution of immune competence.

Mr. Cooper (W)

252. Seminar on Basic and Quantitated Neuroscience (4 units). Lecture, 90 minutes; discussion, 90 minutes. Prerequisite: consent of instructor. Lecture series on basic neurophysiology. Early lectures by invited specialists on their specific fields. Later lectures by each student on a topic selected and prepared in collaboration with the instructor.

Mr. Segundo (Sp, odd years)

253. Communication and Coding in Nervous Systems. Lecture/discussion, one two-hour and two 90-minute sessions. Prerequisite: consent of instructor. Presentation, discussion, and critique of efforts to quantify neuronal function where the essence of the mathematics is expressed in qualitative and physiologically meaningful terms (e.g., stability, neurons as analogs, two-spike transmission). Emphasis on calcium and voltage-operated channels.

Mr. Segundo (Sp, even years)

255A-255D. Seminars in Endocrinology (2 units each). Prerequisite: consent of instructor.

Mr. Gorski and the Staff (W, Sp)

256. Seminar in Cell Structure and Function (2 units). Lecture, one hour; discussion, one hour. Prerequisite: consent of instructor. Selected topics in cell biology emphasizing those areas which are of current interest. Includes an analysis of the various techniques being used to study the cell.

Mr. Dirsken and the Staff (W, Sp)
258. Seminar in Neuroscience (2 units). Prerequisite: basic neuroscience. Topics of current interest or ongoing research projects are presented, and both content and method of presentation are examined. May be repeated for credit.

Mr. Scheibel (F, odd years; W, even years)

M261. Neuronal Circuit Analysis (2 units). (Same as Neuroscience M261.) Lecture/discussion, three hours. Prerequisites: courses M206A, M206B, or equivalent. The course is run in a seminar form with strong emphasis on specific reading assignments. It presents an integrated view of neuronal circuit analysis at an advanced level and examines the layout and performance of a variety of basic neuronal circuits serving different control functions.

Mr. Schlag (W)

265. Evolution of Cancer (2 units). Prerequisite: consent of instructor. Review of current literature emphasizing the appearance of tumors and neoplasms in representative invertebrates, fishes, amphibians, and reptiles. Theories of cancer development from the evolutionary viewpoint.

Mr. Cooper (W)

390A-390B. The Peer Review System (2 units each). Prerequisite: advancement to candidacy in integrative or systems biology or consent of instructor. Introduction to the peer review system for the evaluation of research proposals. After consideration of the grant review process, each student prepares an abbreviated grant application which is evaluated in a mock peer review session moderated by the faculty. In Progress grading.

Mr. Gorski (WSF, odd years)

490. Communicating Scientific Information (2 units). Prerequisite: graduate standing in anatomy. Student papers and lectures serve as the basis for group discussions of the art and science of effective written and oral communication of scientific information. May be repeated for credit. S/U grading.

(W)

495A-495F. Preparation for Teaching in the Anatomical Sciences (2 to 4 units each). Prerequisites: graduate standing, consent of Vice Chair and instructor. Observation and practice of the methods of teaching in anatomy, including preparation of material, participation in laboratory instruction, and presentation of review sessions, all with peer and faculty criticism. Gross anatomy, microscopic anatomy, and neuroanatomy subjects are included. A maximum of three 495 courses may be taken; none may be repeated. May not be applied toward degree requirements. S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser and Graduate Dean, and host campus instructor. Department Chair, and Graduate Dean. The course is used to record enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596. Directed Individual Study or Research (2 to 12 units).

597. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations (2 to 12 units).

598. Thesis Research for M.S. Candidates (2 to 12 units).

599. Dissertation Research for Ph.D. Candidates (2 to 12 units).

Medical History Division

Professors
Franklin D. Murphy, M.D., Sc.D.
Yvette V. O'Neill, Ph.D., in Residence
Mary A.B. Brazer, Ph.D., Emeritus, in Residence

Associate Professors
L.R.C. Agnew, M.D.
Robert G. Frank, Jr., Ph.D.

Adjunct Lecturer
Elizabeth R. Lomax, M.D., Ph.D.

Upper Division Courses

107A-107B. Historical Development of Medical Sciences. Lecture, three hours. The major contributions of medicine and medical personalities from earliest times. 107A deals with the contributions of medical and medical personalities from earliest times through 1650; 107B deals with the subject in the period from 1650 through the 19th century. Illustrated lectures, class discussion, and required readings from selected texts.

Mr. Agnew (Sp), Ms. O'Neill (W)


Mr. Frank (F/W)

Graduate Courses

240A-240B. History of Medical Sciences (2 units each). Lecture, hour. Survey of the development of scientific and medical thought from ancient times to the present.

241A-241B. History of Clinical Sciences (2 units each). Lecture, one hour. Survey of the development of the clinical specialties and comparison of medical practice in Western civilization with that developed in other cultures.

Mr. Agnew (F/W)

242. History of Pathology (1 unit). Survey of the history of pathology and related sciences from antiquity to the 20th century, tracing the development of pathological theory, practice, organization, and education and comparing them to current practice.

Mr. Agnew (F)


Mr. Agnew (W)

244. History of American Medicine (1 unit). Survey of the history of medicine in the United States from the Colonial period to the present.

Mr. Agnew (Sp)

246. History of Neurophysiology: Its Impact on Psychology and Medicine (2 to 4 units). Lecture, one hour; seminar, two hours. The course covers the development of experimental neurophysiology from its scientific roots in the 17th century through the recognition of the excitability of the nervous system, to the use of this characteristic in revealing the functions of the central nervous system. The seminars complement the lectures mainly through discussion of the interaction of neurophysiological ideas with contemporaneous philosophy and medicine. The lectures may be taken independently.

Ms. Brazier, Ms. Lomax, Ms. O'Neill (Sp)

250. History of Medical Psychology (2 units). Lecture, one hour. An examination of the themes underlying modern mental health theories. Beginning with a review of contemporary thinking, the lectures focus on the various factors shaping present concepts of mental disorders and provide a framework for understanding of current issues.

Ms. Lomax, Ms. O'Neill (W)

596. Directed Individual Studies in Medical History (2 to 12 units). Investigation of subjects in medical history selected by students with the advice and direction of the instructor. Individual reports and conferences.

(F/W/Sp)

Anesthesiology

56-125 Center for Health Sciences, 825-4123

Professors
Gerald D. Allen, M.D.
Robert O. Bauer, M.D.
Werner E. Flacke, M.D., in Residence, Vice Chair
Ronald L. Katz, M.D., Chair
Lawrence Kruger, Ph.D.
Chingmuh Lee, M.D., Vice Chair
Richard Patterson, M.D.
Eduardo Rubinstein, M.D., Ph.D.
Stuart F. Sullivan, M.D., Executive Vice Chair
Leonard F. Watts, M.D.
John B. Dillon, M.D., Emeritus

Associate Professors
Kenneth A. Conklin, M.D.
Jordan D. Miller, M.D.
Robert C. Reynolds, M.D.
Susan A. Ward, Ph.D.

Assistant Professors
Nicholas Durant, Ph.D., in Residence
Rosamaria Durazo, M.D., in Residence
Patricia Kapur, M.D.
Marie Kuffner, M.D., in Residence
John Reeves, Ph.D., in Residence
Naomi Saucier, M.D., in Residence
Stanley Stead, M.D.
Denham S. Ward, M.D., Ph.D.
Thomas Webb, M.D.
Ronald Wender, M.D., in Residence

Adjunct Professors
Edward C. DeLand, Ph.D.
Theresa Ferrer-Brechner, M.D.
Joan W. Flacke, M.D.
Atsuo F. Fukunaga, M.D.

Adjunct Associate Professors
George P. Herr, M.D.
Leah E. Katz, CRNA, Ed.D.
Robert D. Kaulman, M.D.
Richard J. Kroening, M.D.
Maurice Lippman, M.D.
Young Zin Sohn, M.D.
Elaine C. Yang, M.D.

Adjunct and Clinical Assistant Professors
Elizabeth Andersen, CRNA, B.S., Clinical
Lori Berke, M.D., Adjunct
Byron C. Bloor, Ph.D., Adjunct
Joseph Cadranel, M.D., Clinical
Victoria Goon, CRNA, M.S., Clinical
Linda S. Finander, CRNA, M.S., Adjunct
Linda Frederico, CRNA, M.S., Clinical
Sandy Frye, CRNA, M.S., Adjunct
David Fung, M.D., Adjunct
Charles C. Griffiths, CRNA, M.S., Adjunct, Program Director

Adjunct
Kumiko Iwamoto, M.D.
Marshall Kaplan, M.D., Adjunct
Jill L'Armand, Adjunct
Suha Murad, M.D., Adjunct
Evelyn Norell, M.D., Adjunct
Carol Passani, CRNA, M.S., Clinical
Jeanette F. Peter, CRNA, M.A., Adjunct
Con Gia Pham, M.D., Adjunct
Los J. Remely, CRNA, M.S., Adjunct
John Ritter, M.D., Adjunct
Shannon L. Steck, CRNA, M.S., Adjunct

Clinical Instructor
John DeAngelis, M.D.
Scope and Objectives

The Department of Anesthesiology in the School of Medicine offers a program leading to the M.S. degree in Nurse Anesthesia. This program prepares qualified registered nurses in the specialty of anesthesiology and qualifies the graduate to sit for the certification examination given by the Council on Certification of Nurse Anesthetists. The graduate attains a high level of clinical competence combined with an extensive body of didactic knowledge relevant to the specialty. The program is designed to lead to careers in the clinical practice of nurse anesthesiology and the teaching of nurse anesthesiology with the opportunity for participating in research in the area.

Master of Science in Nurse Anesthesia

Admission

(1) A Bachelor of Science degree in Nursing or other appropriate undergraduate degree.
(2) Graduation from an accredited nursing program satisfactory to the program and to the UCLA Graduate Division. You may be required to enroll in certain additional undergraduate courses prior to final consideration by the program.
(3) Licensure as a Registered Nurse prior to entry into clinical coursework. Evidence of status as a Registered Nurse in the State of California is mandatory.
(4) Completion of a minimum of one year of experience as a graduate nurse in an acute care area of nursing, preferably an intensive care unit.
(5) Professional and academic competence attested through three letters of recommendation.
(6) Graduate Record Examination (GRE) Aptitude Test results submitted to the program.
(7) Successful completion of the following undergraduate-level courses: (a) inorganic chemistry, organic chemistry, and biochemistry, (b) introductory physics, (c) biology, (d) anatomy, (e) physiology, (f) English, (g) psychology, (h) statistics, and (i) a course in methods of research (highly recommended).
(8) A scholarship record satisfactory to the Graduate Division and the Nurse Anesthesia Program. Transcripts must be sent to both.
(9) Interview with the program director or designee and with members of the final selection committee, and observation in the clinical practicum.

Approximately five to six students are selected for admission in Fall Quarter by the final selection committee which meets annually in February. Information regarding the program may be obtained by writing to the Department of Anesthesiology, 56-125 CHS, UCLA, Los Angeles, CA 90024. All applicants must apply to both the department and the Graduate Division. Separate applications are needed.

Foreign Language Requirement

There is no foreign language requirement for the M.S. degree.

Course Requirements

Total courses required for the degree: 13¼; all must be graduate-level courses.


Completion of courses 597 or 598A and 598B is required. Course 598B may be repeated twice, but only two of the courses may be applied toward the degree. Letter grading may be utilized in 500-series courses.

Thesis Plan

If you elect this option, your thesis committee is established during the second year of the program. The thesis proposal is written and approved during the Winter or Spring Quarter of your second year. You must take a written comprehensive examination for course completion.

Comprehensive Examination Plan

Students electing this option must demonstrate didactic and clinical competence in the field and must complete selected education courses.

If you elect the oral examination option, you must, in addition to the required curriculum in anesthesia, successfully complete designated courses in curriculum, testing and evaluation, and instruction to meet the accreditation requirements for teachers of anesthesia. The oral examination is general in scope and may include information from all aspects of the curriculum. A written comprehensive examination is also required for course completion. Examinations are offered quarterly.

Other Requirements

(1) You must complete all didactic and clinical work to earn the Master of Science degree.
(2) The program does not discriminate on any basis unless a handicap is determined by the selection committee to preclude the safe clinical practice of anesthesia.
(3) You must complete a minimum of 550 cases as the primary anesthetist.
(4) You must meet the requirements for application to sit for the Certification Examination of the AANA for program completion.

Graduate Courses

210A. Chemistry and Physics of Nurse Anesthesia I (2 units). Lecture, two hours; discussion, one hour. A study of the principles of chemistry and physics as applied specifically to the practice of anesthesia.

210B. Chemistry and Physics of Nurse Anesthesia II (2 units). Lecture, two hours; discussion, one hour. Prerequisite: course 210A. A continuation of the study of the principles of chemistry and physics as applied specifically to the practice of anesthesia.

210C. Chemistry and Physics of Nurse Anesthesia III (2 units). Lecture, two hours; discussion, one hour. Prerequisite: course 210B. A continuation of the study of chemistry and physics as related to anesthesia management, with specific emphasis on biochemistry as related to acid-base balance and theories of narcosis.

215A. Pharmacology of Nurse Anesthesia I. Lecture, four hours; discussion, one to two hours. Introduction to basic pharmacological principles as applied to administration of anesthesia. A study of uptake and distribution, mechanism of action, fate, and toxicology as related to anesthetic agents.

215B. Pharmacology of Nurse Anesthesia II. Lecture/discussion. A study of the pharmacology of adjuvant drugs influencing anesthesia administration, including their uptake and distribution, mechanism of action, fate, biotransformation, and toxicology.

220A. Respiratory Anatomy and Physiology for Nurse Anesthetists I (2 units). Lecture, two hours; discussion, one hour. A study of the structure and function of the respiratory system, with emphasis on anatomy and physiology at the cellular level.

220B. Respiratory Anatomy and Physiology for Nurse Anesthetists II (2 units). Lecture, two hours; discussion, one hour. A continuation of respiratory anatomy and physiology, with emphasis on the respiratory system as related to anesthesia administration and relevant problems.

220C. Respiratory Anatomy and Physiology for Nurse Anesthetists III (2 units). Lecture, two hours; discussion, one hour. A continuation of the study of respiratory anatomy and physiology as related to anesthesia administration and relevant problems.

221. Cardiovascular Anatomy and Physiology for Nurse Anesthetists. Lecture, four hours; discussion, one hour. An integrated study of the anatomy and physiology of the cardiovascular system as related to the management of anesthesia administration.

222. Biological Control Systems. (Same as Electrical Engineering M222F.) Prerequisite: Electrical Engineering 122A or equivalent. Introduction to the application of control theory to the modeling and analysis of biological control systems, such as the respiratory system, cardiovascular system, and neuromuscular system. Emphasis on solving problems of current interest in biomedicine.

223. Anatomy and Physiology of the Endocrine and Excretory Systems for Nurse Anesthetists. Lecture, four hours; discussion, one to two hours. An integrated study of the endocrine and excretory systems as related to the management of anesthesia administration.

225A-225B. Anatomy and Physiology of the Nervous System for Nurse Anesthetists (2 units each). (Formerly numbered 225.) Lecture, two hours; discussion, one to two hours. An integrated study of the anatomy and physiology of the nervous system as related to the management of anesthesia administration.

226. Behavioral Management of Pain Problems (2 units). (Same as Psychiatry M268.) Prerequisite: consent of instructor. The course reviews current knowledge and skills involved in the behavioral assessment and management of acute and chronic pain problems. The behavioral perspective is integrated with related physiological and medical considerations.

Mr. Katz, Mr. Rubinstein

Mr. Katz, Mr. Reeves

Mr. McCreary, Mr. Reeves

Mr. Flacke and the Staff

Mr. Katz, Mr. Reeves

Mr. Flacke and the Staff

Mr. Katz, Mr. Reeves

Mr. McCreary
290. Anesthesia Seminar for Nurse Anesthetists (2 units). Discussion, two to three hours. Discussion of special problems in anesthesia of interest to the student. Ms. Ward and the Staff

400A. Basic Clinical Anesthesia for Nurse Anesthetists I (2 units). Lecture, three hours; laboratory, thirty hours. Prerequisite: course 400. Correlation of techniques of anesthesia administration with basic science knowledge as applied in the clinical area with supervised practice. S/U grading. Ms. Frye and the Staff

400B. Basic Clinical Anesthesia for Nurse Anesthetists II (2 units). Lecture, two hours; laboratory, thirty hours. Prerequisite: course 400A. A continuation of the practice of techniques of anesthesia administration as applied in the clinical area with supervised practice. S/U grading. Ms. Frye and the Staff

400C. Basic Clinical Anesthesia for Nurse Anesthetists III (2 units). Lecture, two hours; laboratory, thirty hours. Prerequisite: course 400B. A continuation of techniques of anesthesia administration as applied in the clinical area with supervised practice. S/U grading. Ms. Frye and the Staff

400D. Clinical Anesthesia for Nurse Anesthetists IV (2 units). Lecture, two hours; laboratory, thirty hours. Prerequisite: course 400C. A practice of refinements of anesthesia techniques, with emphasis on specialized areas of anesthesia administration in supervised practice. S/U grading. Ms. Frye and the Staff

400E. Clinical Anesthesia for Nurse Anesthetists V (2 units). Lecture, two hours; laboratory, thirty hours. Prerequisite: course 400D. A practice of refinements of anesthesia techniques, with emphasis on specialized areas of anesthesia administration in supervised practice. S/U grading. Ms. Frye and the Staff

400F. Clinical Anesthesia for Nurse Anesthetists VI (2 units). Lecture, two hours; laboratory, thirty hours. Prerequisite: course 400E. A practice of refinements of anesthesia techniques, with emphasis on specialized areas of anesthesia administration in supervised practice. S/U grading. Ms. Frye and the Staff

400G. Clinical Anesthesia for Nurse Anesthetists VII (2 units). Lecture, two hours; laboratory, thirty hours. Prerequisite: course 400F. A practice of refinements of anesthesia techniques, with emphasis on specialized areas of anesthesia administration in supervised practice. S/U grading. Ms. Frye and the Staff

401. Orientation to Nurse Anesthesia (2 units). Lecture, two hours; discussion, thirty minutes to one hour. Orientation to history, ethics, and legal aspects of nurse anesthesia. Ms. Frye, Ms. Katz

402. Fundamentals of Anesthesia Practice for Nurse Anesthetists (6 units). Lecture, six hours; discussion, one to two hours. Introduction to basic principles of anesthesia administration, including preanesthetic assessment, physical examination, techniques and procedures, and anesthesia for specialized techniques and surgery. Ms. Frye, Ms. Katz

597. Preparation for M.S. Oral Qualifying Examination (2 units). Prerequisite: consent of instructor. Opportunity to pursue comprehensive study in anesthesia and related areas on an individual basis, with the opportunity for discussion of the material with the instructor. Mr. Katz, Ms. Ward

598A. Research in Anesthesia I (2 units). Prerequisite: consent of instructor. Opportunity to pursue anesthesia research outlets for thesis preparation. Independent research of quality suitable for publication is required. This may be elected instead of the oral comprehensive examination for completion of the M.S. program. Ms. Ward

598B. Research in Anesthesia II (2 units). Prerequisite: course 598A. Opportunity to pursue anesthesia research outlets for thesis preparation. Independent research of quality suitable for publication is required. This may be elected instead of the oral comprehensive examination for completion of the M.S. program. May be repeated twice for credit. Ms. Ward

Biological Chemistry

33-257 Center for Health Sciences, 825-6545

Professors
Roslyn B. Alfin-Slater, Ph.D.
Robert J. DeLange, Ph.D.
Edward M.F. de Robertis, M.D., Ph.D. (Sprague Professor of Molecular Oncology)
John Edmond, Ph.D.
Peter Edwards, Ph.D., in Residence
Samuel Edsion, Ph.D., in Residence
Armand J. Fulco, Ph.D.
Doh G. Glitz, Ph.D., Vice Chair
Isaac M. Harary, Ph.D.
Harvey R. Hershman, Ph.D.
Bruce D. Howard, M.D.
Elizabet F. Neufeld, Ph.D., Chair
James C. Paulson, Ph.D.
Larry J. Shapiro, M.D., in Residence
David S. Sigman, Ph.D.
Marian E. Swensdel, Ph.D.
William T. Wickner, M.D.
Irving Zabin, Ph.D.

Emeritus Professors
Robert M. Fink, Ph.D.
Ralph W. McKee, Ph.D.
James F. Mead, Ph.D.
Joseph F. Nyc, Ph.D.
John G. Pierce, Ph.D.
George J. Popjak, M.D., D.Sc.
Sidney Roberts, Ph.D.
Emil L. Smith, Ph.D.
Stephen Zamenhof, Ph.D.

Associate Professors
Kathryn L. Calame, Ph.D.
Leonard H. Rome, Ph.D.
Patrice J. Zamenhof, Ph.D.

Assistant Professors
Kevin McEntee, Ph.D.
Stephen L. Zipursky, Ph.D.

Scope and Objectives
Modern biochemistry is both intellectually and methodologically a wide-ranging and expanding field of science; it has grown well beyond its initial definition as the chemistry of living things. People who call themselves biochemists work in areas as diverse as medical research, nutrition, pharmacology, crystallography, virology, genetic manipulation, and cellular or molecular biology, as well as the "traditional" studies of metabolism, enzymology, and molecular structure.

Biological chemistry at UCLA attempts to provide students with the necessary background for continued growth in this fast-changing science. As a part of the School of Medicine, the department is involved in the basic education of students who will be practicing physicians, as well as medical research specialists. But through its graduate program and its interactions with other graduate departments, it deals with students whose primary interests are in biochemistry and other related sciences.

The department emphasizes biochemical research leading to the Ph.D. degree; the faculty represents a variety of research areas, and graduates find employment in a multiplicity of research or research-related fields, as well as in teaching. The department also offers limited opportunities for research or nonresearch study toward the M.S. degree.

Requirements for Graduate Degrees

Admission
In addition to the University's minimum requirements, which include a bachelor's degree (preferably in chemistry or a biological science), students should normally have completed the following: general chemistry, quantitative chemistry, organic chemistry (with laboratory), physical chemistry (with laboratory), general physics, mathematics through calculus, and general biology (or bacteriology, botany, zoology, biochemistry, or molecular biology). More advanced courses in these areas are also recommended where possible.

You are expected to take the Graduate Record Examination (GRE) Aptitude Test, preferably in October or before, but no later than December of the year prior to expected admission. It is strongly recommended that you also take the GRE Advanced Test in either Biology or Chemistry. In exceptional circumstances, the GRE test requirements may be waived by the departmental graduate admissions committee. If your native language is other than English, you are expected to take an appropriate examination which tests proficiency in English (e.g., TOEFL) prior to the time of application to this department.

There is no separate application form required for admission to the department, but at least three letters of recommendation are required. Have them sent directly to the Graduate Information Office at the address below.

Departmental brochures and information may be obtained by writing to the Graduate Information Office, Department of Biological Chemistry, 33-228 CHS, UCLA, Los Angeles, CA 90024.

Course Requirements
All graduate students must take the three core courses (Biological Chemistry M252, M255, and M267) unless excused by the graduate adviser. (See additional course requirements under each degree program.)
Written Qualifying Examination
After completing the core course requirements (see above), you must take the departmental written examination (usually given in July; may be given in January or at other times if there is sufficient need). This examination is formulated by the departmental graduate student guidance committee from questions submitted by the various faculty members, who also evaluate your answers to the questions. The committee evaluates your overall performance on the examination and makes a recommendation to the departmental faculty of one of the following: (1) pass at the Ph.D. level of achievement; (2) pass at the master’s level of achievement; (3) fail.

The departmental faculty can approve or change the recommended action and can authorize a reexamination in case of failure (consent is rarely given to take the test a third time). The faculty may also recommend or require additional coursework in specific areas prior to taking the examination a second time, or before taking final action on the results of the written examination.

Master of Science Degree
Course Requirements
In addition to the core course requirements described above for all students, elective courses must be taken to complete the total of nine courses (36 units) required for the degree.

No more than two courses (eight units) in the 500 series may be applied toward the total course requirement, and only one (four units) of the two courses may be applied toward the minimum graduate course requirement (20 units) for the degree.

With the consent of the graduate adviser, Biological Chemistry 596, 597, and 598 may be taken if they are appropriate to your program. All three courses are graded S/U and may be taken as often as necessary.

Comprehensive Examination Plan
In general, the department prefers students to enter directly into the Ph.D. program, but if you enter the master’s program, the comprehensive examination plan is preferred. Only in exceptional situations will a student be approved for the thesis plan. In either plan you must pass the departmental written examination at the master’s level of achievement (see above). Only course requirements and the written examination are needed to complete the comprehensive examination plan.

Thesis Plan
In addition to coursework, a written thesis is required. A thesis committee helps you plan the thesis research, determines the acceptability of the thesis, administers a final examination (if deemed appropriate), and recommends appropriate action on the granting of the degree. In the event of an unacceptable thesis or performance on the final examination (if one is given), the thesis committee determines if it is appropriate for additional time to be granted to rewrite the thesis or to be reexamined.

Ph.D. Degree
Admission
Students are not required to obtain a master’s degree prior to admission into the doctoral program and do not usually obtain a master’s degree as part of the normal progress toward the Ph.D.

Course Requirements
In addition to the general course requirements listed above, students in the Ph.D. program are expected to complete:

1. Biological Chemistry 220A-220B-220C (each quarter during the first year). You must arrange for at least two rotations in the laboratories of different faculty members to help in the selection of a research adviser.

2. Three or four elective courses (total of 10 to 12 units) in addition to the core courses described above. One of the courses must be a scientific language/instrumentation course (e.g., computer language, statistics, electron microscopy). Elective courses may be selected from those offered by any department.

3. Courses 596, 597, and/or 599 during quarters in which research (596, 599) or study for written or oral examinations (597) is part of your program. Course 599 is for students who have passed their oral examinations; course 596 is for those who have not.

Teaching Experience
All students in the doctoral program are expected to participate in teaching activities by assisting in the grades of examinations (usually one day a week for one quarter during the second year) and by assisting in the grading of examinations (usually one to two times per quarter starting in the second year).

Qualifying Examinations
If you have passed the departmental written examination at the Ph.D. level of achievement (see above), you should consult with the department Chair, who is responsible for nominating faculty members to serve on your doctoral committee.

The University Oral Qualifying Examination, which must be passed before you can be advanced to candidacy, consists of the presentation and defense of a research proposal to the doctoral committee. This proposal should not be in the area of your dissertation research. The doctoral committee determines whether you pass the examination and whether reexamination will be allowed in case of failure.
223. Current Topics in Neurochemistry (2 units). Prerequisite: course 221. Detailed analysis of the current literature in the areas of explicit function and control of enzyme synthesis; metabolism in developing systems; and the control of gene expression pertaining to the biochemical development of atherosclerosis. Each course may be taken independently for credit.

265. Seminar in the Biochemistry of Nucleic Acids (2 units). Lecture or recitation, one hour. Prerequisite: course M257 or consent of instructor. Biochemistry and chemistry of nucleic acids and nucleotides.

M266A-M266B. Seminar in the Biochemistry of Lipids and Membrane with Cell Receptors (2 units). With cell receptors, the molecular mode of action of steroid hormones which are important for their biological actions.

M266C. Seminar in the Biochemistry of Atherosclerosis: Selected Topics (2 units each). (Formerly numbered M264.) (Same as Chemistry M267, Molecular Biology M266.) Highly recommended prerequisites: prior courses in biochemistry and cell biology. Detailed examination of the mode of action of steroid hormones on both in vitro and in vivo systems. Topics include steroid uptake, receptor purification and activation, and nuclear events, among others.

Mr. O'Connor (F)

M248. Molecular Genetics. (Formerly numbered 248.) (Same as Biology M248.) Lecture, three hours; discussion, one hour. Prerequisite: consent of instructor. Basic concepts in modern genetics are presented, drawing examples from both eukaryotic and prokaryotic systems, with emphasis on techniques for addressing fundamental questions in biochemistry and molecular biology. Topics include mutagenesis, mutant selection, recombination, genetic mapping, complementation, transposable elements, gene organization, genetic regulation, and molecular evolution.

Ms. Calame, Mr. McEntee, Mr. Miller, Mr. Shapiro (Sp)

M253. Macromolecular Structure (6 units). (Same as Chemistry M253.) Lecture or recitation, five hours. Prerequisites: courses 101A or 101B or Chemistry 157A or 157B, and 110A, or equivalent, or consent of instructor. Chemical and physical properties of proteins, nucleic acids, and other macromolecules, with emphasis on theory and methodology; correlation of structure and biological properties; chemical synthesis and properties of polypeptides and polynucleotides.

M255. Biological Catalysis (2 units). (Same as Chemistry M255.) Prerequisites: course 101A or 101B or Chemistry 157A or 157B, and 110A, or equivalent, or consent of instructor. Reaction mechanisms in molecular biology; experimental approaches for the study of enzymes, including kinetics, isotopic labeling, labeling of enzymes, metabolic labeling, and spectroscopy; the design of pharmacologically active agents and artificial enzymes. Mr. Sigman

M257. Physical Chemistry of Biological Macromolecules (2 units). (Same as Chemistry M257.) Prerequisite: Chemistry 25 or 110A or consent of instructor. Theory of hydrodynamic, thermodynamic, optical, and X-ray techniques used to study the structure and function of biological macromolecules.

Mr. Schumaker (W)

M259. Biochemical Endocrinology (2 units). Prerequisites: courses 101A-101B or 201A-201B or Chemistry 157A and 157B, or equivalent. A lecture course emphasizing aspects of the structures of peptide and steroid hormones which are important for their biological actions. Emphasis on the use of genetic with cell receptors, the molecular mode of action of peptide and steroid hormones, and the role of second and third messengers in hormone action.

(W)

M263. Metabolism and Its Regulation. (Formerly numbered M255.) (Same as Chemistry M263.) Lecture, three hours. Prerequisites: course 101A or 101B or Chemistry 156, 157A or 157B, and 110A, or equivalent, or consent of instructor. Thermodynamic and kinetic aspects of metabolism; regulatory properties of enzymes; metabolic regulation; consideration of comparative aspects of metabolism in relation to physiological function.

Mr. Akinson, Mr. Weiss

M264A-M264B-M264C. Molecular Basis of Ath- ersclerosis: Selected Topics (2 units each). (Formerly numbered M264.) (Same as Chemistry M267, Molecular Biology M266.) Highly recommended prerequisites: course M251 or equivalent, consent of instructor. The courses cover a variety of topics concerning the biochemistry, morphology, and physiology of atherosclerosis. Emphasis on the chemistry of lipoproteins and the role of plasma lipoproteins in the regulation of tissue lipid metabolism and the development of atherosclerosis. Each course may be taken independently for credit.

265. Seminar in the Biochemistry of Nucleic Acids (2 units). Lecture or recitation, one hour. Prerequisite: course M257 or consent of instructor. Biochemistry and chemistry of nucleic acids and nucleotides.

Mr. Glitz

266A-266B-266C. Seminar in the Biochemistry of Differentiation (2 units each). Lecture or recitation, one hour. Prerequisite: consent of instructor. A review of the current literature in the areas of specific expression of function and control of enzyme synthesis; metabolism in developing systems; and the control of gene expression pertaining to the biochemical development of atherosclerosis. Mr. Harary, Mr. Herschman

M267. Macromolecular Metabolism and Subcellular Organization (6 units). (Same as Chemistry M267.) Lecture or recitation, five hours. Prerequisites: courses 101A-101B or 201A-201B or Chemistry 157A and 157B, or equivalent. Recommended: course M253. Metabolism of nucleic acids and proteins; biosynthesis of complex lipids and polynucleotides; structure and properties of cellular organelles. Mr. Martinson (W)

M268. Developmental Biochemistry (2 units). (Same as Chemistry M268.) Prerequisite: course M267 or consent of instructor. Biochemical aspects of development, specific tissue and cell function, and differential gene expression. The biochemistry of cell division, macromolecular synthesis, chromatin function in gene expression, cell-cell interactions, membrane organization, and growth are studied as they contribute to such topics as hormone induction, morphogenesis, and differentiation. Emphasis on the use of differentiating in vivo systems and cell culture models. Mr. Harary, Mr. Herschman

M298. Seminar on Current Topics in Molecular Biology (2 units). (Same as Biology M298, Chemistry 298, Microbiology and Immunology M298, and Molecular Biology M298.) Discussion, one hour. Prerequisite: consent of instructor and graduate adviser of interdepartmental Molecular Biology Ph.D. committee. Each student conducts or participates in discussions on assigned topics. May be repeated for credit.

596. Directed Individual Study and Research (2 to 12 units). Laboratory, to be arranged. Prerequisite: consent of graduate adviser. S/U grading.

597. Preparation for Examinations (2 to 4 units). Prerequisite: consent of graduate adviser. Individual study for Ph.D. qualifying examinations or M.S. comprehensive examination. S/U grading.


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 various needs of researchers desiring supplemental biomathematical training, people preparing to provide methodological support to researchers in biology or medicine, or students pursuing a stepwise approach to graduate training in biomathematics.

Requirements for Graduate Degrees

Admission

High academic achievement in one scientific or mathematical field is required. It is not necessary to be proficient in both mathematics and biology, though some prior preparation in both fields is desirable. Both the Aptitude and Advanced Tests of the Graduate Record Examination (GRE) should be taken. At least three letters of recommendation are required from faculty competent to evaluate your qualifications for pursuing graduate study and a creative research career; additional letters are welcomed and may be requested.

In addition to completing the Graduate Admissions Office application forms, you are required to complete a departmental application form, which should be sent directly to the department. All communications with the department, including requests for brochures and forms for the departmental forms, should be sent to the Chair, Graduate Admissions Committee, Department of Biomathematics, AV-617 CHS, UCLA, Los Angeles, CA 90024.

You are admitted to either program after you have achieved admission to the Graduate Division and have been approved by the departmental graduate admissions committee.

Master of Science Degree

Course Requirements

In fulfilling the University’s minimum requirement of nine courses, master’s candidates must complete at least five graduate-level courses in biomathematics, of which Biomathematics 201, 202, and 203 are required.

No more than two 596 courses may be applied toward the required nine courses, and none may be applied toward the graduate course requirement.

Thesis Plan

You generally are required to follow the comprehensive examination plan. Permission to undertake a thesis plan must be given by the departmental advisory committee, which must approve the thesis committee, as well as your plans for the thesis.

Comprehensive Examination Plan

A written comprehensive examination administered by a committee consisting of at least three faculty members appointed by the Chair, with approval of the advisory committee, covers material presented in your coursework. This is usually the written comprehensive examination for the doctoral program given during the summer, but in exceptional cases a special committee and written examination is provided.

Ph.D. Degree

Major Fields or Subdisciplines

Each student completes the requirements for a field of special emphasis in biology. Presently approved fields of special emphasis for which courses of study have been developed include genetics, immunology, neurosciences, pharmacology, and physiology. Others may be added in response to students’ requests.

Course Requirements

The following courses are required:

Biomathematics: 201, 202, 203, 204, and eight units from 205, 206, M207, 208, 209.

Mathematics: Five graduate courses from an approved list, with two substitutions possible if especially appropriate to your research field. (Consent may be given by the advisory committee at the time of admission to the program to count prior graduate courses for full or partial completion of this requirement.)

Biology: Courses required for the field of major biological emphasis.

Independent Research: Each student must take at least four units of Biomathematics 596 with a member of the Biomathematics Department each year prior to taking the written comprehensive examination. As you progress, there will be increasing emphasis on research and encouragement to publish. Failure to advance in capacity for independent, creative research is a primary indication for recommended withdrawal from the program.

The following courses are recommended:

Mathematics: By individual study or coursework, you should have strength in differential equations, probability and statistics, and real and complex analysis. Offerings in the Department of Mathematics are especially recommended.

Statistics: Additional training in biostatistics is highly recommended (see offerings in the School of Public Health).

Computer Methods: You must be a facile programmer and acquainted with numerical methods needed for your area of research. The numerical analysis sequence in the Department of Mathematics and computing courses in biomathematics are suggested.

Biology and Biological Chemistry: A broad background is expected, from molecular to organ-system levels. This probably will be provided in requirements for the field of major biological emphasis; supplemental coursework will be advised, if needed.

Teaching Experience

One teaching preceptorship (Biomathematics 596) is required. You participate fully in the planning and delivery of one course in the Biomathematics Department. The emphasis is on your training in all aspects of preparing for and offering a course; this is not a service-oriented teaching assistantship.

With consent of the advisory committee, a student who does not plan to pursue an academic teaching career may, for one quarter, participate at the level of one 596 course in the individual-instruction activities of a member of the department faculty (e.g., informal instruction of biomedical scientific collaborators, planning and guiding individual reading programs, developing and administering term projects in research).

Qualifying Examinations

In the summer, the department offers a written comprehensive examination to test your competence in biomathematics. Full-time students must take this by the end of two academic years of study and part-time students by the end of three.

The qualifying examination in the field of major biological emphasis usually will be the regular comprehensive examination for doctoral students in that field and is taken prior to the examination that advances them to candidacy. Students entering with a Ph.D. in a biological field are exempt from the above requirements. Students with an M.D. are exempt from the required coursework; exemption from the examination may be granted by joint action of the curriculum and advisory committees in consultation with advisers from the specialty area.

The University Oral Qualifying Examination, administered by the doctoral committee appointed by the Dean of the Graduate Division, critically probes the quality, scope, and feasibility of your proposed dissertation work. It explores the integration and strength of biomathematical, mathematical, and biological expertise in your intended area of research. You advance to candidacy after passing this examination.

Final Oral Examination

A final oral examination is required of all candidates and is a defense of the dissertation, administered by the doctoral committee.
Upper Division Courses

110. Elements of Biomathematics. Lecture, three hours; laboratory, three hours. Prerequisite: Calculus. Analysis of deterministic models. Conditions under which deterministic and probabilistic descriptions of biological phenomena are appropriate. Both approaches are applied to selected examples in physiology and biology. Mr. Engel (F) M153. Introduction to Computational Statistics. (Same as Mathematics M153.) Prerequisite: Mathematics 150C or 152B or equivalent. Statistical analysis of biological data by means of package programs. Review of experimental design, analysis of variance, discriminant analysis, and analysis of categorical data. Emphasis on understanding the connection between statistical theory, numerical results, and analysis of real data.

CM156. Human Genetics. (Formerly numbered M134.) (Same as Biology CM156.) Lecture, three hours; discussion, one hour. Prerequisites: Biology 8, Chemistry 25. The application of genetic principles in human populations, with emphasis on cytogenetics, biochemical genetics, population genetics, and family studies. Lectures and readings in the literature focus on current questions in the fields of medical and biological genetics. Computer-aided methods appropriate to answer such questions. Concurrently scheduled with course CM256.

Mr. Merriam, Ms. Spence (Sp) 170A-170B. Selected Biomathematical Topics for Researchers in Medicine and Biology. (Formerly numbered 170A-170B-170C.) Lecture, four hours; discussion, 90 minutes. Prerequisite for course 170A: elementary calculus. Basic techniques for examination of data, planning of experiments, comparison of procedures, and presentation and explanation of results (e.g., compartment, transport) are developed and used to illustrate the latter. Techniques include use of computer.

(F,W) 171A-171B. Selected Topics for Dental Researchers (2 units each). Instruction in critical and efficient reading of the dental literature, experimental designs, analysis of data using BMDP programs, and some basic modeling techniques. Review of modern biomathematical techniques in craniofacial research and other areas of interest to dentistry students. A prerequisite for graduate grading.

172. Design, Conduct, and Analysis of Clinical Investigations (2 units). Lecture, two hours (five weeks only); discussion, two hours (five weeks only). Topics to include methods of bringing a possible clinical cure to clinical use; design of studies in animals to assess antitumor response; randomization, historical controls, p-values, size of study, stratification, and points; ethics of human experimentation; informed consent; three phases of human studies; indications for various types of controls, prognostic factors, survivorship studies, design of prognostic studies; organization of a clinical trial—administration, comparability, protocols, nursing and clinical standards, data collection and management. P/NP grading.

Mr. Elashoff (Sp) 190HA-190HB. Honors Research in Biomathematics. Prerequisites: upper division standing, consent of instructor and the department chair. Individual research in some aspect of biomathematics designed to acquaint the student in depth with mathematical models and computer applications in biology. Must be taken for at least two quarters and for a total of at least eight units. A thesis is required.

Ms. Spence (F,W,Sp) 199. Special Studies in Biomathematics (2 to 8 units). Prerequisites: upper division standing, consent of instructor. Special studies in biomathematics, including data by means of package programs. Comments on laboratory work or both, designed for appropriate training of students.

Graduate Courses

200. Research Frontiers in Biomathematics (2 units). Prerequisite: consent of instructor. A series of presentations by the faculty on research frontiers in biomathematics.

201. Deterministic Models in Biology. Prerequisite: knowledge of linear algebra and differential equations. The conditions under which deterministic approaches can be employed are examined, as are conditions where they may be expected to fail. Topics include compartmental analysis, enzyme kinetics, physiological control systems, and cellular/animal population models.


Mr. Lange (Sp) 203. Stochastic Models in Biology. Prerequisite: Mathematics 150A or equivalent experience in probability. The mathematical description of biological relationships, with particular attention to areas where the conditions for deterministic models are inadequate. Examples of stochastic models drawn from genetics, physiology, ecology, and a variety of other biological and medical disciplines.

Mr. Lange (W) 204. Biomedical Data Analysis. Prerequisite: consent of instructor. The quantity and quality of observations have been greatly affected by the present-day extensive use of computers. The course is a problem-oriented study of the latest methods in statistical data analysis and the use of such arising in laboratory and clinical research.

Mr. Dixon (Sp) 205. Electric Potential Problems in Membranes, Cells, and Tissues. Prerequisite: knowledge of differential equations and electrostatics, or consent of instructor. Review of electrostatics; potential problems in rectangular, spherical, and cylindrical coordinates; modeling subthreshold electrical properties of cells; microelectrode measurements 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 syncytia; computation of potential barriers for ions traversing a membrane pore.

Mr. Peskoff (Sp) 206. Modeling of Cellular Systems (2 to 4 units). Students who can contribute to the class either as biologists or theoreticians may attend. Expected performance is based on each individual's background. Study of recently reported characterizations of differentiating systems, flow cytometry, etc. Deterministic, stochastic, and computer simulation models are developed from simple dividing systems through special cell populations. Biological assumptions, indications for various approaches, and relationships to laboratory research and clinical applications are emphasized.

Ms. Newton (W) M207. Modeling in Genetic Analysis. (Same as Anthropology M222R.) Lecture, three hours. Prerequisites: Anthropology M222 and graduate standing, or consent of instructor. Basic concepts of human genetics, with emphasis on methods of computer-oriented genetic analysis. Topics include segregation analysis, genetic linkage, polygenic (quantitative) models, and population structure.

Ms. Spence (F) 208. Modeling and Analysis of Neuroelectric Data. Designed for biologists (especially neuroscientists), but open to other theoreticians. Mathematical approaches for modeling and developing neural theory are applied to basic neurophysiological phenomena and neural models. Appropriate practical approaches are also presented. (Sp) 209. Problems in Fluid and Electromyelc Management (2 units). Prerequisites: biochemistry, physiology, Fortran equivalent. Principles of fluid and electrolyte balance and acid-base chemistry. The course begins with a brief review of fluid and electrolyte metabolism in general, followed by an in-depth study of clinical and physiological experiments. Pace is rapid and subjects biologically oriented. Not recommended for students who merely wish an introductory course in the subject. Prerequisites: knowledge of computers is not required even though the programming skills that are attained by the end of the quarter are quite substantial.

210. Introduction to Biomedical Computation. Lecture, three hours; laboratory, three hours. Prerequisite: graduate standing. An introduction to Fortran programming, with a survey of biomedical computer applications. Basic computer techniques and their use in clinical and physiological experiments. Pace is rapid and subjects biologically oriented. Not recommended for students who merely wish an introductory course in the subject. Prerequisites: knowledge of computer programming is not required, even though the programming skills that are attained by the end of the quarter are quite substantial.


Mr. Landaw (W) M230. Computed Tomography: Theory and Applications. (Same as Radiological Sciences M230.) Prerequisite: consent of instructor. Computed tomography is a three-dimensional imaging technique being widely used in radiology and is becoming an active research area in biomedicine. The course covers basic principles of computerized tomography (i.e., various reconstruction algorithms, special characteristics of CT, physics in CT, and various biomedical applications).

Mr. S. Huang (W) M231. Special Topics: Statistical Methods for Categorical Data. (Same as Public Health M231.) Lecture, three hours; discussion, one hour. Prerequisites: Public Health 100B or 101B, Mathematics 150C or 152B, or equivalent, consent of instructor. Statistical techniques for the analysis of categorical data, including discussions of the applications and limitations.
M232. Statistical Analysis of Incomplete Data. (Same as Public Health M202F.) Lecture, three hours; laboratory, one hour. Prerequisites: Public Health 100B or 101B, Mathematics 150C or 152B, or equivalent; consent of instructor. The course discusses the statistical analysis of incomplete data sets. Material is taken from the 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 the methods to applied problems, as well as on the underlying theory. S/U or letter grading. Mr. Little (Sp)

M233. Simultaneous Statistical Inference. (Same as Public Health M202G.) Lecture, three hours; discussion, one hour. Prerequisites: Mathematics 150C, Public Health 200C, M205A. Methods and theory of simultaneous statistical inference. Prerequisite: consent of instructor. The course discusses the equivalent, statistical models and statistical methods in maximum likelihood methods for estimating genetic parameters are introduced and discussed in detail. Mr. Read (W)

442 / Biomathematics / SCHOOL OF MEDICINE

295. Supervised Statistical/Biomathematical Consulting (2 to 8 units). Prerequisites: consent of instructor; two graduate-level courses (six units) in biomathematics, biostatistics, or applied statistics; prior experience using computer programs to manage and analyze data. Hands-on experience with data management, modeling, and statistical analysis problems in actual consulting in biomedical and other research areas. Development of skills in formulating analytic problems, choosing techniques, managing data, executing analyses, interpreting results, and preparing reports. S/U or letter grading. Ms. Wheeler and the Staff (W)

596. Directed Individual Study or Research in Biomathematics (2 to 12 units). Individual study on topics not yet covered by the offerings of the department. May be repeated for credit with topic change. (F,W,Sp)

597. Preparation for M.S. or Ph.D. Comprehensive Exam or Ph.D. Qualifying Examinations (2 to 8 units). Prerequisite: consent of graduate adviser. Individual study. S/U grading. (F,W,Sp)

Microbiology and Immunology

43-239 Center for Health Sciences, 825-5661

Professors
Benjamin Bonavida, Ph.D. (Immunology)
John L. Farey, M.D. (Immunology)
Sydney M. Finegold, M.D., in Residence (Bacteriology)
Sidney H. Golub, Ph.D., in Residence (Immunology)
Marcus A. Horwitz, M.D. (Bacteriology)
Dexter H. Howard, Ph.D. (Mycology)
David T. Imagawa, Ph.D. (Virology)
James N. Miller, Ph.D. (Bacteriology)
Dabi P. Nayak, D.V.Sc., Ph.D. (Virology)
George R. Riviere, D.D.S., Ph.D. (Immunology)
Jack G. Stevens, D.V.M., Ph.D. (Virology), Chair
Jerrod A. Turner, M.D. (Parasitology)
Randolph Wall, Ph.D. (Molecular Biology)
Felix O. Wettstein, Ph.D. (Molecular Biology)
Tedford H. Work, M.D., M.P.H., D.T.M.H. (Virology)
Ruth A. Boak, M.D., Ph.D., Emeritus
David M. McCracken, M.D., Emeritus
Margaret S. Sellers, Ph.D., Emeritus
Henry E. Weimer, Ph.D., Emeritus
Stephen Samet, M.D., Emeritus

Associate Professors
Asim Dasgupta, Ph.D. (Virology)
Ronald H. Stevens, Ph.D. (Immunology)
Jacob Ziegelboim, M.D. (Immunology)

Assistant Professors
Rafi Ahmed, Ph.D. (Virology)
John Bramhall, Ph.D. (Immunology)
Lawrence T. Feldman, Ph.D. (Virology)
Michael Lovett, M.D., Ph.D. (Bacteriology)
Virginia Scofield, Ph.D. (Immunology)

Lecturers
Margery L. Cook, Ph.D. (Virology)
Nina Dabrowa, Ph.D. (Mycology)
Maureen L. White, Ph.D. (Bacteriology)

Adjunct Associate Professor
George Fareed, M.D. (Molecular Biology)
Scope and Objectives

The desire to explain natural phenomena, including disease, is the basis for most students' interest in biological sciences. The Microbiology and Immunology Department in the UCLA School of Medicine is disease oriented. The emphasis is on pathogenesis of infection, malignancy, and immunological response of the host to these changes of immunological dysfunction. All tools available from molecular biology to morphological methods are applied to these problems.

Microbiology and immunology are interwoven disciplines. Microbiology has played a central role in all aspects of biological sciences, including morphogenesis, genetics, developmental biology, physiology, biochemistry, and cell biology. An understanding of microbiology is thus fundamental to biological research. Immunology, once a branch of microbiology, is now a major biological discipline and a basic component of disease-oriented microbiology.

The graduate program in microbiology and immunology is closely associated with advanced (postdoctoral) training in research, clinical and public health diagnostic work, and industrial applications. Careers in microbiology and immunology include industrial appointments and clinical laboratory supervision in both government agencies and private enterprises and academic positions.

Master of Science Degree

The department does not accept students whose sole objective is a master's degree.

Ph.D. Degree

Admission

In addition to the University minimum requirements, the following are required:

1. A bachelor's degree with a major in either the biological or physical sciences.
2. At least a B+ in chemistry, physics, and mathematics; at least a B average in biology (upper division and prior graduate study).
3. Three favorable letters of recommendation.
4. Graduate Record Examination (GRE) general test and subject test in biology.
5. Acceptable statement of purpose.
6. An interview with members of the department graduate student committee when indicated.

For departmental brochures and/or application forms, write to the Graduate Student Office, Department of Microbiology and Immunology, 43-204 CHS, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

You are expected to be competent in both microbiology and immunology. However, you must do your thesis work in one of the following divisions: immunology, medical microbiology, or virology.

Foreign Language Requirement

There is no foreign language requirement for the degree.

Course Requirements

(1) Microbiology and Immunology 202A, 202B, 202C, 202D are required and must be completed during your first year of study.
(2) Course 596 is required. You complete a laboratory rotation program during your first year of study.
(3) Courses M258A and M258B are required.
(4) Biological Chemistry M253 and six additional units of graduate biochemistry (Biological Chemistry M267 is recommended) are required.
(5) Additional course requirements are determined by your major field and your major professor.

Teaching Experience

Teaching assignment in one laboratory section of Microbiology and Immunology 201, M212, or another laboratory course presented by the department is required.

Qualifying Examinations

The departmental written qualifying examination is to be taken at the end of your first year of graduate study. The examination consists of a three-hour written test in your major (immunology, medical microbiology, or virology) and two three-hour tests in two additional minor field topics selected from bacteriology, genetics, immunology, molecular biology, mycology, parasitology, and virology. The examinations require factual knowledge, the ability to analyze experimental work, and the capacity to design problem-solving experiments and are graded on a pass/fail basis. Each examination is separately scheduled at the end of your first year and may be repeated once if failed.

You have the option of completing the University Oral Qualifying Examination by the end of either the second year (Plan I) or the third year (Plan II). Advancement to candidacy is awarded after successful completion of this examination. If inadequacies are encountered, you may be required to repeat the examination, in which case Plan II becomes mandatory.

Plan I (passed within 24 months) includes the preparation and defense of a research proposal (the topic will be the same as the research that you intend to use as your thesis work) and the demonstration of general knowledge of microbiology and immunology.

Plan II (passed within 36 months) includes the preparation and defense of a research proposal (the topic will be in a different area and will use a different approach from that of your thesis project and research, but within the fields of interest in the department), an explanation of the research and results, and the demonstration of general knowledge of microbiology and immunology.

The details of the dissertation requirement are supervised by your professor and doctoral committee. The dissertation will demonstrate an original and independent contribution to scientific knowledge acceptable for publication in a major scientific journal and presented in the University-required format.

Final Oral Examination

The final oral examination is optional with the doctoral committee. However, you are required to present a special seminar based on your dissertation.

Upper Division Courses

M185. Immunology. (Same as Biology M185 and Microbiology M185) Lecture, three hours; discussion, one hour. Prerequisites: Biology 8, Microbiology 251, and Chemistry 23, 25. Recommended corequisites: Chemistry 152 or 156. Introduction to experimental immunobiology and immunohemochromatography; cellular and molecular aspects of humoral and cell immune reactions.
Mr. Clark, Mr. Sercarz (W)

M186. Experimental Design in Immunology. (Same as Biology M186 and Microbiology M186) Laboratory, twelve hours. Prerequisites: course M185, consent of instructor. Corequisites: course M187. The course focuses on a limited number of situations designed to train the student in organizing and evaluating immunological laboratory experiments.
Mr. Clark, Mr. Sercarz (W)

M187. Immunology Seminar (2 units). (Same as Biology M187 and Microbiology M187) Prerequisites: course M185, consent of instructor. Corequisites: course M186. Student presentation of selected papers from the immunology literature. Designed to serve as a forum for the critical analysis of research papers.
Mr. Clark, Mr. Sercarz (W)

M188. Immunological Techniques (2 units). (Same as Microbiology M188.) Prerequisites: course M185 with a grade of A, consent of instructor. Techniques in immunochromatography and immunobiology. State of the art advanced technology for performance of experiments in modern immunology in a workshop format. Each workshop is of approximately two full days duration.
Mr. Sercarz (W)

190. Directed Individual Research Studies in Microbiology and Immunology (2 to 8 units). Prerequisites: senior standing, consent of instructor (based on written research proposal). Individual research projects carried out under direction of a professor.

Graduate Courses

Undergraduates may enroll in some graduate courses by consent of instructor.

201. Microbiology and Immunology (8 units). Lecture/laboratory. Limited to medical students. Study of infectious agents of human disease, with emphasis on host-parasite relationships and immunologic phenomena in immunity and disease, including identification of bacteria, fungi, animal parasites, and viruses, and principles of prevention, treatment, and laboratory diagnosis.
202A. Fundamentals of Immunology (2 units).
Prerequisite: consent of instructor. Introduction to the general immunology and immunopathology; cellular and molecular aspects of humoral and cell-mediated immune functions.

(F, first weeks in September)

202B. Medical Bacteriology (2 units).
Prerequisite: consent of instructor. Characteristics of bacteria including disease and pathogenicity of various bacteria and of humans; host-parasite interactions and immunity; identification and laboratory diagnosis; principles of prevention and treatment; introduction to microbial genetics as it pertains to pathogenicity.

202C. Medical Virology (2 units).
Prerequisite: consent of instructor. Biological properties of animal viruses; replication; methods of detection; interactions with host cells and multivalvular hosts, introduction to tumor viruses. (F)

202D. Medical Mycology and Parasitology (2 units).
Prerequisite: consent of instructor. Morphology, physiology, and pathogenicity of the fungi which cause human and animal diseases. Study of the morphology, biology, host-parasite relationship, public health problems, and control of protozoa, helminths, and arthropods parasitic in and on humans and animals. (F)

M206. Secretory and Gastrointestinal Immunity (2 units). (Same as Oral Biology M206.) The anatomy and physiology of the GI tract, the intestine, and the related lymphatic and blood vascular systems are reviewed in relation to the immune system. The secretory and systemic immune systems are discussed in relation to the development of unique properties of SIgA. The ability to process enteric antigens, to respond, and to regulate enteric immunity is discussed in terms of recent experimental findings. The role that enteric immunity may play in diseases of the GI tract, such as dental caries, (F) inflammatory bowel diseases, is presented. Students participate in discussions following each lecture and present seminars based on a review of the relevant scientific literature.

Mr. Riviere (Sp, alternate years)

208. Molecular Biology of Animal Viruses. Lecture, three hours. Prerequisites: courses in general biochemistry and general microbiology, including virology (consent of instructor: may be obtained in special cases). Recommended: recommended for advanced undergraduates with a major in public health, biology, or microbiology and for graduate students with an interest in any field of biology or chemistry. The course emphasizes the basic molecular and cellular viral biology. Topics include recent experimental results on the organization, expression, and regulation of genes in eukaryotic cells. S/U or letter grading. Mr. Feldman (W)

251. Seminar in Microbiology and Immunology (2 units). Consideration of the history of infectious diseases, host-parasite relationships, etiology, immunology, epidemiology, diagnosis, and immunity. S/U or letter grading. Mr. Howard (W)

252. Seminar in Viral Pathogenesis (2 units).
Prerequisites: course 201 and Microbiology 102, or equivalent. Emphasis on the relationship between structure and function in viral infection. May be repeated for credit.

Mr. Bramhall

250. Cell and Molecular Biology. Lectures and student seminar presentations. A review of selected current topics in molecular and cellular biology. Topics include recent experimental results on the organization, expression, and regulation of genes in eukaryotic cells. S/U or letter grading. Mr. Feldman (W)

254. Immunogenetics (2 units). Review of current literature in the field of immunogenetics, with emphasis on fundamental studies involving gene expression in immunological and molecular biological methods.

Mr. Stevens (F)

262. Seminar in Immunobiology of Cancer (2 units).
Prerequisite: consent of instructor. Review of recent literature in the fields of immunology, biology, and pathology related to the study of cancer. Emphasis on experimental studies involving cell-mediated immunity, humoral response, tumor specific antigens, and new techniques. Reports on scientific meetings are discussed and evaluated. S/U or letter grading.

Mr. Bonavida (W)

M263. Cellular Immunology Seminar (2 units).
(Same as Microbiology M263.) Prerequisite: consent of instructor. Critical discussions of the current literature in T and B cell immunology, with emphasis on molecular mechanisms.

Mr. Sercarz (F, W, Sp)

264. Molecular Microbiology and Cell Biology (2 units).
Prerequisites: courses 202A, 202B, 202C, 202D, and 250, or consent of instructor. Discussion of selected current topics related to molecular biology and cell biology, with special emphasis on an understanding of the basic phenomena at the molecular level. S/U or letter grading.

Mr. Wettstein (F)

265. Co-Seminar in Molecular Biology of Animal Viruses (2 units).
Prerequisites or corequisites: course 208, consent of instructor. Critical review and analysis of selected papers in the field. Topics include structure and biology of animal viruses and virus-host interaction at the cellular and molecular level.

Mr. Neyak (Sp)

M257. Seminar in Host-Parasite Relationships (2 units).
(Same as Microbiology M257.) Prerequisite: consent of instructor. Recent advances in our understanding of the interaction of host-parasite interactions and means of controlling the parasites.

Mr. Miller (Sp)

M258A. Advanced Immunology (3 units).
(Same as Biology M250A and Microbiology M258A.) Lecture, 90 minutes; discussion, 90 minutes. Prerequisites: courses M185 or 202A or equivalent, and consent of instructor. The course is designed to provide continuity between the basic immunology courses and the original research literature. The major aspects of the immune system are intensively examined, with emphasis on fundamental principles and on advances of the past five years. Featured are lectures dealing with the development of B and T lymphocytes, the interaction of these two lymphocyte subpopulations in the production of immunoglobulin, and cell-mediated immunity. S/U or letter grading.

W

M258B. Advanced Immunology (3 units).
(Same as Biology M250B and Microbiology M258B.) Lecture, 90 minutes; discussion, 90 minutes. Prerequisites: courses M185 or 202A or equivalent and M258A, or consent of instructor. A continuation of course M258A which considers the fields of immunology, clinical medicine, surface membrane receptors, and lymphokines. S/U or letter grading.

Mr. Sercarz (F, W, Sp)

M260. Immunology Forum (2 units). (Same as Microbiology M260.) Prerequisite: course M185. A broad range of current topics in immunology is presented and discussed at an advanced frontier level. This is a continuing UCLA-wide, general graduate-level course. Recommended attendance by graduate students in diverse departments: S/U or letter grading.

Mr. Golub (Sp, alternate years)

262. Seminar in Immunobiology of Cancer (2 units).
Prerequisite: consent of instructor. Review of recent literature in the fields of immunology, biology, and pathology related to the study of cancer. Emphasis on experimental studies involving cell-mediated immunity, humoral response, tumor specific antigens, and new techniques. Reports on scientific meetings are discussed and evaluated. S/U or letter grading.

Mr. Bonavida (W)

M263. Cellular Immunology Seminar (2 units).
(Same as Microbiology M263.) Prerequisite: consent of instructor. Critical discussions of the current literature in T and B cell immunology, with emphasis on molecular mechanisms.

Mr. Sercarz (F, W, Sp)

264. Molecular Microbiology and Cell Biology (2 units).
Prerequisites: courses 202A, 202B, 202C, 202D, and 250, or consent of instructor. Discussion of selected current topics related to molecular biology and cell biology, with special emphasis on an understanding of the basic phenomena at the molecular level. S/U or letter grading.

Mr. Wettstein (F)

265. Co-Seminar in Molecular Biology of Animal Viruses (2 units).
Prerequisites or corequisites: course 208, consent of instructor. Critical review and analysis of selected papers in the field. Topics include structure and biology of animal viruses and virus-host interaction at the cellular and molecular level.

Mr. Neyak (Sp)

M257. Seminar in Host-Parasite Relationships (2 units).
(Same as Microbiology M257.) Prerequisite: consent of instructor. Recent advances in our understanding of the interaction of host-parasite interactions and means of controlling the parasites.

Mr. Miller (Sp)

M258A. Advanced Immunology (3 units).
(Same as Biology M250A and Microbiology M258A.) Lecture, 90 minutes; discussion, 90 minutes. Prerequisites: courses M185 or 202A or equivalent and M258A, or consent of instructor. The course is designed to provide continuity between the basic immunology courses and the original research literature. The major aspects of the immune system are intensively examined, with emphasis on fundamental principles and on advances of the past five years. Featured are lectures dealing with the development of B and T lymphocytes, the interaction of these two lymphocyte subpopulations in the production of immunoglobulin, and cell-mediated immunity. S/U or letter grading.

W

M258B. Advanced Immunology (3 units).
(Same as Biology M250B and Microbiology M258B.) Lecture, 90 minutes; discussion, 90 minutes. Prerequisites: courses M185 or 202A or equivalent and M258A, or consent of instructor. A continuation of course M258A which considers the fields of immunology, clinical medicine, surface membrane receptors, and lymphokines. S/U or letter grading.

Mr. Sercarz (F, W, Sp)

M260. Immunology Forum (2 units). (Same as Microbiology M260.) Prerequisite: course M185. A broad range of current topics in immunology is presented and discussed at an advanced frontier level. This is a continuing UCLA-wide, general graduate-level course. Recommended attendance by graduate students in diverse departments: S/U or letter grading.

Mr. Golub (Sp, alternate years)
270. Immunology in Disease (2 units). Lecture, one hour; discussion, one hour. Prerequisite: basic immunology. Introduction to the role of immune processes in disease for students with prior knowledge of basic immunology. Topics include immunodeficiency, immediate hypersensitivity reactions, autoimmune disease, and immune complex-mediated diseases, together with transplantation immunology, tumor immunology (the role of immunity in infection). Students prepare a 20- to 30-minute presentation on a selected topic.
Mr. Fashey (W, alternate years)

271. Research Seminar in Virology (2 units). Prerequisite: consent of instructor. Selected topics in virology, including viral structures, virus-host interaction, and regulation of viral and host gene expression, are presented and discussed in depth.

Mr. Nayak (Sp)

M282. Major Histocompatibility Complexes: Genetics, Biochemistry, and Biology (2 units). (Same as Biology M282.) Lecture, one hour; discussion, one hour. Prerequisites: course M185 or equivalent, genetics, biochemistry. Lectures and discussions of key papers underlying the present concepts of MHC structure and function. Emphasis on the murine MHC (H-2), but where appropriate and illustrative, the human MHC is discussed.
Mr. Clark (W)

M293. Major Concepts in Oncology. (Same as Oral Biology M293 and Pathology M293.) Lecture, three hours. Prerequisite: graduate standing or consent of instructor. Designed for graduate students contemplating research in oncology. Topics include cancer pathophysiology, genetics, membranes, macromolecular synthesis and control, cell cycle, growth control, physical, chemical, and viral oncogenesis, epidemiology of cancer, tumor immunology: principles of cancer surgery, radiation therapy, and chemotherapy. S/U or letter grading.

Mr. Hankinson, Mr. Seege (W)

M296. Seminar on Current Topics in Molecular Biology (2 units). (Same as Biological Chemistry M296, Biology M296, Chemistry M299, Microbiology M298, and Molecular Biology M298.) Discussion, one hour. Prerequisite: consent of instructor and graduate adviser of interdepartmental Molecular Biology Ph.D. committee. Each student conducts or participates in discussions on assigned topics. May be repeated for credit.

496. Directed Individual Study or Research (2 to 8 units). Laboratory, to be arranged. Prerequisite: consent of graduate adviser. S/U grading.

497. Preparation for Ph.D. Qualifying Examinations (2 to 6 units).

499. Research for and Preparation of Ph.D. Dissertation (2 to 12 units). Research on an original problem in the field of microbiology and immunology to be selected by the graduate student with the advice of the adviser. Fields of study may be in bacteriology, immunology, mycology, parasitology, virology, tumor biology, or cell biology.

Molecular Biology (Interdepartmental)
The Ph.D. degree program in Molecular Biology draws its staff members from participating departments in the health and life sciences and from the Molecular Biology Institute. For details on this interdisciplinary program, see Chapter 5 on the College of Letters and Science.

Neurology
1-239 Reed Neurological Research Center, 825-5647
Acting Chair
Robert W. Baloh, M.D.

Vice Chairs
Mark A. Goldberg, M.D., Ph.D., in Residence (Harbor-UCLA)
Christian Herrmann, Jr., M.D.
Wallace W. Tourtellotte, M.D., Ph.D., in Residence (Wadsworth VA)
Claude G. Wasterlain, M.D., in Residence (Sepulveda VA)

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 coordinated basic science and a 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 clinical examination of the normal nervous system; in the second year, neurological history taking and neurological examination of afflicted patients are stressed. The third year consists of a clerkship at an affiliated hospital, and the fourth year provides electives in neurology, including an advanced clinical clerkship.

For further details on the Department of Neurology and a listing of the courses offered, see the Announcement of the UCLA School of Medicine.

Neuroscience (Interdepartmental)
73-346 Center for Health Sciences, 825-8153

Professors
Larry L. Butcher, Ph.D. (Psychology), Chair
Garmine D. Clemente, Ph.D. (Anatomy)
Samuel Eiduson, Ph.D., in Residence (Psychiatry and Biological Chemistry)
Ronald M. Harper, Ph.D. (Anatomy), Vice Chair
Michael T. McGuire, M.D. (Psychiatry)

Richard W. Olsen, Ph.D. (Pharmacology)
Stephen Zamenhof, Ph.D., Emeritus (Microbiology and Immunology)

Associate Professors
Michael S. Letinsky, Ph.D. (Physiology)
Peter M. Narins, Ph.D. (Biology)

Scope and Objectives
Few research fields have greater potential and importance to mankind than neuroscience. The brain is responsible for every human thought, emotion, action, and accomplishment. It is a miraculous organ which orchestrates and paces human maturation; permits us to learn, remember, reason, and behave as we do; and coordinates the function of every other organ and structure in the body.

To understand this complex organ completely is, perhaps, an unapproachable objective since it is the principal organ responsible for mankind's evolution and is itself constantly evolving. Yet, basic questions relating to neural function and dysfunction are approachable, and the solutions to many human neurological and psychiatric disorders can be achieved only through brain research.

The interdisciplinary program of graduate training leading to the Ph.D. in Neuroscience utilizes facilities, resources, and activities of the Brain Research Institute and is administered by an interdepartmental degree committee.

Ph.D. Degree

Admission
All applicants must satisfy the University minimum requirements. In addition, Graduate Record Examination (GRE) or Medical College Admission Test (MCAT) scores are required. Recommended preparation includes mathematics through calculus and at least one year each of general chemistry, organic chemistry, physics, and basic biology. Three letters of recommendation are required.

Information regarding the program may be obtained by writing to the Neuroscience Office, 73-346 CHS, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines
Biobehavioral sciences; neuroanatomy; neurochemistry; neurocybernetics and communication; neuroendocrinology; neuroimmunology; neuropathology; neuropharmacology; neurophysiology.

Foreign Language Requirement
The program does not have a language requirement but does have a breadth requirement which can be satisfied in one of the following ways:

1. Passing the Graduate School Foreign Language Test in one of the approved languages (French, German, or Russian) with a score of
Course Requirements
Basic course requirements include Anatomy M206A, M206B, Biological Chemistry 201A-201B, Biology 166, 171, Neuroscience 233, 254, and electives and lab rotations as determined in consultation with your adviser.

Substitutions to the basic requirements may be made depending on your background and with the consent of the graduate adviser. You are expected to complete the core courses within your first two years of study.

Teaching Experience
Teaching experience is not required for the degree. However, such experience is obtained by virtually all students in Neuroscience 233, which is required.

Qualifying Examinations
A written qualifying examination is required following completion of the core requirements. The objective of this examination is to test your basic knowledge and ability to relate knowledge from different neuroscience areas, to locate and interpret literature, and to apply research problems.

After passing the written qualifying examination, you and your adviser select your doctoral committee to administer the University Oral Qualifying Examination, which is normally taken after the written qualifying examination and the breadth requirements have been completed.

When you have passed the oral examination, you are advanced to candidacy and may begin work on the dissertation.

Final Oral Examination
The final oral examination is optional with your doctoral committee.

Graduate Courses
200A-200B-200C. Clinical Concepts in the Neurosciences (2 units each). Presents information concerning neurological and psychiatric disorders for students from basic science backgrounds.

250A-M210A-M210C. The Functional Organization of Behavior (2 units each). (Same as Psychiatry M210A-M210B-M210C.) Prerequisite: consent of instructor. Course M201A is prerequisite to M210B, which is prerequisite to M210C. M210A is introductory and focuses on the development of behaviors within different species and the functional uses of behaviors. An evolutionary biological perspective is used as the framework. M210B focuses on research studies designed to take into account the functional behavior of animals. M210C focuses on specific questions of interest to students.

Mr. Edelson, Mr. McGuire, Mr. Woody (F, W, Sp)

M204. Structure and Function of the Limbic System (2 units). (Same as Neurology M204.) Prerequisite: consent of instructor. Current knowledge of the mammalian limbic system is presented by surveying studies of its developmental anatomy, intrinsic synaptic organization, synaptic chemistry, afferent and efferent circuits, and dysfunctions in memory and cognition associated with limbic system function. The course is designed primarily to present normal limbic system structure and functions.

Mr. Babu

205. Brain-Behavioral Strategies for the Neurosciences (3 units). Prerequisite: consent of instructor. Emphasis is placed on the ways in which methods, and instruments employed to test specific neurological afferent-efferent and integrative systems of the central nervous system. The programming of signals and incentives in arousal, habituation, classical conditioning, and operant conditioning paradigms is discussed in terms of the neural challenges for the coping animal. Behavioral methods are emphasized, along with concurrent recording of neurophysiological data. The course is designed primarily to present practical behavioral techniques in neuroscience students.

Mr. McGuire, Mr. Woody

M206A. Neurosciences: The Introductory Course for Graduate Students (5 units). (Same as Anatomy M205A.) Lecture, four hours; laboratory/demos, three hours. Prerequisites: a college-level course in biology or zoology, some familiarity with the subject of electrophysiology and current interest and attitudes towards scientific research. The course is designed to provide an overview of the fields of study in neuroscience to current graduate students in relevant disciplines and as background for more advanced courses for students specializing in the neurosciences.

Mr. Decima, Mr. Scheibel, Mr. Segundo (W)

M206B. Neurosciences: The Intermediate Course for Graduate Students (7 units). (Same as Anatomy M205B.) Lecture, six hours; laboratory, two hours; tutorial contacts. Prerequisites: course M206A or 103A-103B, or equivalent, consent of instructor. The course is designed to provide an overview of the fields of study in neuroscience to current graduate students in relevant disciplines and as background for more advanced courses for students specializing in the neurosciences.

Mr. Decima, Mr. Scheibel, Mr. Segundo (Sp)

M210A-M210B-M210C. Functional Neurophysiology. (Same as Physiology M215A-M215B-M215C.) Seminar, three hours. Prerequisites: consent of instructor. Current knowledge of gut and brain peptides is presented as the framework of the course. Different control functions in the gut and brain are discussed. In addition, current information about the functional organization of the gut and brain peptides is presented by surveying their chemical properties and functional organization. The subject matter serves to broaden the experience of students studying in fields other than that of the lecturer and offers new information in depth from students in fields closely related to the subject discussed.

Survey of the Basic Neurological Sciences (2 units each). Summary information concerning methodologies utilized in different research approaches to brain study (e.g., neurophysiology, neuroendocrinology, brain ultrastructure, neuropharmacology, and others) and brief review of present state of knowledge available from each. For students with interest in interdisciplinary aspects of brain research.

Muzsmai (W)

596. Directed Individual Study or Research (2 to 12 units). Prerequisite: consent of instructor.

597. Preparation for Ph.D. Qualifying Examination (2 to 12 units). Prerequisite: consent of instructor.

599. Dissertation Research for Ph.D. Candidates (4 to 12 units). Designed for students requiring special instruction or time to work on dissertation.

Mr. Edelson

Obstetrics and Gynecology

22-154 Center for Health Sciences, 825-5688

Chair
J. George Moore, M.D.

Vice Chairs

Scope and Objectives
The undergraduate program in obstetrics and gynecology is designed to teach students the physiology of women in infancy, childhood, adolescence, and adulthood, an understanding of ovarian and uterine function during the menstrual years, experience in the management of obstetric deliveries, and an understanding of the...
changes in the postmenopausal years. The program includes experience in the management of normal and pathological obstetrical conditions, the anatomical and physiological variants following childbirth, and gynecological abnormalities not necessarily related to reproduction.

Students work on the wards and in the outpatient clinic during the third year, with clinical experience continuing during the fourth year in the advanced clinical clerkship.

The program in graduate medical education in obstetrics and gynecology includes a four-year course of instruction. Subspecialty units provide instruction in perinatal medicine, general gynecology, gynecologic oncology, reproductive endocrinology, and family planning and sex counseling.

For further details on the Department of Obstetrics and Gynecology and a listing of the courses offered, see the Announcement of the UCLA School of Medicine.

Ophthalmology

2-142 Jules Stein Eye Institute, 825-5051

Chair
Bradley R. Straatsma, M.D.

Vice Chairs
Robert E. Christensen, M.D.
Sherwin J. Isenberg, M.D. (Harbor-UCLA)

Scope and Objectives

Ophthalmology is the medical science that encompasses knowledge concerning the eyes and the visual system. Derived from many basic and clinical fields, this knowledge must be synthesized by the physician and applied to the prevention, diagnosis, medical management, and surgical therapy of ocular disease.

In response to the steadily increasing incidence and growing importance of ocular disorders, the Department of Ophthalmology and the Jules Stein Eye Institute are closely coordinated to form a comprehensive center for research in the sciences related to vision, for the care of patients with disease of the eyes and related structures, and for education in the broad field of ophthalmology.

The Department of Ophthalmology provides instruction to medical students during the second, third, and fourth years. By lectures, demonstrations, discussions, and the opportunity to examine patients with a variety of ocular conditions, students gain knowledge and experience in ophthalmology.

For further details on the Department of Ophthalmology and a listing of the courses offered, see the Announcement of the UCLA School of Medicine.

Pathology

13-327 Center for Health Sciences, 206-6307

Professors
Marcel A. Baluda, Ph.D.
Luigiano Barajas, M.D.
Pasquale A. Cavaliere, M.D., Chair
Alastair J. Cochran, M.D., in Residence
Walter F. Coulson, M.D.
Robert Y. Foos, M.D.
Paul C. Fu, Ph.D., in Residence
Yao-Yi Fu, M.D.
R. A. Gatti, M.D.
Hideo H. Ikaiishi, M.D., in Residence
Harrison Latta, M.D.
Klaus J. Lewin, M.D., Vice Chair
M. Michael Lubran, M.D., Ph.D., in Residence
Joseph M. Mirra, M.D.
Robert J. Morin, M.D., in Residence
Byron A. Myhre, M.D., Ph.D., in Residence
Donald E. Paglia, M.D.
David D. Porter, M.D.
Denis O. Rodgers, Ph.D., in Residence
George S. Smith, M.D.
Julien L. Van Lander, M.D.
M. Anthony Verity, M.D.
Roy W. Walford, M.D.
Luciano Zambroni, M.D., in Residence, Vice Chair
William H. Carnes, M.D., Emeritus
Sidney C. Madden, M.D., Emeritus

Associate Professors
Judy S. Berliner, Ph.D., in Residence
Arthur H. Cohen, M.D., in Residence
Peter J. Howitz, M.D.
Juan Lechago, M.D., Ph.D., in Residence
Maramar Naeim, M.D., in Residence
Shi-Kaung Peng, M.D.

Assistant Professors
Sanford H. Barsky, M.D.
Jonathan Braun, M.D.
Paul S. Dickman, M.D., in Residence
Thomas A. Draper, M.D.
Gloria D. Duane, M.D., in Residence
Faye A. Eggert, M.D., Ph.D.
Oliver H. Hankinson, Ph.D., in Residence
S. David Hudnall, M.D., in Residence
William Lewis, M.D.
James H. McBride, Ph.D., in Residence
Nissi M. Varki, M.D., in Residence
Harry V. Vinters, M.D.

Adjunct Professors
Ruth Gussen, M.D.
Frank C. Hirose, M.D.

Adjunct Associate Professors
Robert K. Nieberg, M.D.
Dorothy L. Rosenthal, M.D.
Nora C. J. Sun, M.D.

Adjunct Assistant Professors
Sunila M. Bhuta, M.D.
Camilla J. Cobb, M.D.
Richard H. Weinbruch, Ph.D.

Scope and Objectives

Pathology is, by definition, the science of disease. Its main purpose is to unravel disease mechanisms. Without it, progress in prevention, diagnosis, and therapy are left to chance. Yet, among medical disciplines, it is one of the youngest because scientific concepts of disease, based on direct observation of diseased organs, developed only in the last 150 years.

Once normal molecules, cells, and organs have been damaged, the result of the injury manifests itself by distortions of behavior at the molecular, cellular, and organ levels. The study of these injuries and reactions to injuries constitutes a body of knowledge well worth mastering for its own sake. Students, however, must also learn to use the existing tools or develop the new tools needed to dissect the events that follow injury. Although education in methodology is not, in principle, different in pathology from that in all other biomedical sciences, it is very different in scope.

A combined education in breadth and depth is indispensable; it is this education, as it is applied to injuries and reaction to injuries, that is the goal of the Ph.D. program in Experimental Pathology.

Master of Science Degree

Students are generally accepted into the program for the purpose of obtaining a Ph.D. in Experimental Pathology. However, the department also awards an M.S. degree in Experimental Pathology in cases where a student is unable to finish the full Ph.D. program but whose completed work is adequate to the standards and minimum requirements set for a master's degree.

The general requirements for the M.S. degree are the same as those for the Ph.D., with the following exceptions:

1. Only 30 units of the listed electives are required in addition to the core courses.
2. You are also expected to enroll in a minimum of eight units of Pathology 599 each quarter, starting in the third year. These may not be applied toward the minimum course requirement for the degree.
3. You must pass the written qualifying examination at the master's level. The University Oral Qualifying Examination acts as the comprehensive examination. A thesis is also required, which encompasses individual research.

Ph.D. in Experimental Pathology

Admission

In addition to the University minimum requirements, Graduate Record Examination (GRE) Aptitude Test scores and three letters of recommendation are required. There is no appli-
cation form in addition to the one used by the Graduate Division. Because of the sequencing of classes, applicants are generally considered for admission to the Fall Quarter only. For departmental brochures, write to the Chair, Department of Pathology, 13-327 CHS, UCLA, Los Angeles, CA 90024.

Students intending to take advanced degrees in the Department of Pathology must have a bachelor's degree in physical or biological sciences or in the premedical curriculum. M.D.s are also encouraged to apply. Minimum course requirements for admission normally include one year of calculus, physics, general chemistry, organic chemistry, and biological sciences. A physical chemistry course requiring calculus, a course in molecular biology, and a course in histology are recommended and are required before taking the written qualifying examination. In some cases, deficiencies in the prerequisites may be fulfilled in the first year of study.

Course Requirements

The following courses are required: Pathology 231A, 240A, 242A, 242B, 242C, 244, 250A-250B-250C, 251, and Biomathematics 170A. Three laboratory rotations (Pathology 261A-261B-261C) must be taken to intelligently select a thesis adviser. In addition, if you are beginning the program with a bachelor's degree, you must select 40 units from remaining pathology courses and related biomedical areas of interest at the upper division or graduate level. Within these electives, you must take courses to obtain a basic knowledge of biochemistry and molecular biology. If you are entering the program with a master's degree or M.D., you may have fewer elective units to complete for the Ph.D.

Teaching Experience

You may assist for one or two quarters in medical or dental pathology courses to gain teaching experience.

Qualifying Examinations

After the core course requirements are completed (usually at the end of the second year), a comprehensive written qualifying examination covering core courses and required basic knowledge is administered. If examiners feel that some questions should be elaborated on orally, you must do this within three months of the written examination. If failed, the examination may be repeated.

Six months to one year after the written examination, the University Oral Qualifying Examination is administered by the doctoral committee. This examination normally includes defense of the subject matter of your proposed dissertation topic. You are expected to have done preliminary work before the examination and to demonstrate a wide and comprehensive knowledge of your special subject. After passing, you advance to candidacy.

Final Oral Examination

All candidates are required to defend their dissertation at an oral examination open to the public. The purpose of the dissertation is to demonstrate ability for independent investigation and proficiency in the field.

Graduate Courses

200A. Dental Pathology (3 units). Prerequisite: consent of instructor. Emphasizes the fundamental causes of disease processes, using as examples selected lesions or diseases of major organ systems.

Mr. Foos and the Staff

M215. Interdepartmental Course in Tropical Medicine (2 units). (Same as Medicine M215, Microbiology and Immunology M215, and Pediatrics M215.) Prerequisites: basic courses in microbiology and parasitology of infectious diseases in the School of Medicine or Public Health. The course draws on expertise in the Departments of Medicine, Pediatrics, Pathology, and Microbiology and Immunology to present current knowledge about diseases prevalent in tropical areas of the world. Lectures, demonstrations, and laboratory materials are drawn to include diseases which are prevalent in or localized in certain geographic areas. Although major emphasis is on infectious diseases, problems in nutrition and exotic noninfectious diseases are covered. A syllabus supplements the topics covered in the classroom. S/U grading.

Mr. Turner (Sp, alternate years)

231A. Pathological Anatomy and Physiology (6 units). Lecture, two hours; discussion, six hours; laboratory, four hours; other, six hours. Prerequisites: student standing, completion of curriculum satisfying basic requirements for study of human pathology. Lectures, demonstrations, and individual study of a student loan collection of microscopic slide preparations and of specimens from recent autopsies. Kodachrome photomicrographs and projection of microslides are presented. Concentration is in the area of general pathology.

Mrs. Eggerding and the Staff (F)

231B-231C. Pathophysiology of Disease (6 units each). Prerequisites: course 200A, student standing, completion of curriculum satisfying basic requirements for study of human pathology. Lectures, demonstrations, and individual study of a student loan collection of microscopic slide preparations and of specimens from recent autopsies. Kodachrome photomicrographs and projection of microslides are presented. Concentration is in the area of general pathology.

Mr. Lewin and the Staff (W,Sp)

232. Topics in Vertebrate Neurobiology (2 units). An introduction to the cell biology of the vertebrate central nervous system, with special reference to its development, structure, and potential disease processes.

235A-235B. Regulation of Gene Expression in Mammalian Cells (2 units each). Prerequisite: consent of instructor. Description of intracellular information flow in mammalian cells by stimulus of different natures, as well as induced changes such as induction, repression, differentiation, and neoplastic transformation, is analyzed. Use of culture models and the biopathological implications are stressed.

(F, 235A; W, 235B; alternate years)

M240. Immunopathology (2 units). (Same as Medicine M240.) Prerequisites: Immunology course, consent of instructor. Study of the role of immunologic phenomena in the production of lesions and disease. Topics include immune complex disease, antitissue antibody, immunologic mediators, cell-mediated immunity, and infectious diseases.

Mr. Glasscock, Mr. Porter

242A. Molecular Mechanisms in Disease (2 units). Prerequisites: course 231A, consent of instructor. A description of molecular events resulting from administration of injurious chemical and physical agents (u.v., X rays, carcinogens, toxins, etc.) and from reactions to injuries (e.g., necrosis, degeneration, hyperplasia, neoplasia, inflammation, etc.) and an interpretation of structural and functional disturbances in terms of the molecular alterations.

Mr. Van Lancker and the Staff

242B. Molecular Mechanisms in Disease (2 units). Prerequisites: course 242A, consent of instructor. A description of molecular events resulting from administration of injurious chemical and physical agents (u.v., X rays, carcinogens, toxins, etc.) and from reactions to injuries (e.g., necrosis, degeneration, hyperplasia, neoplasia, inflammation, etc.) and an interpretation of structural and functional disturbances in terms of molecular alterations.

Mr. Van Lancker and the Staff

242C. Molecular Mechanisms in Disease. Prerequisite: consent of instructor. The course covers aspects of neoplasia in relation to alterations in the control of cell growth, chemical carcinogenesis, and the biology of cancer.

Mr. Hankinson

244. Electron Microscopy in Experimental Pathology. Lecture, six hours; discussion, four hours. Use of electron microscopy in investigative aspects of pathology, including introduction to use of modern methods of electron microscopy in pathological studies, essentials of normal ultrastructure, and ultrastructural phenomena in general pathology.

Ms. Berliner, Mr. Zamboni

245. Environmental Pathology. Prerequisites: graduate standing, consent of instructor. Designed to explore the interrelationships of man with his total environment. A series of special topics are presented to discuss the effect on man of changes in the composition of air, water, soil, and other factors. S/U grading.

Mr. O'Donnell and the Staff

250A-250B-250C. Pathology Graduate Student Seminar (2 units each). Limited to and required of all students in experimental pathology. Review and discussion of current literature and research in special topics of experimental pathology.

251. Pathology Graduate Student Laboratory Seminar. Prerequisite: consent of instructor. The course consists of ten two-hour seminars which may include demonstrations of apparatus and methods, dealing with new and advanced experimental techniques of value in experimental pathology. The seminars are conducted by Pathology Department staff and guest lecturers. Subjects include the biochemistry, biological and morphological techniques in the study of disease, concentration in the area of general pathology, study of the role of immunologic phenomena in the production of lesions and disease. Topics include immune complex disease, antitissue antibody, immunologic mediators, cell-mediated immunity, and infectious diseases.

Mr. Hankinson, Mr. Rodgerson

253. Free Radical Pathology (2 units). Lecture, four and one-half hours. Prerequisites: basic biochemistry, physical chemistry. Free radicals, mechanisms of formation, properties, and reactions. Reactions with significant biomolecules. Modes of production in vivo. Protection against and sensitization toward these damaging effects.

Mr. O'Donnell

M256. Seminar in Viral Oncology (2 units). (Same as Microbiology and Immunology M256.) An advanced research seminar designed to consider the current developments in the field. Selection of current subjects and publications dealing with tumor viruses, oncogenesis, development, and cellular regulation.

Mr. Slagle

M257. Introduction to Toxicology. (Same as Pharmacology M257.) Prerequisite: Pharmacology 241 or consent of instructor. Biochemical and systemic toxicology, basic mechanisms of toxicity, and interaction of toxic agents with specific organ systems.
M258. Pathologic Changes in Toxicology. (Same as Pharmacology M258.) Designed to give students experience in learning the 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 are covered. Ms. Berliner (Sp)

260. Quantitative Approaches to Microscopic Anatomy (2 units). Prerequisite: consent of instructor. Practical and theoretical approaches in the application of measurement to anatomical structures. General principles of estimation of volume, surface area, and number are covered by stereology and other techniques. Ms. Berliner

261A-261B-261C. Laboratory Rotation (2 units each). (Formerly numbered 251A-251B-251C.) Laboratory, six hours. An introduction to research with individual instructors, laboratories.

M293. Major Concepts in Oncology. (Same as Microbiology and Immunology M293 and Oral Biology M293.) Lecture, three hours. Prerequisite: graduate standing or consent of instructor. Designed for graduate students contemplating research in oncology. Topics include cancer pathophysiology, genetics, membranes, macromolecular synthesis and control, cell cycle, growth control, physical, chemical, and viral oncogenesis, epidemiology of cancer; tumor immunology; principles of cancer surgery, radiation therapy, and chemotherapy. S/U or letter grading.

596. Directed Individual Study or Research (4 to 12 units). Individual research with members of the staff or of other departments, the latter for the purpose of supplementing programs available in the department. S/U grading.


Pediatrics

22-401 Marion Davies Children's Center, 206-6327

Acting Executive Chair
Delbert A. Fisher, M.D.

Chairs
William F. Friedman, M.D.
Carole Hurvitz, M.D. (Cedars-Sinai)
Robert J. Schlegel, M.D. (Drew/MLK)

Scope and Objectives

The Department of Pediatrics encompasses four teaching hospitals: UCLA Medical Center, Harbor-UCLA Medical Center in Torrance, Martin Luther King, Jr./Drew Medical Center, and Cedars-Sinai Medical Center. The clinical fundamentals course offers medical students detailed instruction in the techniques of the clinical examination of pediatric patients.

The required six-week clinical clerkship in pediatrics is given at one of the four medical centers. 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 "Announcement of the UCLA School of Medicine."

Although the department offers only graduate degrees, upper division undergraduate courses are offered with enrollment restrictions as indicated in the course descriptions.

Master of Science Degree

The Pharmacology Department offers the M.S. degree, and students may obtain the M.S. degree; however, the department normally does not admit candidates for the M.S. degree.

Ph.D. Degree

Admission

In addition to meeting University requirements for graduate admission, you must have received a bachelor’s degree in a biological or physical science or in the premedical curriculum.

In suitable cases, students who have course deficiencies may be admitted to graduate standing, but any deficiencies will have to be removed within a specified time. Graduate Record Examination (GRE) scores, Test of English as a Foreign Language (TOEFL) scores for foreign students, and three letters of recommendation are required.

Prospective students may write for a departmental brochure to the Graduate Student Office, Department of Pharmacology, 23-250 CHS, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

Cardiovascular pharmacology; chemical pharmacology; clinical pharmacology; immunopharmacology; neuroendocrine pharmacology; neuropharmacology; psychopharmacology.

Course Requirements

Required: Pharmacology 200 (three quarters), 201A-201B, 202, 212A-212B, 234A-234B-234C, 237A-237B-237C, 241, 251 (must be taken every quarter), 291 (three quarters or alternative courses); Biological Chemistry 101A-101B-101C, or 101C and 201A-201B; Physiology 101, 102, 103A-103B (Anatomy 103A-103B); one course in biostatistics.

All coursework should be completed by the end of the sixth quarter and prior to taking the departmental comprehensive examinations.

The Pharmacology Department provides a system of laboratory rotations (course 200) in order to familiarize students with a variety of pharmacological research areas and techniques. During your first six quarters in the department, you participate in projects of your choosing. If possible, two of these are during the regular academic year and the third during the summer. You also become familiar with the literature relevant to the various research projects and thus establish a basis for the selection of your own research area. If you have already chosen a research area at the time you
enter the department, you may benefit by working in the related laboratory during the previous summer. This would provide an uninterrupted period of over two months to work on a research project.

As part of course 200 you must submit a report of your activities in the various research groups by the end of the quarter. The report should include the nature of the project, how you participated, the results obtained, and a critical evaluation of the project.

Teaching Experience

Seminar presentations are required of all students in the graduate program.

Qualifying Examinations

Examinations are given in all courses except seminars and research. These are in the form of written examinations, oral examinations, term papers, and/or laboratory practicals.

After completing the first two years of study, you are required to take a departmental comprehensive examination consisting of a written part and an oral part. You are then recommended for continuation toward the Ph.D. degree, for further remedial study, or for termination. Questions are intended to test for a rational, analytical approach to problem solving and for ability to integrate material learned in different courses. You are expected to know basic principles of pharmacology and the status of topics of current interest in pharmacology.

After passing the departmental comprehensive examination, you must take the University Oral Qualifying Examination within 18 months. This examination is administered by the doctoral guidance committee. Most questions concentrate on the background literature, experimental methods, and implications of your field of interest and dissertation project. When you pass this examination, you are eligible to petition the Graduate Division for advancement to Ph.D. candidacy.

If you fail any one of the above required examinations, you may be reexamined at a later date determined by the guidance committee.

Final Oral Examination

A final oral examination is administered after submission of the dissertation.

Cooperative Degree Program

The Department of Pharmacology offers an M.D./Ph.D. program concurrently with the UCLA School of Medicine. Candidates must be accepted by the School of Medicine Admissions Office in order to qualify.

Upper Division Courses

110. Drugs: Mechanisms, Uses, and Misuse. Lecture, four hours; discussion, four hours (three weeks). Prerequisites: Biology 5, 6, 7, Chemistry 21, 23, 25, or equivalent. An introduction to pharmacology for undergraduate students, emphasizing the principles underlying the mechanism of action of drugs, their development, control, rational use, and misuse.

Mr. Jenden (W)

199. Special Studies (2 to 8 units). Prerequisite: consent of instructor and department Chair. Special studies in pharmacology, including either reading assignments or laboratory work or both, designed for appropriate training of each student. (F,W,Sp)

Graduate Courses

200. Introduction to Laboratory Research (2 to 4 units). Prerequisite: consent of instructor. Individual projects in laboratory research for beginning graduate students. At the end of each quarter students submit to their supervisor a report covering the research performed. Pharmacology graduate students must take this course three times during their first two years in residence. (F,W,Sp)

201A-201B. Principles of Pharmacology (4 units, 2 units). (Formerly numbered 201.) Prerequisites: mammalian physiology, biochemistry. A systematic consideration of the principles governing the interaction between drugs and biological systems and of the principal groups of drugs used in therapeutics. Particular attention to the modes of action, pharmacokinetics, and disposition to provide scientific basis for their rational use in medicine.

Mr. Lomax in charge (F,W)

202. Clinical Pharmacology (2 units). (Formerly numbered 202A-202B.) Prerequisites: courses 201A-201B. A series of lectures and case presentations designed to illustrate the principles of pharmacology in a clinical context, and the solution of practical therapeutics by reference to pharmacokinetics, mechanisms of action, and disposition of drugs.

Mr. Catlin in charge (Sp)

212A-212B. Graduate Commentary: Clinical Pharmacology (2 units each). Prerequisites: mammalian physiology, biochemistry. A supplementation of topics covered in course 202. Primarily for graduate students.

Mr. Catlin

234A-234B-234C. Experimental Methods in Pharmacology (2 units each). Prerequisite: consent of instructor. A survey of experimental methods and instrumentation used in the analysis, identification, and study of mechanisms of action of pharmacologically active compounds.

Mr. Chang, Mr. George, Mr. Kammerer (F,W,Sp)

235. Neuropharmacology. Prerequisite: neurophysiology. Advanced neuropharmacology, including actions and modes of action of drugs acting on the central nervous system, interactions between drugs and nervous tissue, movements of drugs through the blood brain barrier, and distribution to the central nervous system; problems of central transmission.

Mr. Catlin (W)

237A-237B-237C. Neurotransmission. Prerequisites: courses 234A-234B-234C, 241, consent of instructor. A detailed examination of biochemical transmission, dealing in particular with the cholinergic and adrenergic transmission mechanisms and pharmacological agents that affect them. The evidence for mechanisms involving other possible transmitters is also critically examined.

Mr. Cho, Mr. George, Mr. Jenden, Mr. Olsen (F,W,Sp)

238. Behavioral Toxicology. Prerequisite: consent of instructor. Lectures and discussions designed to examine effects of exposures to a wide variety of chemical and physical agents on behavior of the total organism as it adjusts to changes in its physical and social environments. Such effects may be reflected as subtle disturbances of behavior before classic symptoms of toxic states become apparent. Consideration to methodologies by which such disturbances may be measured, to the state of present knowledge, and to application of the knowledge in regulating risks of both prenatal and postnatal exposure. Particular emphasis on the relevance of this knowledge to human behavior.

Mr. Russell (Sp)

M239. Psychopharmacology. (Same as Psychiatry M239.) Prerequisite: consent of instructor. A presentation of the effects of drugs on behavior, with special attention to drugs used in psychiatry and drug-seeking behavior. Physiological and biochemical mechanisms underlying such actions are analyzed. Reports on relevant current research are made.

Mr. Jarvik (Sp)

241. Introduction to Chemical Pharmacology. Prerequisite: organic and biological chemistry. Introduction to general principles of pharmacology. The role of chemical properties of drugs in their distribution, metabolism, and excretion.

Mr. Cho (F)

251. Seminar in Pharmacology (2 units). Seminars presented by students, faculty, and guest lecturers on a variety of topics. S/U grading.

Mr. Cammerer (F,W,Sp)

253. Seminar in Environmental Toxicology (2 units). Prerequisite: consent of instructor. Oral reports and discussions of current research on chemical pollutants in the environment, their effects on biological systems, and the mechanism of these effects.

Mr. Jenden (F,W,Sp)

M257. Introduction to Toxicology. (Same as Pathology M257.) Prerequisite: course 241 or consent of instructor. Biochemical and systemic toxicology, basic mechanisms of toxicity, and interaction of toxic agents with specific organ systems.

W

M258. Pathologic Changes in Toxicology. (Same as Pathology M258.) Prerequisite: consent of instructor. Biochemical and systemic toxicology, basic mechanisms of toxicity, and interaction of toxic agents with specific organ systems.

F

261. Introduction to Clinical Pharmacology (2 units). Prerequisite: consent of instructor. Lectures, case presentations, and discussions designed to acquaint graduate students with the special problems and effects encountered in clinical use of drugs, including absorption, metabolism and excretion, drug interactions and interference with clinical laboratory analysis.

W

291. Special Topics in Pharmacology (2 to 4 units). Prerequisite: consent of instructor. Examination in depth of topics of current importance in pharmacology. Emphasis on recent contributions of special interest to advanced Ph.D. candidates, academic staff, or visiting faculty. May be taken twice for credit.

F,W,Sp

596. Directed Individual Research in Pharmacology (4 to 12 units).

599. Research for and Preparation of Ph.D. Dissertation (4 to 12 units).
Physiology

53-170 Center for Health Sciences, 825-6717

Professors
Francisco J. Bezanilla, Ph.D.
Allan J. Brady, Ph.D.
Jennifer S. Buchwald, Ph.D.
Michael H. Chase, Ph.D., in Residence
Sergio Ciani, Ph.D.
Jared M. Diamond, Ph.D.
George Eisenman, M.D.
Alan D. Grinnell, Ph.D.
Susumu Hagiwara, M.D., Ph.D.
(Eleanor I. Leslie Professor of Neuroscience)
Earl Hornscher, Ph.D.
Dolly Kravitz, Ph.D.
Yoichi Kidokoro, M.D., Ph.D., in Residence
Glenn A. Langer, M.D. (Castera Professor of Cardiology), Vice Chair
Wilfried R. M. Mommert, Ph.D., Chair
Arthur Peskoff, Ph.D. (Biomechanics)
Paul Quinton, Ph.D.
Gordon Ross, M.D.
Eduardo H. Rubinstein, M.D., Ph.D.
George Sachs, D.Sc. (Leon J. Tiber, M.D. and David S. Alpert, M.D. Professor of Medicine)
Maria W. Seraydarian, Ph.D., in Residence
Ralph R. Sonnenschein, M.D., Ph.D.
John M. Tormey, M.D.
Julio Vergara, Ph.D.
Bernice M. Wenzel, Ph.D.
Brian Whipp, Ph.D.
Ernest M. Wright, D.Sc.
Mary A. B. Bresler, D.Sc., Emeritus, in Residence
Donald B. Lindsley, Ph.D., Emeritus

Associate Professors
Joy Frank, Ph.D., in Residence
Richard How, Ph.D., in Residence
Sally Krasne, Ph.D.
Michael S. Leitensky, Ph.D.
Kenneth D. Philipson, Ph.D., in Residence

Lecturer
Jessie O. Washington, D.V.M.

Adjunct Associate Professor
Oscar U. Scremin, M.D.

Adjunct Assistant Professors
Charles J. Kean, M.R.C.V.S., Ph.D.
Kenneth S. Leonard, Ph.D.

Scope and Objectives

Physiology is the science of the functional activities of the human body. This covers a wide range, on the one hand involving observations on human organisms and patients, on the other hand 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, neurobiology, communication and information, organ systems and integrative phenomena, and behavioral physiology.

In a 1982 survey conducted by the Conference Board of the Associated Research Councils, UCLA’s Physiology Department was judged fifth best in the nation in terms of the quality of its faculty. In addition to the Ph.D. program, the department offers postdoctoral training in research and welcomes students interested in concurrent M.D./Ph.D. programs.

Ph.D. Degree

Admission

Admission to graduate standing in the Department of Physiology are expected to pursue the Ph.D. degree. The department does not admit candidates for the M.S. degree. Ph.D. students must conform to the general admission requirements set by the Graduate Division and have received a bachelor’s degree in a biological or physical science or in the premedical curriculum. In general, at the time of admission, you should have completed courses in mathematics through calculus and differential equations (equivalent to Mathematics 31A, 31B, 33A); physics (12 quarter units); chemistry (16 quarter units, including quantitative analysis, physical and organic chemistry); biology or zoology (16 quarter units, including comparative vertebrate anatomy).

In certain cases, at the discretion of the department, students lacking some of the preparation but having a strong background in areas pertinent to physiology may be admitted to graduate standing, provided that deficiencies are made up. Successful completion of the first-year curriculum requires knowledge of physical chemistry (at least equivalent to Chemistry 110A and 156) and differential equations (equivalent to Mathematics 33A). It is strongly recommended that these or equivalent courses be taken prior to admission. If not, these deficiencies must be removed within a specified time after admission, which would likely extend the first-year curriculum into the second year. Students may also be admitted on the recommendation and sponsorship of staff members subject to admission committee approval.

The Graduate Record Examination (GRE) Aptitude Test is required as well as the Advanced Test in Biology or in your major field. Medical College Admission Test (MCAT) scores will be accepted in lieu of the GRE. Three letters of recommendation are required and should be addressed to the Director of Graduate Studies. Completion of a master’s program is not required.

An application packet and/or departmental brochure is available from the Graduate Student Office, Department of Physiology, 53-170 CHS, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

Cellular electrophysiology; membrane transport; excitation, conduction, energetics, and protein chemistry of muscle; fundamental neurophysiology; cardiovascular, respiratory, and gastrointestinal physiology.

Course Requirements

The graduate training program consists of two levels of basic subject matter. One level is comprehensive but qualitative rather than extensively analytical. The other level involves in-depth study which is rigorous and quantitative. First-year students have the option of taking courses at either level but are required to take at least two areas of in-depth study.

Qualifying Examinations

A departmental written qualifying examination is usually taken at the end of the first year of study, although this requirement may be waived provided other methods of performance evaluation indicate satisfactory progress. Recommendations following the examination are based on the total and specific areas of competence revealed by the examination, performance in coursework during the year, and recommendations of staff with whom you have had close association. Marginal performance in all areas with excellence in none is not considered acceptable.

Following successful completion of the departmental written examination, you must select a sponsor who will act as chair of your doctoral committee and direct your thesis research project. The committee members conduct the University Oral Qualifying Examination to establish that you are capable of conducting a productive research project. At this point in your training, you normally will have completed all formal coursework, will have passed the departmental written examination, and will have devoted approximately a year to a research project. After successful completion of the oral examination, you are advanced to candidacy.

Final Oral Examination

The final oral examination is optional with the doctoral committee.

Upper Division Courses

100. Elements of Human Physiology (6 units). Prerequisite: dental student standing or consent of instructor. Required of first-year dental students. Lectures, laboratories, and demonstration/discussions concerning functional activities of the living body in terms of both cellular and systemic functions. Examples are presented, where possible, on the basis of information relevant to oral function.

Mr. Hornscher and the Staff (F)
101. Neurornuscular and Cardiovascular Physiology (7 units). Prerequisites: basic courses in chemistry, physics, and biology, at least one year each; organic chemistry; histology; gross anatomy, human or comparative. Primarily for first-year medical students, but open to other students by consent of instructor. Lectures, laboratory, and conferences. An analysis of the electrical properties of muscle and nerve, the contractility of muscle and the heart, and the cardiovascular system and its regulation.

Ms. Wenzel (W)

102. Renal, Respiratory, and Gastrointestinal Physiology (6 units). Prerequisites: same as for course 101. Primarily for first-year medical students, but open to other students by consent of instructor. Lectures, laboratory, and conferences. A continuation of course 101, dealing with respiration, and the distribution of water, electrolytes, and metabolites by the renal and gastrointestinal systems, and the special physiology of certain organs.

Mr. Tormey, Ms. Wenzel (Sp)

103A-103B. Basic Neurology (1 unit, 3 units). Lecture/laboratory, one-four-hour and two-one-hour sessions (Winter — last six weeks); one two-hour, one three-hour, and one two-hour sessions (Spring). Prerequisite: student standing or consent of instructor. Corequisites: Anatomy 103A-103B. Lectures, conferences, demonstrations, and laboratory procedures necessary for an understanding of the functions of the human nervous system. Prerequisite: consent of instructor. Mr. Chase and the Staff (W-Sp)

M105. Human Physiology. (Formerly numbered 105N.) (Same as Nursing M105.) Lecture, four hours; discussion, one hour. Prerequisite: nursing student standing or consent of instructor. Required of third-year nursing students. Lecture and discussion emphasizing a cooperative approach to anatomy and physiology of the human body.

199. Special Studies (1 to 8 units). Prerequisite: consent of instructor. Special studies in physiology, including either reading assignments or laboratory work or both, designed for appropriate training of each student.

Graduate Courses

200. Transport across Biological Membranes. Prerequisite: consent of instructor. An in-depth study of transport ions, nonelectrolytes, and water across plasma membranes of single cells and epithelia. Lectures include such topics as membrane structure, the passive permeability of membranes to ions and nonelectrolytes, active transport of sugars and amino acids, active ion transport, and the mechanisms of water transport. Experimental work involves the transport of ions across single cell membranes and epithelia using radioactive and electrophysiological techniques.

Mr. Wright

202. Permeability of Biological Membranes to Ions (5 units). Prerequisites: Chemistry 110A, 110B, or equivalent, consent of instructor. Topics include ion permeation mechanisms, ion distribution, and physical basis of ion discrimination across cell membranes.

Mr. Diamond

M203. Oral Physiology. (Same as Oral Biology M205.) Lecture, one hour; discussion, one hour. The organ-level and cellular physiology of the following systems is discussed, in a somewhat flexible framework: (1) salivary glands, including the mechanisms of secretion, abnormalities such as Mikulicz-Sjögren syndrome, and effects on the dentition; (2) dental pulp: development, normal physiology, and reparative mechanisms; (3) organization of sensory systems, receptors, pathways, and central projections; (4) dentinal pain mechanisms, hydromechanical theory, and electrical recordings from dentin; (5) taste receptors: mechanisms of perception of four basic tastes, alterations of taste caused by drugs, diseases, and aging; (6) oral touch and temperature receptors: comparison with similar systems in the skin, assessment of sensory dysfunction; (7) speech: phonation, resonance, and articulation in speech production, in modern neurophysiology, and to consider means of sounds in children. Classes are supplemented with audiovisual materials and many references from the literature.

Mr. Junge (F)

205. Physical Chemistry of Membranes and Cellular Membrane Systems. Prerequisite: consent of instructor. A mathematical and physical background for understanding current approaches in cellular electro-physiology and transport across membranes. Surveys ordinary differential equations, functions of many variables, Fourier series, and integrals. Discusses the principle of equilibrium and nonequilibrium thermodynamics, the basic concepts of electrotaxis and their application to physical-chemical problems typically encountered in the study of membrane transport: (e.g., osmotic pressure, Gibbs-Donnan equilibrium, surface potential, solvent-solute coupling in transmembrane fluxes, integration of the Nerst-Planck equation and of the time-dependent diffusion equation, etc.).

Mr. Ciani

207. Neurophysiology. Prerequisite: consent of instructor. Seminar and laboratory course designed to acquaint the student with behavioral techniques and concepts relevant to research problems encountered in modern neurophysiology, and to consider means of integrating them with neurophysiological methods.

Ms. Wengel

212A-212B-212C. Critical Topics in Physiology (1 to 8 units each). Prerequisite: consent of instructor. Advanced treatment of critical topics in physiology by staff and guest lecturers for graduate and postdoctoral students in the biomedical sciences.

213. Methods in Cell Physiology (6 units). Prerequisite: consent of instructor. The lectures and laboratory deal with the integrated circuits of the cellular life support systems employed in modern instruments, so that students learn to design and build many of the simpler circuits often required in their research. Emphasis on the particular circuits used in electrophysiology, RC analysis, and an introduction to cable theory.

Mr. Bezanilla, Mr. Vergara (F)

214. Cell Physiology: Excitability (2 to 8 units). Prerequisites: course 213, consent of instructor. General properties of excitable cells, linear and nonlinear properties, current and voltage relations and propagation of the nerve impulse, voltage gating and gating currents, as well as the relationship between macroscopic conductance and single channel properties.

Mr. Benzanilla (W)


Mr. Cari

216. Cellular Electrophysiology (6 units). Prerequisite: basic knowledge of the physics of electricity, integral and differential calculus, and biology (equivalent to Biology 5), consent of instructor. The course presents basic concepts of membrane structure, passive and active transport of ionic and nonelectronic materials; optimization of excitation and conduction, and biophysics of transport phenomena. This material is presented in semiquantitative terms. Rigorous in-depth coverage is offered in course 217A.

217A. Ion-Permeable Channels in Cell Membranes. Prerequisite: physical chemistry, consent of instructor. The properties of ion-permeable channels in cell membranes, including a survey of the types of ion-permeable channels found in membranes, analysis of the permeability and selectivity of channels, voltage and chemical regulation of ion-permeable channels, and single channel properties.

Mr. Ciani, Mr. Hagimara, Mr. Horn, Ms. Krause

217B. Transport Systems in Cell Membranes. Prerequisite: consent of instructor. Properties of pumps and carriers in cell membranes. Topics include nonelectrolyte (sugar, amino acid, carboxylic acids) and ion (Na, K, H, and Ca) transport across plasma membranes of single cells and epithelia.

Mr. Sachs, Mr. Wright

217C. Cellular Neurophysiology. (Formerly numbered 217B.) Prerequisite: course 213 or 216 or consent of instructor. Structure and function of synaptic transmission, neurotransmitters, excitation-inhibition special sensory receptors.

218A. Integrative Neurophysiology. Prerequisite: course 217C or consent of instructor. Structure and function of CNS neurons, structure and function of visual, cerebellum, and other CNS systems. Structure and function of autonomic nervous systems.

218B. Physiology of Muscle. Prerequisite: course 216 or consent of instructor. Ultrastructure of muscle. Excitation, excitation-contraction coupling, calcium regulation of contraction, myofibrillar interactions, energetics mechanics, and chemical kinetics of contraction in vertebrate muscle.

221A-221B-221C. Concepts of Excitation and Contraction in Muscle (2 to 6 units each). Prerequisite: consent of instructor. In-depth study of muscle physiology, with material derived from a critical review of classical and recently published research papers. Content varies according to the special interests of the students.

Mr. Brady

222. Graduate Commentary: Renal, Respiratory, and Gastrointestinal Physiology (2 units). Prerequisite: course 102 or 101. Staff and guest lecturers for graduate students of the topics presented in course 102.

223. Graduate Commentary: Physiology of the Nervous System (2 units). Prerequisites: basic courses in chemistry, physics, and biology, at least one year each; organic chemistry, histology; gross anatomy, human or comparative; consent of instructor. An advanced supplementation for graduate students of the topics presented in basic neurology.

Ms. Buchwald

225. Ionic Selectivity: The Role of Kinetic and Equilibrium Processes in Ion Permeation through Channels (2 to 4 units). Lecture, two hours; reading period, ten hours. Prerequisites: course 217A (unless waived), consent of instructor. Covers the "state of the art" for characterizing the molecular details of ion permeation in model peptide channels (e.g., gramicidin) and biological channels (e.g., acetylcholine receptor channel, K channel, and Na channel), particularly as these can be inferred from electrical measurements. Molecular aspects of ion permeation are emphasized.

Mr. Eisenman

227. Theoretical Problems in Membrane Permeation (2 units). Prerequisite: consent of instructor. Tutorial directed to specific theoretical problems of interest to the student.

Mr. Cari
228. Epithelia: Structure and Function (2 units). Prerequisite: consent of instructor. Lectures and seminars on the physiology of epithelial cells, with particular emphasis on membrane transport. S/U grading.
   Mr. Wright (W)
   229. Research Topics in Neurobiology (2 units). Prerequisite: consent of instructor. Discussion of current literature covering research problems in neurobiology. S/U or letter grading. Mr. Letinsky
   230A-230B-230C. Selected Topics in Organ Physiology (2 to 6 units each). Prerequisite: consent of instructor. Macroscopic, microscopic, and ultrastructural correlates of tissue and organ function. Advanced consideration of special topics in the physiology of the cardiovascular and gastrointestinal systems, as well as in the respiratory, renal, and central nervous systems. Mr. Brady and the Staff
   231A-231B-231C. Cardiovascular and Respiratory Physiology (3 to 6 units each). Prerequisite: consent of instructor. In-depth study of the cardiovascular and respiratory systems. 231A emphasizes respiratory mechanisms and control. 231B and 231C include the function and control of the cardiovascular system and its relation to the mechanics of respiration and cellular gas exchange. Study material consists of critical reviews and discussion of selected articles in journals.
   245. Stochastic Analysis of Channel Gating. Prerequisite: current knowledge of gauge and brain peptides is presented by surveying their chemistry, anatomy, and physiology. Experimental approaches used to study biologically active peptides are discussed. In addition, current information about each of the major gut and brain peptides is reviewed. S/U or letter grading.
   Mr. Brecha, Mr. Reive, Ms. Tache (W)
   250A-250B-250C. Techniques in Biological Research (1 unit each). Discussion of techniques of interest to students in the biological sciences. S/U grading.
   Mr. Horn (Sp)

Psychiatry and Biobehavioral Sciences

B7-349 NPI, 825-0770

Professors
Ransom J. Arthur, M.D., in Residence
D. Frank Benson, M.D.
Nicholas G. Blurtion Jones, D.Phil. (Biobehavioral Sciences)
Nathaniel A. Buchwald, Ph.D., in Residence
Joseph T. Campagnoni, Ph.D., in Residence
Anthony T. Campagnoni, Ph.D., in Residence
(Chubiohavioral Sciences)
Anthony T. Campagnoni, Ph.D., in Residence
(Chubiohavioral Sciences)
Dennis P. Cantwell, M.D. (Joseph Campbell Professor of Child Psychiatry)
Stephen D. Cederbaum, M.D., in Residence
Ching-piao Chien, M.D., in Residence
Kenneth M. Colby, M.D.
Barbara F. Freadman, M.D. in Residence
Jean S. deValois, Ph.D., in Residence (Biobehavioral Sciences)
Wilfred J. Dixon, Ph.D. (Biobehavioral Sciences)

Robert B. Edgerton, Ph.D., in Residence (Biobehavioral Sciences)
Samuel Eisen, Ph.D., in Residence (Biobehavioral Sciences)
Barbara Fisch, M.D.
Arvan L. Fluharty, Ph.D., in Residence (Biobehavioral Sciences)
Charles F. Ford, M.D., in Residence
Steven R. Forness, Ed.D., in Residence (Biobehavioral Sciences)
Daniel X. Freedman, M.D. (Judson Braun Professor of Biological Psychiatry)
Joaoquin M. Fuster, M.D., in Residence (Psychology)
Gary C. Gally, Ph.D., in Residence (Medical Psychology)
Ronald G. Gallimore, Ph.D., in Residence (Biobehavioral Sciences)
John Garcia, Ph.D. (Biobehavioral Sciences)
Donald Guthrie, Ph.D., in Residence (Biobehavioral Sciences)
John Hanley, M.D., in Residence
Frank W. Hayes, M.D., in Residence
Frank W. Hofstett, Ph.D. (Biobehavioral Sciences)
Chester D. Hull, Ph.D., in Residence (Biobehavioral Sciences)
Lissy J. Jervis, Ph.D., in Residence (Biobehavioral Sciences)
Harry J. Jervis, Ph.D., in Residence (Biobehavioral Sciences)
Marvin Karno, M.D., in Residence
John G. Kennedy, Ph.D., in Residence (Biobehavioral Sciences)
Arthur S. Kling, M.D., in Residence
Lewis L. Langness, Ph.D., in Residence (Biobehavioral Sciences)
Henry Leese, M.D., in Residence
Robert P. Liberman, M.D., in Residence
James T. Marsh, Ph.D. (Medical Psychology)
David S. Maxwell, Ph.D. (Biobehavioral Sciences)
Philip R. A. May, M.D. (Della Martin Professor of Psychiatry)
Michael T. McGuire, M.D.
Ivan N. Mensch, Ph.D. (Medical Psychology)
Milton H. Miller, M.D.
Jim Minton, Ph.D., in Residence (Medical Psychology)
Kazu Nihira, Ph.D., in Residence (Medical Psychology)
Ernest P. Noble, M.D., Ph.D. (Thomas P. and Katherine K. Pike Professor of Alcohol Studies)
William H. Oldendorf, M.D., in Residence
Edward M. Ornitz, M.D., in Residence
Alfonso Paredes, M.D., in Residence
Robert O. Pasnau, M.D., in Residence
Morris J. Paulson, Ph.D., in Residence (Medical Psychology)
Dennis S. Posner, Ph.D. (Biobehavioral Sciences)
Douglas R. Price-Williams, Ph.D., in Residence (Biobehavioral Sciences)
Edward R. Ritvo, M.D., in Residence
Don A. Rockwell, M.D.
Alexander C. Rosen, Ph.D., in Residence (Medical Psychology)
Robert T. Rubin, M.D., in Residence
Paul Satz, Ph.D., in Residence (Neuropsychology)
Arnold B. Scheibel, M.D.
Eustace A. Serafinides, M.D., Ph.D., in Residence
David Shapiro, Ph.D. (Medical Psychology)
Edwin S. Shneidman, Ph.D., in Residence (Medical Psychology)
Arthur B. Silverstein, Ph.D., in Residence (Medical Psychology)
James Q. Simmons, M.D., in Residence
George F. Solomon, M.D., in Residence
S. Stefan Soltysik, M.D., Ph.D., in Residence (Neuropsychology)
Robert S. Sparkes, M.D.
M. Anne Spence, Ph.D., in Residence (Biobehavioral Sciences)
Adjunct Assistant Professors

Luis J. Fitten, M.D.
J. Stephen Heisel, M.D.
Richard J. Loewenstein, M.D.
Barringer D. Marshall, M.D.
Donna M. Moore, M.D.
Leonora K. Petty, M.D.
H. Rebecca Rausch, Ph.D. (Neuropsychology)
Anthony E. Reading, Ph.D. (Medical Psychology)
Rochelle Reno, Ph.D. (Medical Psychology)
Lanny L. Snodgrass, M.D., Ph.D.

Adjunct and Visiting Lecturers

Nancy H. Allen, M.P.H., Adjunct (Biobehavioral Sciences)
Linda A. Andron, M.S.W., Adjunct (Social Work)
J. Wesson Ashford, M.D., Adjunct
Marion T. Baer, Ph.D., Visiting (Nutrition)
S. Delores Barnes, D.S.W., Adjunct (Social Work)
Barbara A. Bass, M.S.W., Adjunct (Social Work)
Diene J. Bass, M.S.W., Adjunct (Social Work)
Carole L. Bender, M.S.W., Adjunct (Social Work)
M. Christina Benson, M.D., Visiting
Jane E. Burroughs, M.S.W., Adjunct (Social Work)
William E. Donnelly, M.S.W., Adjunct (Social Work)
Richard A. Embry, M.S.W., Visiting (Social Work)
Angela Farrell, M.S.W., Adjunct (Social Work)
Florence Frisch, M.S.W., Adjunct (Social Work)
Charlotte B. Gelb, M.S.W., Adjunct (Social Work)
Claudia Gerber, R.N., Adjunct (Nursing)
Tracy A. Goodglick, B.A., Adjunct (Biobehavioral Sciences)
Mary Lou Gottlieb, M.S.W., Adjunct (Social Work)
Dennis T. Jaffe, Ph.D., Visiting (Biobehavioral Sciences)
Joan E. Johnson, M.S.W., Adjunct (Social Work)
Martha B. Jura, Ph.D., Adjunct (Biobehavioral Sciences)

Associate Professors

Anthony M. Adinolfi, Ph.D. (Biobehavioral Sciences)
Robert F. Asarnow, Ph.D., in Residence (Medical Psychology)
Javier I. Escobar, M.D., in Residence
Fawzy I. Fawzy, M.D., in Residence
Frederick D. Frankel, Ph.D., in Residence (Medical Psychology)
Betsy Jo Freeman, Ph.D., in Residence (Medical Psychology)
Steve J. Funderburk, M.D., in Residence (Biobehavioral Sciences)
Susan E. Hodges, Ph.D., in Residence (Biobehavioral Sciences)
Kay R. Jamison, Ph.D., in Residence (Medical Psychology)
Keith T. Kernan, Ph.D., in Residence (Biobehavioral Sciences)
Michael S. Levine, Ph.D., in Residence (Neuroanatomy)
Stephen R. Mandel, M.D., in Residence (Biobehavioral Sciences)
Mark J. Mills, J.D., M.D., in Residence (Social Work)
Gloria J. Powell, M.D., in Residence (Medical Psychology)
Warren R. Procci, M.D., in Residence (Biobehavioral Sciences)
Andrew T. Russell, M.D., in Residence (Biobehavioral Sciences)
Waid O. Shekim, M.D., in Residence (Biobehavioral Sciences)
Jerome M. Siegel, Ph.D., in Residence (Biobehavioral Sciences)
Marian D. Sigman, Ph.D., in Residence (Medical Psychology)
Michael A. Strober, Ph.D., in Residence (Medical Psychology)
Alexander J. Tymchuk, Ph.D., in Residence (Biobehavioral Sciences)
Thomas S. Weisner, Ph.D., in Residence (Biobehavioral Sciences)
David K. Wettisch, Ph.D., in Residence (Biobehavioral Sciences)
Gail E. Wyatt, Ph.D., in Residence (Medical Psychology)
Edward Geller, Ph.D., Emeritus

Assistant Professors

Joan R. Asarnow, Ph.D., in Residence (Medical Psychology)
Lewis R. Baxter, M.D., in Residence
Carole H. Browner, Ph.D., in Residence (Biobehavioral Sciences)
Manca L. Daniels, M.D., in Residence
Robert P. Diamond, M.D., in Residence
Stephan E. Dubin, D.O., in Residence

Maurice B. Sterman, Ph.D., in Residence (Biobehavioral Sciences)
Robert J. Stoller, M.D.
Peter E. Tanguay, M.D., in Residence
George Tarien, M.D.
Claudewill S. Thomas, M.D., in Residence
Bernard Towles, M.D.
J. Thomas Ungerleider, M.D., in Residence
Jaimie R. Villablanca, M.D.
Kenneth B. Wells, M.D., in Residence
T. George Bidder, M.D., in Residence
Joel Yager, M.D., in Residence (Biobehavioral Sciences)
Jerome M. Donald A. Schwartz, M.D.
Olga Samuel, M.S.W., in Residence (Biobehavioral Sciences)
Charles D. Woody, M.D., in Residence (Biobehavioral Sciences)
Keith T. Kernan, Ph.D., in Residence
Gail E. Wyatt, Ph.D., in Residence (Medical Psychology)
Betty Jo Freeman, Ph.D., in Residence (Biobehavioral Sciences)
Joan E. Johnson, M.S.W., in Residence (Biobehavioral Sciences)
Dennis T. Jaffe, Ph.D., Visiting (Biobehavioral Sciences)
J. Mark Thompson, M.D., Adjunct (Biobehavioral Sciences)
Claudia Gerber, R.N., Adjunct (Nursing)
Tracy A. Goodglick, B.A., Adjunct (Biobehavioral Sciences)
Mary Lou Gottlieb, M.S.W., Adjunct (Social Work)
Dennis T. Jaffe, Ph.D., Visiting (Biobehavioral Sciences)

Adjunct Faculty

M. King, M.D., Adjunct (Biobehavioral Sciences)
Hayato Kihara, Ph.D., Adjunct (Biobehavioral Sciences)

Adjunct Faculty

Ricardo P. Mendoza, M.D., in Residence (Biobehavioral Sciences)
Martin E. Martin, M.D., in Residence (Biobehavioral Sciences)
Joel Yager, M.D., in Residence (Biobehavioral Sciences)
Jeffrey N. Wilkins, M.D., in Residence

Adjunct Faculty

Thomas R. Garrick, M.D., in Residence (Biobehavioral Sciences)
Mahesh Godinay, M.B., in Residence (Biobehavioral Sciences)
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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 psychiatry interns and residents and for medical students (courses for medical students are listed in the Announcement of the UCLA School of Medicine and the School of Medicine Handbook of Clinical Courses).

Enrollment in department courses is limited to registered UCLA students, students registered in programs officially affiliated with UCLA, and students enrolled concurrently through University Extension. Students who meet these requirements, but who are not affiliated with a departmental training program, must also meet required course prerequisites determined by specific educational programs. Additional information is available from the department office.

Programs

The Developmental Disabilities Immersion Program is cosponsored by the Department of Psychology and the Department of Psychiatry and Biobehavioral Sciences and by the Office of Instructional Development — Field Studies Development. Each year a group of 28 students is selected for the program which runs during the Winter/Spring Quarters. Students participate in courses and research at Lanterman State Hospital and Developmental Center, a facility for mentally retarded citizens in Pomona, and do related fieldwork while living at the site. During each quarter of the program up to 20 units of coursework related to developmental disabilities are offered. Most of the courses are in the Psychiatry/Psychology M180 through M184 series, but courses from other departments (such as Biology) may supplement these offerings. Many of the courses fulfill psychology undergraduate major requirements. Student individualized research projects are also part of the immersion experience.

Students interested in the program should contact the Office of Instructional Development — Field Studies Development for further information. Information on clinical practicums which are offered in conjunction with other educational institutions and UCLA departments may be obtained from the department office.

Master of Social Psychiatry

The Master of Social Psychiatry (M.S.P.) program is not admitting new students at this time.

Upper Division Courses

M112. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Same as Anthropology M136Q and Psychology M155.) Prerequisite: consent of instructor. The skill of observing and recording behavior in natural settings is taught, emphasizing field training and practice in observing behavior. Group and individual projects are included. Some of the uses of observations and their implications for research in the social sciences are also discussed.

M119. Evolution of Intelligence. (Same as Psychology M119.) Lecture, two hours; discussion, two hours. Prerequisites: Psychology 15 or 115, an introductory statistics course, junior or senior standing, consent of instructor. Intelligence is treated as neural information-processing capacity, and its evolution in vertebrates is correlated with the evolution of enlarged brains. Quantitative approaches in evolutionary biology and the neurosciences are emphasized.

M133. Exceptional Children. (Same as Psychology M133B.) Prerequisite: Psychology 130. Study of the issues and research problems in the areas of mental retardation, giftedness, learning disorders, emotional disorders, and childhood psychoses.

M142. Advanced Statistical Methods in Psychology. (Same as Psychology M142.) Lecture, two hours; discussion, two hours. Prerequisite: Psychology 41. Chi square, special correlation methods, multiple regression, nonparametric methods, analysis of variance, reliability and validity.

M175. Women Physicians: Professional Socialization. The seminar deals with the professional socialization of women in medicine. Focus is on the developmental stages of medical training and practice (premed, medical school, internship, residency, and various specialty areas of private practice). Women trainees and physicians in various specialties participate in presentations. A research project is required.

A certificate is also awarded by the department to qualified graduate students who successfully complete the Mental Retardation and Other Developmental Disabilities Training Program. The program fulfills the internship requirement for the Ph.D. program in Clinical Psychology and the master's program in social welfare, and for the disciplines of speech pathology, occupational therapy, and nutrition at nearby universities. Further, it satisfies state licensure and clinical placement requirements in psychology, speech and language, special education, social welfare, nursing, pediatrics, pediatric dentistry, occupational therapy, and nutrition. Interested students should contact the program training coordinator for further information.

Information on clinical practicums which are offered in conjunction with other educational institutions and UCLA departments may be obtained from the department office.

Programs

The Developmental Disabilities Immersion Program is cosponsored by the Department of Psychology and the Department of Psychiatry and Biobehavioral Sciences and by the Office of Instructional Development — Field Studies Development. Each year a group of 28 students is selected for the program which runs during the Winter/Spring Quarters. Students interested in the program should contact the Psychology Interdisciplinary Program students. Introduction of statistical method and design in experimentation principles of statistical inference and appropriate testing methods. An introduction to the use of computers and various software packages is presented.

M180A. Contemporary Problems in Mental Retardation. (Same as Psychology M180A.) Prerequisite: course M180A. Limited to Immersion Program students. Psychoeducational issues in mental retardation relating literature to ongoing field experiences through lectures, discussions, media, and six student papers.

M180B. Contemporary Issues in Mental Retardation. (Same as Psychology M180B.) Prerequisite: course M180A. Limited to Immersion Program students.


M182A. Advanced Statistical Methods in Mental Retardation. (Formerly numbered M184.) Prerequisite: Psychology 41. Limited to Immersion Program students. Introduction of statistical method and design in experimentation principles of statistical inference and appropriate testing methods. An introduction to the use of computers and various software packages is presented.

M182B. Advanced Design and Statistics. (Same as Psychology M182B.) Prerequisite: course M182A. Continuation of course M182A.

M182C. Perception. (Same as Psychology M182C.) Limited to Immersion Program students. Human information processing, both physical and psychological, with special emphasis on pathologies in the mentally retarded.

M182D. Current Issues in Mental Retardation. (Same as Psychology M182D.) Limited to Immersion Program students. Advanced topics in mental retardation. May be repeated for credit by consent of instructor.

M183. Introduction to Neuroscience. (Same as Psychology M183.) Limited to Immersion Program students. Gross anatomy of the human brain and spinal cord. Mr. Soltysik.

M184. Human Genetics. (Formerly numbered 198.) (Same as Psychology M184.) Lecture, two hours; discussion, two hours. Prerequisite: course M181B. Limited to Immersion Program students. Application of genetic principles in human populations, with emphasis on cyogenetics, biochemical and population genetics, and family studies. Lectures and readings focus on the methodologies appropriate to answer current questions in the fields of medical and human genetics.

M190. Ethology: Physiology of Behavior and Learning in Animals. (Same as Psychology M190.) Lecture, four hours; laboratory, one hour. Basic course for undergraduate students which integrates neuropsychological and ethological studies of behavior with behavioral plasticity and standard training procedures in laboratory animals (in behavioral, neurophysiological, and pharmacological studies) with a broad biological, evolutionary perspective.

M199. Special Studies in Psychiatry (2 to 4 units). Prerequisite: consent of instructor and department Chair, based on a written proposal outlining the course of study. The proposal is to be submitted by instructor and student at time of initial enrollment. Additional information and course proposal forms are available in the Office of Education, B7-349 NPI.
Graduate Courses

200. Colloquium on Biobehavioral Sciences (1 unit). Prerequisite: consent of instructor. The colloquium establishes a vehicle for continuing education on recent advances in various scientific fields relevant to behavior in its biobehavioral and biosocial contexts. It provides a forum for pertinent interdisciplinary discussion. Speakers present information from their area of competence and express their ideas on the relevance of this material to the broader issues of behavior. Mr. West

M201A-M201B-M201C. The Functional Organization of Behavior (2 units each). (Same as Neuro- science M201A-M201B-M201C.) Prerequisite: consent of instructor. Course M201A is prerequisite to M201B, which is prerequisite to M201C. M201A is introductory and focuses on the development of behaviors within different species and the functional uses of behaviors. An evolutionary biological perspective is used as a framework. M201B focuses on research studies designed to take into account the functional behavior of animals. M201C focuses on special questions of interest to students.

Mr. Edson, Mr. Woody (F,W,Sp)

207. Hypnosis Seminar (2 units). Prerequisite: psychology intern, psychiatrist resident, member of (or trainee in) one of the licensed mental health professions, or consent of instructor. Experiential seminar intended to prepare mental health professionals for clinical applications in hypnotics. Didactics, demonstration, practice, and feedback. Following training in inductions and development of classic hypnotic phenomena (e.g., age regression, hypnoanalysis), the class focuses on psychotherapeutic applications, including direct symptom removal, behavioral methods, and hypnosis analysis. Emphasis on developing skill for application in clinical practice. S/U grading.

Mr. Holroyd

208A-208B-208C. Clinical Neuropsychology (2 units each). Prerequisites: graduate or postgraduate standing, consent of instructor. The aim of the course is to introduce and review neuropsychological concepts, including fundamental neuropsychological systems of the brain, the effects of generalized and focal brain impairment on behavior, and an introduction to the use of neuropsychological test instruments. 208A focuses on the fundamentals of neuropsychology in adults. 208B reviews developmental neuropsychology, focusing on the assessment of brain damage in children and the elderly. 208C is devoted to consideration of special problems in neuropsychology, including language dysfunction, learning disabilities, dyslexia, dysgraphia, and dyslexia, epilepsy and CNS effects of toxic substances, and an introduction to forensic neuropsychology. Mr. Marsh (F,W,Sp)

209A-209B-209C. Behavior Therapy Practicum (2 units each). Prerequisite: consent of instructor. The behavior therapy practicum provides instruction and supervision in the behavioral treatment of a variety of problems presented by adult outpatients, including anxiety, affective, conversion, obsessive-compulsive, psychosocial, eating disorders. By means of a lecture/workshop approach, trainees learn behavioral analysis and assessment, personal effectiveness training, systematic and vivo desensitization, contingencies, contracting, and management of therapeutic behavior modification. Mr. Munford (F,W,Sp)

M210A-210B. Seminar in Psychocultural Studies. (Same as Anthropology M234A-M234B.) Lecture, three hours. Prerequisite: consent of instructor. The two-quarter sequence is devoted to the present state of research in psychocultural studies. It surveys work in child development and socialization, personality, psychobiology, trans-cultural psychiatry, deviance, learning, perception, cognition, and psychocultural perspectives on Chinese. Mr. Edgerton, Mr. Pincie-Williams

211. Sociocultural Perspectives on Mental Retardation. (Same as Anthropology M234A.) Lecture, three hours. Prerequisite: consent of instructor. The seminar explores concepts such as "intelligence," "competence," and "adaptive behavior" in varying non-Western societies in the light of the phenomenon of mental retardation in the West, particularly the United States. Topics include cross-cultural perspectives, the history of institutional confinement, cross-cultural approaches to assessment and classification, community versus institutionalization, and current issues involving adaptation and "quality of life." Also to be discussed are topics such as communicative competence, work, crime, deviance, sexuality, and marriage. May be repeated for credit. Mr. Edgerton

M212. Cultural Modes of Thought. (Same as Anthropology M232P.) Lecture, three hours. Prerequisite: consent of instructor. An examination of the influence of culture on learning, perception, thinking, and intelligence. The course covers the fields of cross-cultural psychology in addition to cognitive anthropology. The focus is on learning and thinking in non-Western cultures but includes problems of education in ethnic areas in the U.S.

Mr. Gallimore, Mr. Price-Williams


M214. Medical Models for the Cross-Cultural Study of Socialization and Childhood. (Same as Anthropology M236P.) Lecture, three hours. Prerequisite: consent of instructor. Methods, ethnographic data, and theoretical orientations. Emphasis on current research. May be repeated for credit.

Mr. Weiner

M216A-M216B-M216C. Functional Neuropsychology. (Formerly numbered 216.) (Same as Neuroscience M216A-M216B-M216C and Physiology M225A-M225B-M225C.) Seminar, three hours. Prerequisites: graduate standing, consent of instructor. Covers the neurobiology of human infant speech and the neuropsychology of language memory. Topics include animal communication, phylogeny, andontogeny of language, cerebral processing of language and speech in normal and brain-damaged adults, and neural models of memory. S/U or letter grading.

Ms. Buchwald, Mr. Haigren, Ms. Cleary, Ms. Green, Mr. Halgren, Ms. Van Lancker (F,W,Sp)

M219A-M219B. Basic Course in Mental Retardation Research (2 units each). (Same as Anthropology M237A-M237B.) Lecture, two hours; discussion, two hours. Prerequisite: consent of instructor. Required of all MRRT trainees. The course provides a systematic overview of mental retardation research and the sciences basic to this field of study. It acquaints students with the language, methods, aims, and contributions of the various disciplines that contribute to the field. The last two weeks of the second quarter are spent discussing and preparing multidisciplinary research designs with potential for the prevention or amelioration of mental retardation. S/U grading.

Mr. Buchwald, Mr. Edgerton

M220A-220B. Living Systems Theory and Its Application (2 or 4 units each). Prerequisite: consent of instructor. Current status of basic and applied scientific research in systems science at the levels of the cell, the organism, the organism, the group, the organization, the society, and the supranational systems. Present and potential future applications of systems science to psychodiagnosis, psychotherapy, group processes, community psychiatry, and organizational behavior. Possible applications to neurosciences, artificial intelligence, instructional technology, and other fields. It takes for four units, additional class time and reading and a research paper (20-25 pages) are required.

Mr. Miller

M221. Transcultural Psychiatry (Same as Anthropology M234P.) Lecture, three hours. Prerequisite: consent of instructor. Consideration of psychiatric topics in cross-cultural perspective, such as studies of drug use, deviance, suicide, homicide, behavioral disorders in non-Western societies, Western psychiatry, and the questions of "sick" societies. May be repeated for credit.

Mr. Kennedy

222. MMPI Seminar and Case Conference (2 units). Seminar, one hour; discussion, one hour. Prerequisite: psychology intern, psychiatry resident, permission of instructor. Seminar and conference on the interpretation of the Minnesota Multiphasic Personality Inventory (MMPI) — theory, principles, and application to the personality types. Case material relating to the MMPI profile and treatment planning are discussed.

Mr. Caldwell

226A-226B. Childhood Psychopathology (2 units each). Seminar, one hour. Prerequisite: consent of instructor. Current research in the causes and behavioral manifestations of childhood psychopathology. Discussion on diagnosis and etiology of childhood psychopathology is included.

Ms. Sigman, Mr. Tanguy

228. Behavioral Medicine. Seminar, three hours. Prerequisite: consent of instructor. Review of behavioral science knowledge and techniques relevant to the understanding of physical health and illness and discussion of the application of this knowledge to health care and rehabilitation. Integration of behavioral and biomedical approaches is stressed.

Mr. McCreary, Mr. Munford, Mr. Reeves, Mr. Shapiro

230. Confl ictus and Asian Americans (1 unit). Prerequisite: consent of instructor. The seminar focuses on the stress and aspirations of Asian Americans. The philosophical teachings of Confucius are discussed. Similarities and differences among Asian Americans and relevant issues are presented. S/U grading.

Mr. Chien, Mr. Yamamoto

231. Hispanic Mental Health Issues and Treatment (2 units). Prerequisite: consent of instructor. Course highlights mental health issues and needs of Hispanics through seminars and videotapes dealing with historical comparison of psychiatry in Mexico and the United States, an analysis of the various theoretical perspectives regarding biopsychosocial behavior; distinguishing psychodynamic from cultural factors in the treatment of Hispanic patients; treatment of Hispanic families, couples, undocumented persons, and criminal justice system clientele.

Mr. Loya, Mr. Morales, Ms. Telles (W)

232A-232B-232C. Human Sexual Dysfunction (2 units each). Prerequisite: consent of instructor. One-year training and research course in the direct behavioral treatment of human sexual dysfunction. A combination of didactic material and supervised experience.

Mr. Golden (F,W,Sp)

234A-234B. Affective Disorders (1 unit each). (Formerly numbered 234A-234B-234C.) Prerequisites: graduate standing, consent of instructor. General topics related to the primary affective disorders (depression, mania, manic-depressive illness), including diagnosis, pharmacology, epidemiology, psychology, phenomenology, biology, and treatment. S/U grading.

Ms. Jamison

M235. A Laboratory for Naturalistic Observations: Developing Skills and Techniques. (Same as Anthropology M235G and Education M222A.) Lecture, three hours. Prerequisite: consent of instructor. The skill of observing and recording behavior in natural settings is taught, emphasizing field training and practice in observing behavior. Some of the uses of the observations and their implications for research in the social sciences are also discussed. Students are expected to integrate observational work into their current research interests. May be repeated for credit.

Mr. Gallimore, Mr. Turner, Mr. Weiner
236A-236B-236C. Psychology Interns Seminar (1 unit each). Prerequisite: consent of instructor. Current topics in clinical psychology. The group selects topics for discussion pertaining to psychopathology, diagnostic evaluation, and modalities of treatment. S/U grading.

Ms. Hoitroy M239. Psychopharmacology. (Same as Pharmacology M239.) Prerequisite: consent of instructor. A presentation of the effects of drugs on behavior, with special attention to drugs used in psychiatry and drug seeking behavior. Physiological and biochemical mechanisms underlying such actions are analyzed.

Reports on relevant current research are made.

Mr. Jarvik (Sp)

240. Assessment and Treatment of Afro-American Families (3 units). (Formerly numbered 240A-240B-240C.) Seminar, two hours. Prerequisites: graduate standing, consent of instructor. The course aids mental health professionals and trainees in the evaluation and treatment of Afro-American families in terms of their cultural milieu, historical background, and economic status. Didactic presentations by instructors and invited guests form the basis for supervised evaluation and case management with an Afro-American child and family.

Ms. Bass, Ms. Powell, Ms. Wyatt (F)

241A-241B-241C. Observation of Group Psychotherapy (2 units each). Prerequisite: consent of instructor. Principles of adult psychotherapy are explored through observation of an ongoing group, lectures, and discussion. Major theoretical emphasis on humanistic-group dynamic approaches.

Mr. Rosen (F)

242A-242B-242C. Child Psychotherapy Seminar (1 unit each). Prerequisite: consent of instructor. In 242A-242B videotaped diagnostic and treatment sessions of children and their families provide a framework for discussing such topics as diagnostic criteria, the beginning of treatment, the overdetermined nature of the symptom, transference phenomena related to parental conflict, initial recovery of the symptom, and the reality of the patient. In 242C the theory and principles of psychoanalytic work with parents are offered. Focus on initiating and maintaining the treatment of the family. Student presentations are encouraged in order to amplify clinical and theoretical issues.

Mr. Heinicke (F,W,Sp)

243A-243B-243C. Mental Retardation Interdisciplinary Core Curriculum (1 unit each). Prerequisite: consent of instructor. A survey series on major topics of mental retardation, covering epidemiology, nosology, assessment, health care delivery systems, basic genetics, nutrition, direct care, and special deficits. Presented in an interdisciplinary framework as generic information independent of discipline.

Ms. Gottlieb, Ms. Jacobs, Mr. Tymchuk (F,W,Sp)

244. Computers in Mental Retardation Research. Prerequisite: consent of instructor. An introduction to the basic nature of digital computer systems, with emphasis on their impact on society. The course is directed toward providing the student with a broad general understanding of applications and limitations of computers. Specific examples are drawn from clinical, research, and administrative applications within the mental retardation and child psychiatry program.

Mr. Guthrie, Mr. Hull (W)

245A-245B. Psychological Assessment of Severely Handicapped Children (3 units each). Lecture, 90 minutes per week; laboratory, 12 hours per week. Prerequisite: consent of instructor. Course 245A is prerequisite to 245B. The course focuses on the psychological assessment of the preschool child. Specific emphasis on the assessment of children with developmental disabilities and children who are generally thought to be "unteachable." The course has a practical orientation and involves two hours per week of supervised testing. S/U grading.

Ms. Freeman (F,W)

M246. Psychological Aspects of Mentality. Prerequisite: consent of instructor. (Same as Psychology M246.) Prerequisite: consent of instructor. Discussion of the psychological aspects of mental retardation, including classification, description, etiology, theory, prevention, treatment, assessment, modern and future developments, and input from other disciplines (ethics, law, religion, welfare systems).

Ms. Jacobs, Mr. Tymchuk

247A-247B-247C. Neurological and Psychological Bases of Behavior (1 unit each). Discussion, laboratory, and discussion of research in neurological and psychological bases of behavior. Focus on initiating and maintaining the treatment of the family. Student presentations are encouraged in order to amplify clinical and theoretical issues.

Mr. Buchwald, Mr. Levine (F,W,Sp)

248. Research Rounds in Mental Retardation and Developmental Disabilities (1 unit). Seminar, two hours per week; laboratory, one hour per week. Prerequisite: consent of instructor. Monthly session consists of presentation of a patient and discussion of research approaches relevant to that patient. Staff members from various disciplines and invited speakers present their research. S/U grading.

Mr. Levine

249A-249B. Language Disorders of Childhood (3 units each). Prerequisite: consent of instructor. Course reviews language disorders in children, their relationship to normal maturational patterns and to other aspects of behavior, the critical period hypothesis, universals of language development, environmental factors affecting language acquisition, neuromotor mechanisms underlying speech and language, diagnostic methods, graduate star-medical, and approaches to diagnosis and language training.

Ms. Baitaxe

251. Laboratory Exercises in the Techniques of Mammalian Cell Culture. Laboratory, twelve hours. Prerequisites: graduate or medical student standing, consent of instructor. The course provides a working knowledge of the techniques and biochemistry of mammalian cell lines in culture through laboratory exercises involving the propagation and manipulation of differentiated and undifferentiated continuous mammalian cell lines. S/U grading.

Mr. Haggerty

253. Seminar: Child Development (1 unit). Prerequisite: consent of instructor. The seminar is divided into three sections: theories of development, systems of child development, and chronological aspects of child development. Presentation of assigned readings by the students plays a major role in each session.

Mr. Cantwell

M254. Counseling Families of Handicapped Children (2 units). (Same as Social Welfare M254.) Prerequisite: consent of instructor. Techniques and issues in counseling families through evaluation, feedback, and treatment. Social and psychological stresses on family unit, professional's reactions, community resources, and issues of genetic counseling, placement, and developmental disabilities.

Ms. Gottlieb (W)

256. Basic Clinical Child Psychopathology (1 unit). Prerequisite: consent of instructor. Weekly seminars covering the basic clinical aspects of child psychopathology. Readings are provided as basis of discussion on topics including interviewing of parents and children, diagnosis, and related syndromes.

Mr. Cartwell

257A-257B-257C. Diagnostics and Therapeutics of Language Disabilities (3 units each). Prerequisites: consent of instructor. The course is directed toward the language specialist seeking training in the developmental disabilities of language and includes training in diagnostic techniques and therapy approaches. Focus is placed within the framework of total behavior. The clinical practicum includes individual case supervision, a review of pertinent literature, and a discussion of research topics. Students are required to complete a clinical research project in psycholinguistics and neurolinguistics.

Ms. Baitaxe (F,W,Sp)

259. Legal and Ethical Issues in Developmental Disabilities (3 units). Prerequisite: consent of instructor. Discussion of current laws in mental retardation and developmental disabilities. Ms. McGuire, Ms. Salmgren, Ms. ethical codes, issues, how to resolve them, videotape, discussion of cases.

Ms. Jacobs, Mr. Tymchuk

264. Biobehavior: Theory, Research, and Clinical Applications of Linguistics. Prerequisite: consent of instructor. Introduction to concepts and techniques of biobehavior, including review of experimental literature and applications to various clinical problems (hypertension, headache, panic, and anxiety, acute and chronic pain, behavioral disorders, etc.). Training in the use of portable biobehavioral devices. Consideration of research and clinical issues.

Mr. Shapiro

265. Mind and Brain in Evolution (2 units). Prerequisites: consent of instructor. A survey of the fossil evidence on the organic evolution of the brain and the implications of that evidence for the evolution of mind and intelligence. Quantitative approaches are emphasized. Mr. Shapiro

266. Psychophysiological Research (1 unit). Seminar, 90 minutes. Prerequisite: consent of instructor. Discussion of ongoing laboratory research. Issues include concepts, experimental design, measurement, and data analysis. Current topics include regulation of physiological and subjective reactions to stress, pain, discrimination and control of blood pressure, and behavioral regulation of postural hypotension.

Mr. Shapiro

M268. Behavioral Management of Pain Problems (2 units). (Same as Anesthesiology M268.) Prerequisite: consent of instructor. Discussion of current knowledge in the behavioral assessment and management of acute and chronic pain problems. The behavioral perspective is integrated with related physiological and medical considerations.

Mr. Cantwell

271. Ethology of Motivation and Conditioning. Basic facts and concepts of motivation and learning in animals are presented in the framework of ethological and neurophysiological approach. Classical and instrumental conditioning procedures are discussed, with particular attention to the motivational variables.

Ms. Soltysik

M272. Psychological Anthropology. (Same as Anthropology M272.) Lecture, three hours. Prerequisites: consent of instructor. The course reviews current knowledge in psychological anthropology, both theoretical and methodological. Areas of interest include such things as culture and theory, culture and personality, and culture psychiatry. The course also deals with development of cultural relativism and the unconscious process as they are related to culture. Topics vary from quarter to quarter. May be repeated for credit.

Mr. Edgerton

M273. Social Relations, Illness, and Health. (Formerly numbered 273.) Prerequisite: one upper division course in anthropology, sociology, or psychology. Social structural factors that influence how health is defined and illness experienced, managed, and treated in the U.S. and abroad. Topics include the determinants of household health, institutional issues in the delivery of health services, and gender and health.

Ms. Browner (Sp)
274. Neurophysiology and Behavior (3 units). Prerequisites: graduate standing, consent of instructor. The course provides an analysis of strategies and approaches used to study behavior of mammalian organisms. Special emphasis on recent developments in electrophysiological recording techniques in behavioral and development-related research. Topics include classical and contemporary brain functions. In Progress grading. Mr. S. Levine

275A-275B. Sociobiology Seminar (2 units each). Prerequisite: consent of instructor. The course is designed to review in detail sociological theory as it applies to adult bonding behavior: kin-selection theory, reciprocal altruism theory, mate selection theory, and bond strategy theory. Bonds are viewed primarily from a biological and psychological perspective. In Progress grading. Mr. McGinnis

277. From Research to Practice: Biobehavioral Contributions (2 units). Prerequisite: consent of instructor. An overview of biobehavioral research as it is currently translated into therapeutic and preventive practice across disciplines. S/U grading. M. Serafinides

278. Clinical Psychopharmacology Research. Discussion, two hours; laboratory, two hours. Prerequisites: experience in a psychiatric facility, involvement in a psychiatric research project. Directed research and clinical experience at the graduate level. Clinical skills are taught in the practical setting of ongoing psychopharmacology research projects. Discussion of clinical case problems and ongoing psychopharmacology research projects, and of proposed new projects focusing on practical problems, design, methodology, procedures, and instrumentation. M. May

280. Quantitative Analysis of Ethnographic Data. Prerequisite: graduate standing. The course provides didactic and experiential training in quantification and analysis of ethnographic data, including principles of psychological scaling and techniques of behavioral measurement as applied to ethnographic data and applications. Credit is applied toward the multiple aspects of group process on a psychiatric inpatient ward. M. Nihira

282. Schizophrenia (2 units). Prerequisite: consent of instructor. Clinical evaluation and treatment of schizophrenia and associated disorders; selection of appropriate medication for individual patients. Emphasis on the application of natural selection for human behavior. In Progress grading. 233A-233B-293C. Sexual Abuse Seminar (1 unit each). Prerequisite: consent of instructor. The course reviews the interdisciplinary evaluation and treatment of sexually abused children and their families: recognition; reporting requirements and procedures; childhood advocacy; incidence and phenomenology; interviewing techniques; the physical examination; treatment modalities; such as individual, family, group therapies, and self-help; family dynamics; special needs of the developmentally disabled; the adult molested as a child; understanding the perpetrator and controversial issues. M. Johnson, M. Moan, M. Powell

288. Current Topics in Biobehavioral Sciences (1 to 4 units). Prerequisite: consent of instructor. Current issues in the biobehavioral sciences are offered on a selective basis depending on instructor and topical relevancy of topics. See Schedule of Classes for topics and instructors. May be repeated for credit.

402. Childhood Psychosis Journal Club (1 unit). Prerequisite: consent of instructor. Discussion of basic and applied research issues related to childhood psychosis by a series of speakers. Readings are suggested for each topic. M. Sigman

403. Individual Case Supervision (1 to 4 units). Prerequisite: consent of instructor and department consent. The case supervision will be conducted and directed by an instructor and student prior to enrollment; additional information and proposal forms are available in the Office of Education, B7-349 (NH). One-to-one supervision of individual therapy cases. Includes analyses of patient treatment, treatment techniques, assessment of cases, informal didactic sessions on personality theory, and applications to patient management.

410. Community Meeting: 2-West (1 unit). Prerequisites: assignment to 2-West, consent of instructor. One-hour course is devoted to individual experience in leading a large group of patients and staff. Leadership is by rotation. A 30-minute process didactic session follows.

413. Treatment Planning Meetings (1 unit). Prerequisite: consent of instructor. The course focuses on treatment and management problems posed by inpatients. Course topics include treatment planning, and interdisciplinary skills are discussed. M. Slawson


424. Ward Millie Meeting (1 unit). Prerequisite: consent of instructor. Millie course meetings are designed to provide a didactic and experiential teaching component to multiple aspects of group process on a psychiatric inpatient ward.

425. Admission and Disposition Conference (1 unit). Prerequisite: consent of instructor. Child preadmission and pre-treatment issues associated with inpatient family prior to hospitalization. Admission deals with multiple issues of consent and potential for hospitalization. Admission and disposition include personal, cultural, environmental issues, and possible psychiatric involvement. Students will be introduced to the concepts of psychiatric diagnosis and possible psychiatric involvement both from a psychological and social systems perspective. S/U grading.

426. Psychology Interns Psychosomatic Liaison Conference. Prerequisite: consent of instructor. Psychology interns case conference of psychosomatic issues. The course is used extensively. Case supervision is available. Participants must be treating one or more cases. Mr. Weilsh

429. Child Outpatient Team (1 unit). Prerequisite: consent of instructor. Weekly team meetings to coordinate the clinical activities of the trainees in the Children's Outpatient Team. In Progress grading. Cases will be situated in the context of multiple aspects of group process on a psychiatric inpatient ward. Emphasis on structural family therapy. Alternative models may be reviewed during the year. Videotape is used extensively. Case supervision is available. Participants must be treating one or more cases. Mr. Gottlieb

449. Supervision in Systematic Parent Training (2 units). Lecture, 90 minutes; discussion, one hour. Prerequisites: graduate standing, consent of instructor. Advanced clinical trainees learn behaviors and techniques of assessment and treatment of parent-child problems. The sessions are composed of lectures, case presentations, and workshops on the various skills necessary. Mr. Frankel

462A-462B-462C. School Intervention and Psychometric. Prerequisite: consent of instructor. The course provides knowledge of children in schools through (1) field experiences, (2) a didactic program, (3) group supervision. Each trainee chooses a local elementary, junior, or high school as the site for field experience in consultation. Supervision focuses on assessing the needs of the school and initiating the consultation. Seminars consider theories of consultation, systems theory as applied to the schools, the organizational aspects of the schools, the professional roles represented in the school (e.g., teachers, counselors, principals, etc.), and their special problems. In Progress grading. Mr. Cantwell

465. Pediatric Psychopharmacology Seminar (1 unit). Prerequisite: child psychiatry fellow or consent of instructor. Designed for all fellows in child psychiatry. Course objectives are to acquaint trainees with (1) the background of childhood psychopharmacology, (2) the role of the Psychopharmacology Department in the evaluation of drugs with children, and (3) clinical indications for various psychotropic drugs. Clinical supervision of individual cases is provided along with seminars and discussions of various articles. Mr. Cantwell

474. Child Erectile Dysfunction (No credit). Prerequisite: consent of instructor. Each month one second-year child psychiatry fellow presents a major clinical problem. Senior faculty discusses preclinical. The presenting trainees are expected to cover the pertinent literature and to assemble the basic elements of information on the case or problem at hand. Most sessions are eligible for Continuing Medical Education credit.
485. Medical Genetics Seminar (No credit). Prerequisites: introductory course, consent of instructor. A weekly lecture series intended for those interested in genetics or in the specific topic to be presented. Speakers are invited for their expertise or recent work in some special area related to genetics and may be from UCLA or elsewhere. Discussion and questions from the audience are encouraged.

Ms. Crandall and the Staff

596P. Individual Studies in Psychiatry (2 to 12 units). Prerequisite: consent of instructor and department chair, based on a written proposal outlining the course of study. The proposal is to be structured by instructor and student at time of initial enrollment. Additional information and course proposal forms are available in the office of education, B7-349 NPI. Directed individual research and study in psychiatry at the graduate level.

Mr. Tymchuk

Radiology

460 / Psychiatry and Biobehavioral Sciences / SCHOOL OF MEDICINE

Radiological

AR-259 Center for Health Sciences, 825-7811

Professors
Zoran L. Barbaric, M.D. (Diagnostic Radiology)
Jorge R. Barrio, Ph.D. (Nuclear Medicine)
Leslie R. Bennett, M.D., Acting Chair
H. K. Huang, D.Sc. (Medical Imaging Division Chief and Biomedical Physics Program Director)
Norman S. MacDonald, Ph.D. (Nuclear Medicine)
Carol M. Newton, M.D., Ph.D.
Amos Norman, Ph.D. (Radiation Biology)
Robert G. Parker, M.D. (Radiation Oncology)
Michael E. Phelps, Ph.D. (Jennifer Jones Simon Professor of Biophysics), Nuclear Medicine and Biophysics Division Chief
James B. Smathers, Ph.D. (Radiation Oncology)
Milo M. Webber, M.D., LL.B. (Nuclear Medicine)
Gabriel H. Wilson, M.D. (MRI)
H. Rodney Winters, M.D., D.Sc. (Radiation Oncology)

Moses A. Greenfield, Ph.D., Emeritus
Richard F. Riley, Ph.D., Emeritus

Associate Professors
Edward J. Hoffmann, Ph.D., in Residence (Nuclear Medicine, Biophysics)
Sung-Cheng Huang, D.Sc. (Nuclear Medicine, Biophysics)

Assistant Professors
W. N. Paul Lee, M.D., in Residence (Pediatrics)
Juan F. Lois, M.D., Ph.D., in Residence (Diagnostic Radiology)

James Winters, M.D., Ph.D., in Residence (Diagnostic Radiology)

Adjunct Professors
J. Duncan Craven, M.D. (Diagnostic Radiology)
L. Stephen Graham, Ph.D. (Nuclear Medicine)

Adjunct Associate Professors
F. Eugene Holly, Ph.D. (Radiation Oncology)
Martin W. Herman, Ph.D. (Diagnostic Radiology)
Lawrence E. Williams, Ph.D. (Medical Imaging)

Adjunct Assistant Professors
Carolyn Kimme-Smith, Ph.D. (Medical Imaging)
Richard L. LaFontaine, Ph.D. (Diagnostic Radiology)
Nicholas J. Mankovich, Ph.D. (Medical Imaging)
Lee T. Myers, Ph.D. (Radiation Oncology)
James S. Whiting, Ph.D. (Medical Imaging)

Adjunct and Visiting Lecturers
David O. Findley, Ph.D., Visiting (Diagnostic Radiology)
Charles L. Moeller, Adjunct (Diagnostic Radiology)
Peter J. Rosemark, Ph.D., Visiting (Radiation Oncology)
Marilyn C. Wexler, M.S., Visiting (Radiation Oncology)

Scope and Objectives

The biomedical physics graduate program in the Department of Radiological Sciences offers training in four subspecialties: biophysics, medical imaging, medical physics, and radiation biology. Specialized facilities for training and research are available in the departmental
clinical laboratories, the Laboratory of Biomedical and Environmental Sciences, the Image Processing Laboratory, and a number of associated hospitals. Highly specialized equipment includes the biomedical cyclotron, the radiation oncology cyclotron, the positron emission tomography (PET) scanners, the stereotactic gamma irradiator, and a VAX 11/750 computer system with an image processor. Students are trained to work both as professional medical physicists and as independent investigators.

Graduates in biomedical physics can expect to engage in any combination of clinical service, consultation, research, and teaching. Biomedical physicists are usually employed in hospitals frequently associated with a medical school, where they are members of the academic staff. They are also in demand in high technology private industry engaging in research and development of diagnostic equipment. In government agencies, biomedical physicists are involved in the formulation and enforcement of regulations applied to the use of radiation in health care delivery.

Requirements for Graduate Degrees

Admission
In addition to the University's minimum requirements, candidates for admission are required to have a bachelor's degree with a major in a science. Also, it is expected that all applicants will have had (1) one year of college physics (calculus-based), plus the equivalent of Physics 8E, (2) two years of college mathematics (through differential equations), including calculus equivalent to Mathematics 31A, 31B, 32A, 32B, 33A, 33B, (3) one year of college chemistry and one quarter of biochemistry, (4) one course each in anatomy and physiology, (5) at least one course in computer science, and (6) one course in statistics. Deficiencies in the above courses must be removed prior to advancement to candidacy.

Scores from the Graduate Record Examination (GRE) Aptitude Test, taken in the last three years, should be sent to the department. Three letters of recommendation are required. If you already have a master's degree, one of the letters should be from your adviser.

A brochure describing the program in biomedical physics may be obtained from the Department of Radiological Sciences, Biomedical Physics Graduate Program, AR-259 CHS, UCLA, Los Angeles, CA 90024.

Master of Science in Biomedical Physics

Course Requirements
Eleven courses, including eight core courses (Radiological Sciences 200A, 200B, 203, 204, 205, 207, 209, 260A-260B), course 208, and Public Health 100A and 100B, are required for the M.S. degree. In addition, you must take Radiological Sciences 202A-202B-202C and three clinical rotations.

For some students with a medical physics background or a career objective other than a practicing medical physicist, a more sharply focused curriculum may be advised.

Courses 596 and 598 may be applied toward the degree. Eight units of 500-series courses may be applied toward the total course requirement, four units toward the minimum graduate course requirement.

Thesis or Comprehensive Examination Plan
You are required to write a thesis (Plan I) based on research project or to pass a comprehensive examination (Plan II) consisting of material selected from the core courses. The examination is offered at least once a year and may be repeated once.

Ph.D. in Biomedical Physics

Admission
Admission to the doctoral program requires (1) selecting a subspecialty, (2) passing either all of the core courses with grades of B or better or the M.S. comprehensive examination, and (3) passing a written subspecialty screening examination which may be repeated once. Completion of a master's program is not required.

Qualifying Examinations
The screening examination for admission to the Ph.D. program should be taken by the end of your sixth quarter in residence. Once the screening examination is passed and you have selected a research topic in your subspecialty for the dissertation, you should, within a reasonable time frame agreed on with the dissertation adviser, form a doctoral committee and schedule the first University Oral Qualifying Examination. This examination covers your mastery of the biomedical physics curriculum, particularly the areas of the proposed dissertation topic.

If you do not complete the dissertation within four years after taking the written screening examination, you may be required to take it again.

Final Oral Examination
The final oral examination, or dissertation defense, is required.

Upper Division Course

199. Directed Individual Study or Research for Undergraduate Students (2 to 4 units). Prerequisite: consent of graduate adviser (based on written proposal outlining the course of study or research). Directed individual study in biomedical physics for undergraduate students to be structured by faculty member and student at time of initial enrollment.

Mr. Mankovich (W)

210. The Physics of Medical Imaging. Prerequisites: courses 200A, 200B, 205, 207, 208A-208B, 208C-208D. An introduction to the recent advances in digital diagnostic imaging systems, with topics centered on instrumentation in nuclear magnetic resonance (NMR) imaging, computed tomography (CT), and digital radiography (DR). Mr. Huang (F)

Graduate Courses

200A. Physics and Chemistry of Nuclear Medicine. Prerequisite: consent of instructor. Nuclear structure, statistics of radioactive decay, nuclear radiations and their interaction with matter, nuclear decay processes, nuclear reactions, dosimetry, and compartment models. The physical and chemical properties of radioactive preparations used in nuclear medicine.

Mr. Hoffman (F)

200B. Instrumentation in Nuclear Medicine. Prerequisite: course 200A. Introduction to nuclear medicine instrumentation, including exterior probe systems, the autoradiographic method, liquid scintillation counters, scanners, and cameras; dosimetry of internally administered radioisotopes.

Mr. Graham (W)


Mr. Withers (F)

202A. Nuclear Medicine. Prerequisite: course 200B or consent of instructor.

202B. Diagnostic Radiology. Prerequisites: courses 200A, 205, and 208A-208B, or consent of instructor.

202C. Radiation Therapy. Prerequisites: courses 203, 204, 207, and 208A-208B, or consent of instructor.


Mr. Smathers (W)

204. Introductory Radiology Biology. Effect of ionizing radiation on chemical and biological systems.

Mr. Withers (F)

205. Physics of Diagnostic Radiology. Production of X rays, basic interactions between X rays and matter, X-ray system components, physical principles of medical radiography, radiographic image quality, fluoroscopy, image intensifiers, special procedures, X-ray protection. Laboratory experiments illustrate the basic theory.

Mr. LaFontaine (F)

206. Advanced Instrumentation: NMR, CT, and DR. Prerequisites: courses 200A, 200B, 209, 210. An introduction to the recent advances in digital diagnostic imaging systems, with topics centered on instrumentation in nuclear magnetic resonance (NMR) imaging, computed tomography (CT), and digital radiography (DR).

Mr. Huang (F)

207. Radiation Protection and Health Physics. Concepts in radiation protection, the recommendations of the International Commission on Radiological Protection, radiological measurements, the maximum permissible dose levels. Shielding calculations. The layout and design of radiographic installation.

Mr. Norman (F)

208A-208B. Medical Physics Laboratory. Prerequisites: courses 203, 205. Techniques for measuring ionizing and nonionizing radiation, applications to problems in radiological sciences.

Mr. Herman (F, 208B; Sp, 208A)

209. Digital Techniques in Radiological Sciences. Lecture, three hours; laboratory, one hour. Prerequisites: one course in Fortran or another computer language, consent of instructor. The course covers the basic principles of the digital technology used in radiological sciences. It introduces the concepts and provides the experience necessary to undertake radiological research in a diverse computing environment. The relationship between computers and diagnostic equipment is discussed with regard to data acquisition, equipment interfacing, and data analysis.

Mr. Mankovich (W)


Mr. Huang (Sp)
211. Medical Ultrasound. Lecture, 90 minutes; laboratory, two hours. Prerequisite: at least one course in calculus; for non-Radiological Sciences Department students: consent of instructor. Designed to teach graduate biomedical physics students to calibrate ultrasound medical imaging equipment, to evaluate new instrumentation and research in the field, and to initiate their own research into clinical ultrasound studies.

Ms. Kimme-Smith (W)

M230. Computed Tomography: Theory and Applications. (Same as Biomathematics M230.) Prerequisite: consent of instructor. Computed tomography is a three-dimensional imaging technique being widely used in radiology and is becoming an active research area in biomedicine. The course covers basic principles of computed tomography (CT), various reconstruction algorithms, special characteristics of CT, physics in CT, and various biomedical applications.

Mr. S. Huang (W)

260A-260B. Seminar in Medical Physics (2 units each). Joint critical study by students and instructors of the fields of knowledge pertaining to medical physics. Periodic contributions are made by visiting scientists. Research in progress is discussed.

Mr. Norman (W, 260A; Sp, 260B)

266A-266B-266C. Seminar in Nuclear Medicine (2 units each). Topics of current interest in nuclear medicine. Intended for physicians, radiation physicists, and graduate students.

Mr. Bennett (F,W,Sp)


Mr. Barrio (Sp)

481. Angiographic Techniques (1 unit). Laboratory. Prerequisite: consent of instructor. Beginning radiology residents are taught basic techniques of angiographic procedures, utilizing animals.

Mr. Snow

495. Special Studies in Biomedical Physics. Discussion, two hours; laboratory, four hours. Teaching assistance in graduate laboratory courses under the supervision of a faculty member. S/U grading.

596. Research in Biomedical Physics (4 to 12 units). Directed individual study or research. Only one 596 course may be applied toward the M.S. degree requirements. May be repeated for credit.

597. Preparation for Ph.D. Qualifying Examinations. May not be applied toward the M.S. degree requirements. May not be repeated. S/U grading.

598. Research for and Preparation of M.S. Thesis (4 to 12 units). Two 598 courses (or 596 and 598 combined) may be applied toward the M.S. degree requirements. May be repeated. S/U grading.


Surgery

72-125 Center for Health Sciences, 825-7017

Chair
W. Eugene Stern, M.D.

Executive Vice Chair
Eric W. Fonkalsrud, M.D.

Vice Chairs
E. Carmack Holmes, M.D. (Sepulveda VA)
Edward P. Passaro, Jr., M.D. (Wadsworth VA)
Samuel E. Wilson, M.D. (Harbor-UCLA)
George J. Wittenstein, M.D. (Olive View)

Scope and Objectives

The Department of Surgery instructs medical students during all four years of medical school. Students are expected to obtain a broad knowledge of diseases treated by surgical means, to understand the pathology of these conditions, the therapy that may be applied, and the anticipated results of treatment. They are also encouraged to learn about the impact of surgical illness on the patient and the patient's family and environment.

Third-year students participate in a 12-week core clerkship in clinical surgery. UCLA, Wadsworth VA, and Harbor-UCLA Medical Centers provide individual sections, each of which has a special orientation depending on the patient population and the individual staff. During the fourth year, students may elect to take additional clinical clerkships 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 the Announcement of the UCLA School of Medicine.
The UCLA School of Nursing is proud of its national and international reputation for excellence. Challenging clinical programs are carefully designed to prepare our students to meet the obligations which arise out of the ever evolving changes that are taking place in the health care delivery arena. Our faculty members are selected for their expertise in the clinical and research areas, as well as their dedication to transmitting knowledge to our students. This combination assures the preparation of highly skilled and competent practitioners of nursing.

The School of Nursing places a strong emphasis on research. We encourage the development and implementation of basic and applied research by both students and faculty, in order to provide a sound basis for the practice and improvement of patient care. The support technology to facilitate this endeavor is well established in the school. Faculty and students find their academic lives enriched by these opportunities.

We consider our curriculum progressive and innovative. As we have become attuned to the great social changes taking place around us and the needs of our clients who represent a broad ethnic, racial, and cultural spectrum, we have taken particular pains to insure a strong emphasis on cultural diversity in our curricula.

We are proud to acknowledge that we march to the beat of a different drummer, and in so doing we remain in the forefront of nursing in preparing future leaders in the field.
School of Nursing

2-200 Louis Factor Building, 825-7181

Professors
Charles E. Lewis, M.D., Sc.D., Director
Sharon J. Reeder, R.N., Ph.D., Acting Dean and Associate Dean for Research
Agnes A. O'Leary, R.N., M.P.H., Emeritus
Donna L. Vredevoe, Ph.D.
Lulu Wolf Hassenplug, R.N., M.P.H., Sc.D., Emeritus
Dorothy E. Johnson, R.N., M.P.H., Emeritus
Harriet C. Moidel, R.N., M.A., Emeritus
Agnes A. O'Leary, R.N., M.P.H., Emeritus

Associate Professors
Kathleen A. Dracup, R.N., Ed.D.
Harriet C. Moidel, R.N., M.A., Emeritus
Dorothy E. Johnson, R.N., M.P.H., Emeritus
Lulu Wolf Hassenplug, R.N., M.P.H., Sc.D., Emeritus
Maria W. Seraydarian, Ph.D.
Betty L. Chang, R.N., D.N.Sc.
Jean A. C. Kerr, R.N., Ph.D.
Olive Y. Burner, R.N., Ph.D.
Donna F. Ver Steeg, R.N., Ph.D., Associate Dean

Emeritus
Kathleen A. Dracup, R.N., Ed.D.
Harriet C. Moidel, R.N., M.A., Emeritus
Dorothy E. Johnson, R.N., M.P.H., Emeritus
Lulu Wolf Hassenplug, R.N., M.P.H., Sc.D., Emeritus
Maria W. Seraydarian, Ph.D.
Betty L. Chang, R.N., D.N.Sc.
Jean A. C. Kerr, R.N., Ph.D.
Olive Y. Burner, R.N., Ph.D.
Donna F. Ver Steeg, R.N., Ph.D., Associate Dean

Assistant Professors
Loretta M. Birkhead, R.N., Ed.D.
Oliver Y. Burner, R.N., Ph.D.
Analys K. Derelian, R.N., D.N.Sc.
Maryalice B. Jordan-Marsh, R.N., Ph.D.
Jean A. C. Kerr, R.N., Ph.D., Assistant Dean for Student Affairs
Deborah Konika, R.N., Ed.D., Assistant Dean for Continuing Education
Susan M. Rudington, R.N., Ph.D.
Magandel R. McBride, R.N., Ph.D.
Adeline M. Nyamathi, R.N., Ph.D.
Rose M. Odom, R.N., D.N.Sc.
Pamela S. Thompson, R.N., Ph.D.
Juliet L. Tien, R.N., D.N.Sc.
Margaret A. Topf, R.N., Ph.D.

Clinical Assistant Professors
Genevieve A. Bahu, R.N., M.N.
Evelyn L. Gonzales, R.N., M.S.N.
Mirta E. Granville, R.N., M.S.N.
Barbara M. McCarthy, R.N., M.N.
Linda P. Sarne, R.N., M.N.
Mickie D. Welsh, R.N., M.S.N.

Adjunct and Visiting Lecturers
Elizabeth C. Aitchison, R.N., M.N., Visiting
Janet M. Boydston, R.N., M.N., Visiting
William R. Crawford, Ed.D., Visiting
Linda L. Faber, R.N., Ph.D., Visiting
Mary E. Grech, R.N., M.S., Visiting
Mary J. Hoban, R.N., M.N., Visiting
Sandra R. Kaler, R.N., M.S., Visiting
Celine Marsden, R.N., M.N., Visiting
Debra J. Nash, R.N., M.S.N., Visiting
Anna K. Omery, R.N., M.S., Visiting
Leslie N. Ray, R.N., M.N., Visiting
Judith V. Roach, R.N., M.N., Visiting
Esther F. Seeley, R.N., M.N., Adjunct
Irene M. Stuart, R.N., M.N., Visiting
Rose A. Vasta, R.N., M.S.N., Visiting
Ines E. Verzemnieks, R.N., M.S., Visiting

The UCLA School of Nursing gives direction to interested potential applicants through monthly open counseling sessions. If you are interested in the academic programs offered, you are urged to attend a counseling session or request a copy of the Announcement of the UCLA School of Nursing by writing to the Student Affairs Office, School of Nursing, 2-200 Louis Factor Building, UCLA, Los Angeles, CA 90024 (825-7181).

History and Accreditation
The School of Nursing was authorized by The Regents of the University in 1949 as one of the professional schools of the Center for Health Sciences at UCLA. This action paved the way for the development of an undergraduate basic program in nursing and made possible the establishment of a graduate program leading to the Master of Nursing degree. The baccalaureate program has been continuously approved by the California Board of Registered Nursing since 1949. The School of Nursing became an agency member of the Department of Baccalaureate and Higher Degree Programs of the National League for Nursing in 1952. The Accrediting Service of the National League for Nursing has granted full accreditation to both programs since 1954.

Degrees Offered
Bachelor of Science in Nursing (B.S.)
Master of Nursing (M.N.)

Bachelor of Science Degree
The baccalaureate program leading to the Bachelor of Science degree provides for a close interweaving of general and professional education. The physical, social, and emotional health aspects of nursing are emphasized throughout the curriculum. Clinical nursing experience under the guidance of faculty members is provided in hospitals, outpatient clinics, homes, and community health centers.

Credit by examination is available to qualified students on review of previous education. The School of Nursing curriculum affords the opportunity to sit for the California Registered Nurse licensing examination at the conclusion of your junior year. You must maintain a minimum GPA of 2.0 each quarter and must petition the Assistant Dean to enroll beyond the four quarter courses usually permitted. Since many states do not reciprocally honor California nursing licenses obtained prior to completion of a baccalaureate degree, students who plan to follow this sequence should contact the Assistant Dean of Student Affairs before the beginning of the freshman year for more complete details.

Admission
The School of Nursing strives to attain a culturally and ethnically diverse student population. Admission, beginning in the junior year, is based on scholarship, diverse life experiences, and disadvantage. You must have completed a minimum of 84 quarter units with an overall grade-point average of 2.8 or better and have three letters of recommendation. Diverse life experiences, including previous employment, volunteer work, and community service which reflect leadership, responsibility, multicultural involvement, multilingual abilities, and other unusual skills and knowledge are evaluated. Consideration is also given to social and economic disadvantage such as educational background, heavy work schedule during school, housing conditions, family responsibilities, and mastery of physical handicaps. Completed applications should reflect clearly identified career goals and documentation of your potential in nursing.

Applications for acceptance to the baccalaureate program must be filed no later than November 30 for the next Fall Quarter. The School of Nursing admits 25 students each Fall Quarter. In addition to the regular UC Undergraduate Application Packet which must be filed with the Office of Undergraduate Admissions and Relations with Schools, an application must be filed with the school by November 30. This application is available directly from the Student Affairs Office, School of Nursing, 2-200 Louis Factor Building, UCLA, Los Angeles, CA 90024.

You can find a discussion of the prenursing curriculum and prehealth advising in "Preparing for a Professional School" in Chapter 5.

Degree Requirements
The Bachelor of Science degree in Nursing is granted on fulfillment of the following requirements.

1. You must complete 45 required courses (180 quarter units) of college work and satisfy the general University requirements.

2. Of the required 45 courses, at least 21 courses must be in general education, including the courses listed under the "Prenursing
Curriculum’ in Chapter 5 on the College of Letters and Science.

(3) You must complete at least 25 courses (100 quarter units) of upper division coursework toward the degree, including Nursing 101, 104A, 104B, M105, 109, 120A through 120F, 184, 190A, 190B, 192, 193, 195, four electives, Public Health 100A, 180.

(4) You must maintain an overall grade-point average of C (2.0) or better in all courses taken while a student in the School of Nursing.

(5) You must complete all required nursing courses in the school and receive a grade of C or better in the following courses: Nursing 101, M105, 109, 120A through 120F, 190A, 190B.

(6) You must have been enrolled in the School of Nursing during the final three quarters of residence; the last nine courses must be completed while so enrolled.

Study Lists: You may not enroll in more than four courses per quarter unless a petition is approved in advance by the Assistant Dean.

Honors

Dean's Honors

Dean's Honors are awarded annually to undergraduate students completing the academic year with distinction. To be eligible you must achieve an overall grade-point average of 3.75 on a minimum of 36 graded units of work completed during the academic year.

Honors with the Bachelor's Degree

College honors are awarded at graduation to students with a superior overall grade-point average. The levels of honors and the requirements for each level are: Summa cum laude, an overall average of 3.85; Magna cum laude, 3.65; Cum laude, 3.50. To be eligible for college honors, you must have completed at least 90 University of California units for a letter grade.

School of Nursing Faculty Award

The Faculty Award for excellence in nursing, established in 1965, is awarded to a student graduating from the bachelor's and the graduate program with the highest grade-point average in all nursing courses.

Master of Nursing Degree

The School of Nursing offers graduate study leading to the Master of Nursing (M.N.) degree. Students contribute to improving nursing care through the application of advanced knowledge in nursing research, theory, and clinical practice. Throughout the program, the structure for nurse-client relationships and research is provided by the nursing process. This is a deliberative problem-solving activity which includes assessment, diagnosis, intervention, and evaluation. In addition to their clinical specialization sequence, students may elect courses in teaching consultation and/or administration as preparation to meet their specific career goals.

Admission

(1) You must have graduated from a recognized college or university having an NLN-accredited baccalaureate nursing program satisfactory to the School of Nursing and to the Graduate Division. If you have completed other curricula (e.g., graduated from a foreign institution), you may be required to enroll in certain undergraduate nursing courses which generally may not be applied toward requirements for advanced degrees.

(2) You must have status as a licensed registered nurse in the State of California.

(3) An upper division statistics course or a lower division statistics course with content equivalent to Public Health 100A must be completed before entering the school.

(4) An upper division nursing research course, taken at an NLN-accredited institution and equivalent to Nursing 193, must be completed before entering the school.

(5) Professional and/or academic competence in nursing attested through three letters of recommendation is required.

(6) A satisfactory scholarship record is required.

(7) Since written and verbal communication skills are basic to the practice of nursing, it is essential that students read, write, and speak English well. Foreign applicants from countries in which English is not the first language and medium of instruction, whether licensed registered nurses in the United States or not, are required to pass the Test of English as a Foreign Language (TOEFL) with a score of 550 or higher.

(8) All foreign applicants who are not licensed registered nurses in the United States, prior to consideration for admission, are required to pass the Committee on Graduates of Foreign Nursing Schools Examination (CGFNS).

In addition to the Graduate Division application, you must also file the Application for Admission to Graduate Study in the School of Nursing, available through the Student Affairs Office, School of Nursing, 2-200 Louis Factor Building, UCLA, Los Angeles, CA 90024. Application deadline is December 30 for both Fall and Spring Quarters. For information on admission to graduate standing, see Chapter 3.

Major Fields or Subdisciplines

The School of Nursing offers graduate studies in the following areas.

Maternal-Child Health: Maternity, pediatrics.

Medical-Surgical Nursing: Cardiopulmonary, general medical-surgical, nursing administration, oncology.

Primary Ambulatory Care / Family Nurse Practitioner: Family, gerontology, occupational health.

Psychiatric-Mental Health: Child mental health, community mental health, consultation liaison nursing, ethnic mental health, psychiatric nursing.

You may choose to add preparation in education or administration to your clinical requirement.

Course requirements for each specialty area are detailed below.

Degree Requirements

(1) A minimum of ten courses (40 units) in the Nursing 100, 200, 400, and 500 series is required; eight of the courses (32 units) must be taken in the School of Nursing, with five (20 units) in the 200 and 400 series. Additional coursework is required to fulfill the requirements for certain areas of specialization. A total of eight units of 500-series courses may be applied toward the total course requirement for the degree.

(2) A minimum grade-point average of 3.0 is required. A grade of B is required in graduate clinical nursing courses in order to advance to the next clinical course in a series.

(3) A minimum of three quarters of full-time enrollment (eight units per quarter) is required for academic residence.

(4) A comprehensive examination or a thesis is required.

Course Requirements

You must successfully complete a minimum of one course from each of the following areas:

(1) Research in nursing (Nursing 204).

(2) Nursing theory (Nursing 203, 210, 211, 212, M217, 221, 222, 223, 224, 225).

(3) Cultural diversity (Nursing M158, 196, 250, 251 or Public Health M283G).

(4) Clinical practice (Nursing 401, 402A, 402B, 403, 405, 414, 415, 416, 417, 421A through 429C, 440A, 440B, 441A, 441B). Courses selected from clinical practice must be completed in accordance with the requirements for clinical courses listed under each specialization.

(5) Clinical specialization.

Additional course requirements vary according to specialty area listed below.

Maternal-Child Health

Maternity Clinical Nursing Specialty: The goal of this specialty is to develop clinical specialists who take a leadership role in the nursing management of the childbearing family in all phases of the reproductive cycle. Students develop individualized plans of study to meet their personal and professional goals. Guided options include management of low risk pregnancy, alternative birthing, perinatal nursing,
and neonatal intensive care. This specialty requires a total of ten courses, including Nursing 203, 204, one cultural diversity course, 212, 223, 422A, 422B, 422C.

Pediatric Clinical Nursing Specialty: The goal of this specialty is to develop clinical specialists who take a leadership role in the nursing management of a selected group of children and families. Guided options include children and families experiencing acute/critical illness, chronic illness, developmental disabilities, neonatal adaptation, or oncology. This specialty requires a total of ten courses, including Nursing 203, 204, one cultural diversity course, 212, 223, 421A, 421B, 421C.

Medical-Surgical Nursing Specialty: The graduate of the medical-surgical nursing program is a specialist who takes leadership in the care of one or more specific groups of clientele whose health problems may be classified according to biological systems, pathology, acuity levels, medical treatment modalities, physical functions, or psychophysiological functions. Graduate students choose from existing clinical options (i.e., cardiopulmonary, general medical-surgical nursing, nursing administration, and oncology), and within each option they develop individualized plans of study to meet personal and career objectives.

Cardiopulmonary: This option is designed to prepare clinical nurse specialists to meet an increasing demand for improved health services for patients with cardiopulmonary diseases. Several years of experience in acute coronary/pulmonary care settings (medical and/or surgical) and/or in cardiac/pulmonary rehabilitation is highly recommended before entering this option. Graduates are expected to function as cardiopulmonary nurse clinicians, teachers, consultants, or research associates. This option requires a total of ten courses, including Nursing 204, 210 or 211, one cultural diversity course, 415, 423A, 423B, 423C.

General Medical-Surgical: The goal of this option is to prepare clinical specialists in general medical-surgical nursing. Students are encouraged to develop their own clinical focus in areas of acute chronic illness (e.g., critical care, trauma nursing, diabetes, neurological nursing, rehabilitation, geriatrics). At least two years of prior experience in medical-surgical nursing is highly recommended. This option requires a total of ten courses, including Nursing 204, one theory course, one cultural diversity course, 423A, 423B, 423C, one elective course, and one course from 203, 401, or 403.

Nursing Administration: The major objective of this option is to prepare middle- and top-level nursing administrators. Students learn to analyze the health needs of large groups of patients, organize and implement nursing services to meet those needs in collaboration with other disciplines, evaluate the results of nursing care delivery, and adjust nursing practice as required. The program requires six quarters of full-time study and a three-month summer administrative residency. Stipends for the summer residency program are provided by the institutions in which the residency is completed.

In addition to the required courses in the School of Nursing, students in this program take courses in the School of Public Health, Division of Health Services Management. Nursing administration students may select medical-surgical nursing as their clinical specialization. This program requires a total of 15 courses, including Nursing 204, one theory course, one cultural diversity course, 423A, 423B, 478A-478B, and six health services management courses (Public Health 130, 131, 139, 430, 431, 436).

Oncology: The comprehensive care of the cancer patient requires that nurses be prepared in theory and skills to minister to the patient's total needs — physical, psychological, emotional, social, and spiritual. This option is designed to prepare clinical nurse specialists for the interdisciplinary team responsibility for cancer prevention, treatment, and rehabilitation. In addition to clinical competence in preventive, detection, and rehabilitative phases of cancer care, emphasis is directed to the preparation of the clinician in research, teaching, administration, and consultation. This option requires a total of 11 courses, including Nursing 203, 204, one cultural diversity course, 401, 416, 417, 423A, 423B, 423C.

Primary Ambulatory Care/Family Nurse Practitioner Specialty: This specialty prepares family nurse practitioners to take a leadership role in the care of individuals throughout the lifespan. The focus is on collaborative practice to assure comprehensive, quality health care in care settings of the patient, while at home, or in the community mental health subspecialty, education, research, practice, and consultation roles in mental health settings. The specific bases for practice are theories and research on personality development, function and dysfunction, biopsychosocial theories of mental illness, and psychotherapeutic approaches to nursing assessment, diagnosis, and treatment of clients' responses to mental health problems.

This specialty encompasses two subspecialties: community mental health (nurse therapist and consultant to health agencies) and psychiatric nursing (nurse therapist who serves individuals, groups, and families with acute or chronic mental health problems). Options within the subspecialties include child mental health (needs and problems of various age groups of children and their families), consultation liaison nursing (needs and problems of clients and consultees in general medical inpatient and outpatient settings), and ethnic mental health (health needs and problems of selected ethnic groups).

Community mental health subspecialty requires Nursing 204, one theory course, one cultural diversity course, 405, 424A, 424B, 440A-440B, 441A-441B.

Psychiatric nursing subspecialty requires Nursing 204, one theory course, one cultural diversity course, 405, 424A, 424B, 424C, one elective course.

Child mental health option requires courses listed under the psychiatric nursing subspecialty plus Nursing 234, or courses listed under the community mental health subspecialty plus Nursing 234.

Consultation liaison nursing option requires Nursing 204, one theory course, one cultural diversity course, 403, 405, 424A, 424B, 440A-440B, 442.

Ethnic mental health option requires Nursing 204, one theory course, 260, 403, 405, 424A, 424B, 440A-440B, 441A-441B, five cognate courses, a seminar in cultural concepts.

Thesis Plan: If you choose the thesis plan, you normally select a thesis committee by the beginning of your third quarter or following completion of Nursing 204 and 205A or 205B. You are expected to complete the thesis within the normal five- to seven-quarter time period. Completed theses should be filed approximately two weeks before the awarding of the degree.
Comprehensive Examination Plan

The comprehensive examination is given in written form and is scheduled each quarter. You are eligible to take the examination during the quarter in which you are advanced to candidacy and may repeat the examination, in its entirety or in part, twice. You must complete all requirements for the degree within one calendar year after advancement to candidacy.

Upper Division Courses

101. Introduction to the Art and Science of Nursing (8 units). Lecture, four hours; discussion, two hours; laboratory, twenty-four hours; a tựotutorial laboratory/seminars, variable. An introduction to nursing theory and practice. Content includes the following modules: nursing process, pharmacology, interpersonal and technical skills. Methodology includes laboratory, lectures, discussion, seminars, a tựotutorial laboratory, and clinical application.

104A. The Behavior of Man in Health and Illness. An examination of the health-illness continuum from the framework of social and biological sciences. Content includes role theory, developmental theory, trans-cultural communication theory, and other theories relevant to nursing practice. Ms. Odum, Ms. Vasta.

104B. The Behavior of Man in Health and Illness. Prerequisite: course 104A. An examination of the health-illness continuum from the framework of illness as a stressor and the possible responses to stress. Content includes anxiety, pain, coping, stress disturbances, loss, and other responses relevant to nursing practice. Ms. Odum, Ms. Vasta.

M105. Human Physiology. (Same as Physiology M105.) Lecture, four hours; discussion, one hour. Prerequisite: nursing student standing or consent of instructor. Required of third-year nursing students. Lecture and discussion emphasizing a correlatively approach to anatomy and physiology of the human body.

109. Communication in Health Care. Lecture, two hours; laboratory, six hours. Study of basic communication and group process theory and its application to practice. Laboratory experience emphasizes development of each individual's ability to communicate effectively in a dyad and in a small group. Ms. Topf.


188. Seminar in Physiology (2 units). Prerequisite: course M105 or equivalent. Student presentation of selected topics in physiology based on recent monographs, review articles, and original research papers. Topics are designed to amplify and extend information presented in course M105 lectures. May be repeated for credit.

190A. Selected Area of Clinical Concentration (6 units). Lecture, two hours; laboratory, twenty hours. Prerequisites: courses 101, 104A, 104B, 120A through 120F. Beginning concentration in a clinical area of student's choice.

190B. Selected Area of Clinical Concentration (6 units). Lecture, two hours; laboratory, twenty hours. Prerequisites: courses 101, 104A, 104B, 120A through 120F. Beginning concentration in a clinical area of student's choice.

190A. Selected Area of Clinical Concentration (6 units). Lecture, two hours; laboratory, twenty hours. Prerequisites: courses 101, 104A, 104B, 120A through 120F. Beginning concentration in a clinical area of student's choice.

190B. Selected Area of Clinical Concentration (6 units). Lecture, two hours; laboratory, twenty hours. Prerequisites: courses 101, 104A, 104B, 120A through 120F. Beginning concentration in a clinical area of student's choice.

190A. Selected Area of Clinical Concentration (6 units). Lecture, two hours; laboratory, twenty hours. Prerequisites: courses 101, 104A, 104B, 120A through 120F. Beginning concentration in a clinical area of student's choice.

190B. Selected Area of Clinical Concentration (6 units). Lecture, two hours; laboratory, twenty hours. Prerequisites: courses 101, 104A, 104B, 120A through 120F. Beginning concentration in a clinical area of student's choice.

192. Physical Assessment of the Adult. Discussion, one hour; laboratory, three hours; individual study, three hours; laboratory, twenty hours. Emphasis on techniques for the physical assessment of the adult. Theories and methods of change and their applications to nursing. Principles of leadership, teaching-learning, health delivery systems, organization of nursing care, and patient advocacy.

196. Health Care Problems of Minority Group Members. Prerequisite: Sociology 1. Description and discussion of the special health care problems which members of minority groups face. These problems may be related to socioeconomic status as well as ethnic background and subcultural differences.

199. Special Studies in Nursing (2 to 16 units). Prerequisites: senior standing and/or consent of instructor. Individual study of a problem in the field of nursing. May be repeated for credit, but only four units may be applied toward the degree requirements. P/NP or letter grading.

Graduate Courses

Research in Nursing, Nursing Theory, and Cultural Diversity

203. Theoretical Frameworks for Nursing Practice. Comparative study of selected conceptual models of nursing and the recipient of nursing, with particular emphasis on the regulatory model, the adaptation model, the supplementary model, and the complementary model.

204. Research in Nursing: An Advanced Course. Prerequisite: course 193 or equivalent upper division basic research methodology course. The course focuses on complex research designs and analysis of multiple variables. Emphasis on techniques for control of variables, data analysis, and interpretation of results. The interrelationship of theoretical frameworks, design, sample selection, data collection instruments, and data analysis techniques is analyzed in depth. Content is assessed in terms of clinical nursing research problems.

205A. Qualitative Research Methods in Nursing. Prerequisite: course 204. Emphasis on nursing research designs utilizing the field method approach, ethnometodology, and/or inductive methods.

205B. Quantitative Research Methods in Nursing. Prerequisite: course 204. Emphasis on nursing research designs requiring statistical analysis of data.

210. Respiratory Physiology as It Relates to Nursing. Lecture, three hours; discussion, one hour; seminar. Prerequisite: upper division course in human physiology. An advanced treatment of the topic presented in lectures and seminars, with emphasis on current research. Application of knowledge to nursing problems is stressed.

211. Cardiovascular Physiology as It Relates to Nursing. Lecture, three hours; discussion, one hour; seminar. Prerequisite: upper division course in human physiology. An advanced treatment of the topic presented in lectures and seminars, with emphasis on current research. Application of knowledge to nursing problems is stressed.
212. Discontinuities in Family Health during the Reproductive Years. Lecture, two hours; discussion, one hour. An overview of selected problems with health connotations that are potentially disruptive to the family during childbearing years. Selected problems are examined in depth. Pertinent variables affecting the family's definition of the situation, resources, strategies for coping, and utilization of professional services are explored and their relevance for nursing practice is examined.

Ms. Reeder and the Staff

M217. Medical Anthropology. (Same as Anthropology M263.) Lecture, three hours. Prerequisite: course M158 or consent of instructor. Any of the topics covered in course M158 are selected each quarter for intensive literature review and independent projects. May be repeated for credit.

221. Theoretical Frameworks for Developmental Problems, Middle and Later Years. Aspects of life span development relevant to understanding health needs in middle and later years are studied. Changes in biological, cognitive, and psychosocial processes are explored, and implications for prevention and rehabilitative care are considered.

Ms. Putnam

222. The Concept of Grief and Loss. Lecture, three hours; laboratory, two to four hours. Prerequisite or corequisite: clinical nursing course. The course deals with the concepts and theories of grief and loss, with particular emphasis on the loss of a significant other. There are also discussions about death and the dying person, with the intent of assisting the care giver to deal more effectively with a person and/or family involved in a life-threatening experience.

Ms. van Servellen and the Staff

223. Management of Developmental Problems, Early Years. Lecture, two hours; discussion, two hours. Study of selected human developmental theories, hypotheses, and concepts as they relate to children. Problems relevant to nursing are examined through the critique of pertinent literature.

Ms. Verzemnieks and the Staff

224. Problems in Patient Motivation. The major purpose is an exploration of the phenomena which may occur when a person assumes the role of a sick patient.

Ms. Topf


Ms. Jordan-Marsh

234. Issues in Health Care. Prerequisite: consent of instructor. A comprehensive course dealing with present and future views of health care and the roles of health team members as viewed by society and influenced by societal values. Selected health care issues are debated by students utilizing an in-depth literature review on the issue.

Ms. Ver Steeg

250. Seminar: Nursing in Other Cultures. Prerequisite: consent of instructor. Discussion of anthropological principles which affect nursing care in a particular cultural environment. Individual research projects based on the medical problems found in such an environment and the projected nursing interventions relative to those findings.

Ms. Tien and the Staff

251. Nursing Care to Ethnic People of Color in the United States. Prerequisites: course 196 and graduate standing, or consent of instructor. Examines and evaluates selected theories from nursing and other sciences and their application to the delivery of intracultural and transcultural nursing care. Emphasis on value orientations, sociocultural perceptions and cognitions of health and illness, and ethnomedical health practices as predictive factors in analyzing health care delivery to ethnic people of color.

Ms. Tien

260. Seminar in the Integration of Cultural Concepts and Mental Health Nursing (2 units). Seminar, two and one-half hours (eight weeks). Prerequisites: course 424B, a minimum of two cultural diversity cognate courses, consent of instructor. Corequisite: course 403. Discussion of the concepts of culture, language, life-style, and health practices which influence the practice of primary care among Asian/Pacific, black, Hispanic/Latino, and Native American people.

Ms. Tien

264. Seminar in Primary Ambulatory Care. Corequisites: courses 402A and/or 402B, or consent of instructor. Discussion of the concepts of team practice, interprofessional and intraprofessional relationships, legal issues, and the socioeconomic aspects of primary care.

Ms. Ver Steeg

Clinical Practice

401. Nursing Assessment and Intervention. Lecture, two hours; laboratory, four to eight hours. Prerequisite or corequisite: course 203. Instruction and experience in the systematic assessment of patients for the identification of nursing problems. Discussion and evaluation of major modes of interventive practice.

Ms. Derdiarian
402A-402B. Primary Diagnosis for Nurse Practitioners. Lecture, four hours; laboratory, four hours; demonstration/practice, two hours. Prerequisites: successful completion of anatomy and physiology pretest, consent of instructor. Collection, analysis, and reporting of data used by hours. Pathology and physiopathology are integrated in a systems approach. Ms. Stuart and the Staff

403. Physical Assessment for Clinical Practice. Prerequisite: consent of instructor. An introductory study of the basic techniques of history taking and physical examination which are used in clinical practice as part of the total assessment process. Includes theory, demonstration, and practice of physical assessment methodology. Ms. Stuart and the Staff

404. Comprehensive Group Theory. Lecture, two hours; laboratory, two hours. The course offers an in-depth study of group dynamics and group therapy, applicable to any health service area. It focuses on the study and application of group theory and practice related to nursing. Ms. Birckhead and the Staff

M410A. Nursing Care of the Developmentally Disabled (Same as Psychiatry M472A.) Lecture, one hour; discussion, one to two hours; laboratory, ten hours minimum. Prerequisite: consent of instructor. Study of the handicapping conditions of childhood and their effects on the individual and the family. Content is based on normative developmental models with consideration for sociocultural diversity. Emphasis on prevention, systematic assessment, and planning of care for the individual and family. Introduction to the implementation of intervention strategies. Series of three courses integrates didactic material and clinical experience. Ms. Betz (F)

M410B. Nursing Care of the Developmentally Disabled. (Same as Psychiatry M472B.) Lecture, one hour; discussion, one to two hours; laboratory, ten hours minimum. Prerequisites: course M410A and/or consent of instructor. Study of the philosophical and conceptual models affecting care delivery for the developmentally disabled. Emphasis on intervention strategies necessary for primary, secondary, and tertiary prevention. Ms. Betz (W)

M410C. Nursing Care of the Developmentally Disabled. (Same as Psychiatry M472C.) Lecture, one hour; discussion, one to two hours; laboratory, ten hours minimum. Prerequisite: course M410C and/or consent of instructor. Exploration and participation in the assessment, planning, and delivery of health care to the developmentally disabled in a variety of settings. Emphasis on the expanded role of the nurse. Ms. Betz (Sp)

414. Current Perspectives in Respiratory and Cardiovascular Nursing (2 units). Lecture, one hour; discussion, one hour. Prerequisite: consent of instructor. Exploration of selected problems, trends, and issues in respiratory and cardiovascular health care, with emphasis on their significance for the clinical nurse specialist.

415. Assessment in Respiratory and Cardiovascular Nursing. Prerequisites: course 210 or 211, consent of instructor. Introduction to the basic methods of assessing respiratory and cardiovascular function in health and illness, with emphasis on their application in clinical nursing practice. Ms. Dracup

416. Oncology and Treatment of Cancer. Lecture, two hours; discussion, one hour; laboratory, eight to ten hours. Prerequisite: consent of instructor. Basic knowledge from biological, behavioral, and medical sciences for understanding the development, diagnosis, treatment, and prognosis of cancer. Nursing care management related to diagnostic and treatment modalities is stressed. Ms. Sarna

417. Systematic Approach to Oncologic Nursing. Lecture, two hours; discussion, laboratory, eight to ten hours. Prerequisites: course 416, consent of instructor. Nursing management of persons with various types of malignancies. The focus is on the assessment of special physical and psychosocial problems of patients with diagnoses of cancer in a specific site. The focus is also to provide the student with theoretical and technical skills necessary for the interventions of these problems. Ms. Sarna

421A. Clinical Nursing Care of Children. Discussion, two hours; laboratory, sixteen to twenty hours minimum. Prerequisites: courses 203, 223. The course focuses on the application of a theoretical model and the nursing process to a specific, identifiable patient population. Emphasis is placed on the selection, implementation, and evaluation of nursing interventions in children. Content consists of each aspect of the nursing process. Ms. Verzemnieks and the Staff

421B. Advanced Clinical Nursing Care of Children (8 units). Discussion, two hours; laboratory, twenty hours minimum. Prerequisite: course 421A. The course focuses on the role of the clinical specialist in pediatric nursing, with emphasis on the practitioner core of the role. Students identify a selected patient population or group of patients and present an intervention for the nursing process from assessment through evaluation. Content includes theoretical and practical issues related to the clinical specialist role. Ms. Verzemnieks and the Staff

421C. Specialization in Nursing Care of Children (8 units). Discussion, two hours; laboratory, twenty hours minimum. Prerequisite: course 421B. Required for the pediatric nursing specialization. The practitioner is a corequisite for students enrolled in a specialization in clinical nursing for children. Ms. Verzemnieks and the Staff

422A. Clinical Maternity Nursing. Discussion, two hours; laboratory, ten hours minimum. Prerequisites: one theory course, consent of instructor. Emphasis on developing skill in the utilization of the assessment, intervention, and evaluation phases of the nursing process. The assessment phase as it relates to the childbearing family is stressed, as is family-centered orientation. Theoretical models for the study of the family and the development of nursing practice are examined and utilized in care giving. Pertinent variables affecting care are identified, and the integration of health services for all segments of society are examined. Ms. Koniak

422B. Advanced Clinical Maternity Nursing (8 units). Discussion, two hours; laboratory, twenty hours minimum. Prerequisite: course 422A. The course provides an in-depth study of the nursing process as it relates to the assessment, intervention, and evaluative phases of the process. Teaching, counseling skills, and collegial relationships with coworkers are stressed. The health beliefs, orientations, and health behavior of clients from various cultural backgrounds is further examined and evaluated. The delineation and evaluation of researchable clinical questions are emphasized. Ms. Koniak

422C. Clinical Specialization in Maternity Nursing (8 units). Discussion, two hours; laboratory, twenty hours minimum. Prerequisite: course 422B. Clinical expertise continues to be refined and extended in one or more areas of the high-risk conditions and/or normal maternity care during the advanced course in the reproductive process as they relate to the assessment, intervention, and evaluative phases of the nursing process. Coordination of care, patient and family education counseling, and assessment of the patient care in particular is stressed. The delineation and development of researchable clinical questions are further refined. Ms. Koniak

423A. Clinical Medical-Surgical Nursing (2 to 4 units). Lecture, two hours; seminar, 90 minutes; laboratory, fifteen to thirty hours. Prerequisite: course 420 (may be taken concurrently), one theory course; for nonmedical-surgical specialization students: consent of instructor (may enroll for two units). An advanced course in the theory and practice of the nursing care of medical-surgical adult patients. Major emphasis on the introduction of assessment and diagnosis of nursing problems within the UCLA conceptual framework for nursing practice. The assessment focuses on physiological and psychosocial changes in clients as they move on the health-illness continuum. The course is based on the synthesis of knowledge from prerequisite theory courses, with particular emphasis on application in clinical practice. Students select a nursing model of their choice in working with clients in one of the following options: (1) cardiology, (2) general medical-surgical, (3) oncology. Ms. Nyamath and the Staff

423B. Advanced Clinical Medical-Surgical Nursing (2 to 8 units). Lecture, two hours; seminar, 90 minutes; laboratory, fifteen to thirty hours. Prerequisite: course 423A; for nonmedical-surgical specialization students: consent of instructor (may enroll for two units). Continued refinement of the nursing process and extension of professional knowledge and skills with a selected patient population. Emphasis on selection, utilization, and evaluation of interventions for nursing problems of medical-surgical patients. Students select a specific patient population for concentration in the course: (1) cardiology, (2) general medical-surgical, (3) oncology. Ms. Nyamath and the Staff

423C. Clinical Specialization in Medical-Surgical Nursing (2 to 8 units). Lecture, two hours; seminar, 90 minutes; laboratory, fifteen to thirty hours. Prerequisite: course 423B; for nonmedical-surgical specialization students: consent of instructor (may enroll for two units). Required for the medical-surgical specialization. Examination and implementation of the clinical nurse specialist role with a specific patient population and/or within a particular practice setting. Emphasis on the functional aspects of the role: practitioner, educator, consultant, researcher. Students select a specific patient population for concentration in the course: (1) cardiology, (2) general medical-surgical, (3) oncology. Ms. Omery and the Staff

424A. Clinical Psychiatric Nursing. Discussion, three hours; laboratory, eight to ten hours. Prerequisites: course 405, consent of instructor. Focus on the process of psychotherapy, with specific emphasis on the knowledge and skills of assessment and diagnosis. Content includes theories and techniques of practice. Ms. Kerr and the Staff

424B. Advanced Clinical Psychiatric Nursing (8 units). Discussion, three hours; laboratory, twenty hours minimum. Prerequisites: course 424A, consent of instructor. Refinement and extension of the process of psychotherapy, with emphasis on prevalent psychiatric health issues. Ms. van Sorell and the Staff

SCHOOL OF NURSING / 469
424C. Clinical Specialization in Psychiatric Nursing (8 units). Seminar, two hours; laboratory, twenty-four hours. Prerequisites: course 424B, consent of instructor. Required for the psychiatric nursing specialization. Supervised internship. Students select the setting and population.

Ms. van Servellen and the Staff

425A. Clinical Gerontological Nursing (4 or 8 units). Discussion, three hours; laboratory, fifteen to thirty hours. Prerequisite: one course in nursing theory. Principles and practice of assessment of psychosocial variables in health problems of elderly. Emphasis on integrated understanding of multiple variable influences in total health.

Ms. McBride, Ms. Stuart

425B. Advanced Clinical Gerontological Nursing (4 or 8 units). Discussion, three hours; laboratory, fifteen to thirty hours. Prerequisite: course 425A. Application of knowledge and skills of psychosocial nursing intervention in rehabilitation of the chronically ill aged.

Ms. McBride, Ms. Stuart

425C. Clinical Specialization in Gerontological Nursing (8 units). Discussion, three hours; laboratory, thirty hours maximum. Prerequisite: course 425B. Extension and demonstration of competencies in planning and implementation of nursing programs in health problems of the elderly.

Ms. McBride, Ms. Stuart

429A-429B. Preceptorship in Primary Ambulatory Care Nursing (8 units each). Lecture, three hours; discussion, three hours; laboratory, sixteen hours minimum. Prerequisites: courses 420A-420B, consent of instructor. Theory and clinical practice in nursing management and evaluation of health problems in a selected ambulatory population. Health maintenance is emphasized. Attention to the developmental and cognitive needs of clients in relation to family, social, and cultural structures.

Ms. Jordan-Marsh, Ms. Thompson, and the Staff

429C. Advanced Preceptorship in Primary Ambulatory Care Nursing (8 units). Lecture, two to three hours; discussion, two hours; laboratory, forty-four hours minimum. Prerequisites: courses 429A-429B, consent of instructor. Required of students who want to meet the requirements for preparation as a nurse practitioner as established by the California Board of Registered Nursing. Emphasis on the refinement and extension of assessment, management, and evaluation skills, family health care, and community health concepts. Placements provide the opportunity for in-depth focus on a specific group of health problems.

Ms. Murata and the Staff

440A-440B. Clinical Specialization in Community Mental Health Consultation. Lecture, three hours; clinical, ten hours. Prerequisites: course 424B, consent of instructor. Corequisites: courses 441A-441B. The study and application of mental health consultation theory and practices relevant to community mental health nursing. Focus on group consultation skills. The development of the nurse-consultant role in the interdisciplinary health team approach to mental health services. In Progress grading. Ms. Tien

441A-441B. Clinical Specialization in Community Organization. Discussion, three hours; clinical, ten hours. Prerequisites: course 424B, consent of instructor. Corequisites: courses 441A-441B. The course focuses on the process of community mental health assessment and program evaluation and planning for health services. Emphasis on health advocacy, prevention of mental illness, and planned change concepts. In Progress grading. Ms. Tien

442A. Liaison Nursing. Lecture, three hours; laboratory, ten hours. Prerequisites: courses 403, 440A-440B. Behavior of groups of individuals is studied from an intersystem framework. The student focuses on the interactions of the health care providers and clients in general hospitals, clinics, and community health agencies. Attention to the variables influencing the health care providers' assessments and interventions concerning the client's behavioral problems. This framework is utilized to evaluate the stability and direction of the organization as these are causally related to the system's effectiveness in the delivery of quality health care. The interrelatedness of such variables as human sciences, sociopolitical and cultural life-style factors of the system are examined.

Ms. Flasikerud

Functional Preparation

375. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member responsible for curriculum and instruction at the University. May be repeated for credit. S/U grading.

473. Generic Consultation (4 to 8 units). Discussion, three hours; laboratory, ten to twenty hours. Prerequisites: introductory and intermediate clinical practicums, one course in group dynamics and process, or equivalent. The study and application of consultation theory and practice relevant to nursing. Emphasis on the refinement of knowledge and skills necessary to establish a nursing role as an interdisciplinary consultative nursing consultant. The concepts presented are based on those theories from the following areas: group dynamics, learning, communication, change, and nursing process.

Ms. van Servellen and the Staff

475. Human Relations in Administration. A systematic study of the principles of human relations in administration, with emphasis on their application to the field of nursing.

478A-478B. Seminar in Nursing Administration. Discussion, four hours; laboratory, eight hours. Prerequisite: consent of instructor. In-depth discussion of key issues affecting nursing administration (e.g., classification of patients by nursing care need, impact of nursing registries on hospital nursing programs, certification of nurses for advanced clinical practice, quality assurance, legislative issues, emerging organizational forms for delivering nursing care, extended nursing roles). The course focuses on the integration of nursing and management theories for application in nursing service settings. Seminars are supplemented by field visits to residency sites to complete data collection for projects.

Ms. Burns

Special Studies

596. Directed Individual Studies for Graduate Students (4 to 8 units). Prerequisite: consent of instructor. Opportunity for graduate students in nursing to pursue special research interests. May be repeated for credit, but only four units may be applied toward the M.N. degree requirements. S/U grading.

597. Individual Study for Comprehensive Examination (4 to 8 units). Individual study for comprehensive examination. May be repeated once for credit, but only four units may be applied toward the M.N. degree requirements. S/U grading.

598. Research for Thesis (4 to 8 units). Prerequisite: consent of instructor. May be repeated for credit, but only four units may be applied toward the M.N. degree requirements. S/U grading.
Public health is that field of the health sciences which is concerned with understanding, preventing, and controlling disease, and with promoting health in populations. Its goal is to ensure that the protection and improvement of the health of the public is accomplished by the most efficient and effective means consistent with equity for all individuals.

The mission of the UCLA School of Public Health is to develop, integrate, and apply pertinent knowledge from the biological, physical, and social sciences to enhance community health. In this context health is defined as a positive condition requiring not only the control of disease but also the presence of sufficient physical and mental vigor to promote well-being and improve the quality of life. To fulfill this mission the school (1) provides education for future public health professionals, (2) conducts research to define, protect, and improve health and health services, and (3) contributes knowledge, expertise, and service to the community.

Seven areas of study are offered: behavioral sciences/health education, concerned with the study and implementation of behavior which prevents disease and enhances health; biostatistics, which develops statistical and analytic techniques for public health use; environmental and occupational health sciences, which elucidates health hazards in the general environment and in the workplace; epidemiology, concerned with the nature, extent, and distribution of disease and health in populations; health services, concerned with the organization, quality, and distribution of health care; nutritional sciences, concerned with identifying essential components of diet and promoting good nutritional practices; and population and family health, which identifies health problems of and promotes health in high-risk groups such as women, children, the poor, and the disadvantaged.

Students are prepared for careers in professional public health in the public and private sector, in health agencies, hospitals, industry, and voluntary organizations, as well as for careers in research and teaching.
16-071 Public Health, 825-5516

Professors
Abdelmonem A. Alifi, Ph.D. (Biostatistics)
Rosalyn B. Allen-Slater, Ph.D. (Nutritional Sciences), Assistant Dean for Academic Affairs
Lawrence R. Ash, Ph.D. (Infectious and Tropical Diseases)
Allan Ralph Barr, Sc.D. (Infectious and Tropical Diseases)
Emil Berkanevich, Ph.D. (Behavioral Sciences and Health Education)
Judith Blake, Ph.D. (Fred H. Bixby Professor of Population Policy)
Lester Breslow, M.D., M.P.H. (Health Services)
Robert H. Brook, M.D., Sc.D. (Health Services)
Potter C. Chang, Ph.D. (Biostatistics)
Virginia A. Clark, Ph.D. (Biostatistics)
Irvin Gushner, M.D., M.P.H. (Population and Family Health)
Roger Detels, M.D., M.S. (Epidemiology), Dean<br>Willard J. Dixon, Ph.D. (Biostatistics)
John Edmond, Ph.D. (Nutritional Sciences)
Alfred H. Katz, D.S.W., M.A. (Population and Family Health)
E. Fielding, M.D. (Nutritional Sciences and Health Education)
John F. Schacher, Ph.D.
Frank F. Tallman, M.D.

Associate Professors
Carol S. Aneshensel, Ph.D., Acting (Population and Family Health)
Linda B. Bourque, Ph.D. (Epidemiology, Population and Family Health)
E. Richard Brown, Ph.D. (Behavioral Sciences and Health Education)
Albert Chang, M.D., M.P.H. (Population and Family Health)
Shan Cretin, Ph.D., M.P.H. (Health Services)
William G. Cumberland, Ph.D. (Biostatistics)
Cliris A. Davos, Ph.D. (Environmental and Occupational Health Sciences)
Sander Greenland, Dr.P.H. (Epidemiology)
William C. Hinds, Sc.D. (Environmental and Occupational Health Sciences)
Isabelle F. Hunt, Dr.P.H. (Nutritional Sciences)
Mohammad G. Mustafa, Ph.D. (Environmental and Occupational Health Sciences)
Susan C. Scribshaw, Ph.D. (Population and Family Health)
Judith M. Siegel, Ph.D., M.S.Hy. (Behavioral Sciences and Health Education)
Jane L. Valentine, Ph.D. (Environmental and Occupational Health Sciences)
Barbara R. Visscher, M.D., Dr.P.H. (Epidemiology)

Assistant Professors
Dean B. Baker, M.D., M.P.H. (Epidemiology)
James M. Cameron, Ph.D. (Health Services)
Joseph S. Coyne, Ph.D. (Health Services)
Virginia F. Flack, Ph.D. (Biostatistics)
Robert W. Haile, Dr.P.H. (Epidemiology)
Philip I. Harber, M.D., M.P.H. (Epidemiology)
Michael R. Jones, Ph.D. (Nutritional Sciences)
Marlene Lugg, Ph.D. (Health Services)
Glen A. Melnick, Ph.D. (Health Services)
Donald E. Morisky, Sc.D., M.S.P.H. (Behavioral Sciences and Health Education)
Gary A. Richwald, M.D., M.P.H. (Population and Family Health)
Michael A. Vojvacky, Ph.D., M.P.H. (Behavioral Sciences and Health Education)

Lecturers
Jean L. Mickey, Ph.D. (Biostatistics)
Florence C. McGuicken, M.S., Emeritus

Adjunct Professors
Ellen Alkon, M.D., M.P.H.
Linda Beckman, Ph.D., M.S.
Edith M. Carlisle, Ph.D. (Nutritional Sciences)
Arthur Chung, M.D.
Brian E. Henderson, M.D.
Leona M. Libby, Ph.D. (Environmental and Occupational Health Sciences)
Thomas Mack, M.D., M.P.H. (Epidemiology)
Joseph P. Newhouse, Ph.D. (Health Services)
John M. Peters, M.D., M.P.H., Sc.D.
Ruth J. Roemer, J.D.
John E. Ware, Ph.D. (Health Services)

Adjunct Associate Professors
Davida Coady, M.D., M.P.H.
Edward J. Faeder, Ph.D. (Environmental and Occupational Health Sciences)
Alfred C. Marcus, Ph.D.

Adjunct Assistant Professors
Allyson R. Davies, Ph.D. (Health Services)
Daniel Ershoff, Dr.P.H.
James Greenwood, Ph.D., M.P.H.
Sander Greenland, Dr.P.H. (Epidemiology)
William G. Cumberland, Dr.P.H. (Epidemiology)
Sander Greenland, Dr.P.H. (Epidemiology)
Bart B. Sokolow, D.Env. (Environmental and Occupational Health Sciences)

Adjunct and Visiting Lecturers
Omar Aji, M.D., Visiting<br>Nancy H. Allen, M.P.H., Adjunct<br>Gregory W. Aponte, Ph.D., Visiting (Nutritional Sciences)
Linda M. Blanchard, M.P.H., Adjunct<br>Stewart B. Farnum, Dr.P.H., Visiting<br>Michael L. Bobrow, B.Arch., Visiting<br>Helene G. Brown, B.S., Visiting<br>Wen Ping Chang, M.D., M.P.H., D.M.Sc., Visiting<br>Roger A. Clemens, Dr.P.H., Visiting (Nutritional Sciences)

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Requirements for Graduate Degrees

Admission

Application forms and the Announcement of the UCLA School of Public Health, as well as descriptive brochures and applications for the Environmental Science and Engineering Program, may be obtained by writing to the Office of Student Affairs, School of Public Health, 16-071 Public Health, UCLA, Los Angeles, CA 90024. Both the School of Public Health Application for Admission to Graduate Status and the Graduate Division application must be completed. Three letters of recommendation are required, two from former professors and one from an employer (if no employer, three former professors) before an application is considered complete. It is your responsibility to ensure that the application file is complete.

The published deadline for graduate applications is January 14, 1986, for Fall Quarter 1986 admission. Applications received after the deadline will have considerably reduced opportunities for admission and financial aid.

Applicants must meet the University minimum requirement of an acceptable bachelor's degree with a B average in upper division coursework and/or prior graduate study. Except for the Division of Population and Family Health, prior field experience is not required as a condition of admission, although a background of public health experience may be considered in your evaluation. In addition, you must be accepted by and accommodated in the division of the Department of Public Health in which you wish to study. If you need help in deciding on a division, you should speak to the staff in the Office of Student Affairs.

Applicants to the School of Public Health must perform satisfactorily on a recent Graduate Record Examination (GRE), Medical College Admission Test (MCAT), or Dental Admission Test (DAT) Aptitude Test. (Note: The Nutritional Sciences Division requires GRE scores. MCAT or DAT scores are accepted only for applicants already holding M.D. or D.D.S. degrees.) Refer to the UCLA Application for Graduate Admission, Fellowship and Financial Aid for the Test of English as a Foreign Language (TOEFL) requirement for foreign applicants. Applicants at the master's level require a minimum combined (verbal and quantitative) score of 1100. Applicants at the doctoral level need a minimum combined (verbal and quantitative) score of 1200. The analytical section is not required. The Biostatistics Division has different criteria for evaluating performance on aptitude tests for its master's and doctoral degrees. No screening examination is required for admission; however, specified courses are required by the Biostatistics, Environmental and Occupational Health Sciences, and Nutritional Sciences Divisions (see below). If your undergraduate coursework has been deficient in breadth of fundamental training, you must take specified undergraduate courses after admission.

Master's Applicants

In addition to the above general requirements, you must also have satisfied one of the following requirements for admission to the master's curriculum:

1. Graduation with a bachelor's degree from an approved college or university and/or
2. Graduation with a doctoral degree from an approved professional or other health-related school (the Dean must approve the applications of all students holding doctoral degrees).

Your prior program of study should include adequate preparation in mathematics, physical sciences, biological sciences, and social sciences, and typically include two courses each in mathematics, biological sciences, social sciences; one course in physical sciences; and others that constitute an adequate preparation for the proposed area of specialization.

If your prior work in the biological, physical, mathematical, and social sciences does not constitute adequate preparation for your proposed area of specialization, you must include courses in those sciences in your graduate program; these may not be applied toward the minimum requirements for the degree.

Specific Concentration Requirements

1. Students concentrating in environmental and occupational health sciences should have a bachelor's (or master's) degree in chemistry, physics, biology, engineering, or other appropriate field. Coursework should include three quarters of general chemistry (including quantitative analysis) and two quarters of organic chemistry and/or biochemistry, mathematics through calculus, three quarters of biological sciences, and three quarters of physics.

2. Students whose field of concentration is to be nutritional sciences should have a bachelor's degree in biological or chemical sciences or an appropriate field, and three quarters of general chemistry (including quantitative analysis), three quarters of organic chemistry and/or biochemistry, mathematics through calculus, three quarters of biological sciences (including microbiology and physiology), and two quarters of physics. Substitutions for these requirements will be considered for applicants with an otherwise superior academic background.

3. Applicants interested in the health services management program in the Division of Health Services must be interviewed by a member of the faculty of the program. Prior to enrollment, you must demonstrate a basic competency in accounting either by taking an introductory accounting course or by passing a waiver examination administered by the program.
(4) Applicants interested in the population and family health program must have some prior experience in the health field (paid or volunteer).

(5) For admission to the Master of Science in Biostatistics program, you must have completed a bachelor's degree. Majors in mathematics, computer science, or a field of application in biostatistics are preferred. Undergraduate preparation for the program should include Mathematics 31A, 31B, 32A, 32B, 33A, 33B (second-year calculus), or the equivalent.

**Master of Public Health**

The M.P.H. is a professional degree in the field of public health. You are expected to focus on public health practice and to acquire a broad knowledge related to professional skills.

**Course Requirements**

You must complete at least one year of graduate residence at the University of California and a minimum of 11 full courses, at least six of which must be graduate courses and at least two of which must be 400-series courses. Only one 596 course (four units) may be applied toward the six graduate courses; 597 and 598 courses may not be applied toward the degree. No more than 18 full courses may be required for the degree.

Mandatory core courses include Public Health 100A or 101A, 112 (114 for epidemiology majors), 130 (130D for health services majors), and 150 or 155. Each core course may be waived if you have taken a similar course elsewhere and can pass the waiver examination. In addition to the core courses, at least three courses (two or four units) outside your area of specialization are strongly recommended. Only courses in which you receive a grade of C- or better may be applied toward the requirements for a master's degree. You must maintain an average of no less than 3.0 (B) in all courses required or elected during graduate residence at the University of California.

**Areas of Specialization**

Areas of specialization and typical course plans, in addition to mandatory courses, are listed below.

**Behavioral Sciences and Health Education**

Public Health 182, 482 (eight units), and five courses (20 units) from 282, 287, 296, 481, and 181 or 484 are required. In addition, two to three elective courses from the list of specialty areas are required. Individual and experimental courses may not be applied toward the required course units. Additional courses may be elected, in consultation with your faculty advisor, from within the department or in other schools/colleges at UCLA. Normally two years or six quarters are needed to complete the course requirements. Candidates with a prior doctoral degree or advanced preparation in a related field may complete an M.P.H. degree in one year. In addition, it is possible for students to elect an additional area of concentration in another division.

**Biostatistics**

Required courses include Public Health 100A, 100B, 100C, and 100D, or 101A, 101B, and 101C; 200A; 401E or 401F or 401G; 402A, 402B (satisfies the field training requirement); three courses from 403, 404, 405, 406. Courses 211A and 211B are recommended. Elective courses should be selected in public health, biomathematics, or mathematics.

**Environmental and Occupational Health Sciences**

Required courses include Public Health 150, 153 (required for students who have not taken a course in microbiology), 154, 156, 253A, 255 and 256 (may be repeated for credit), 400, 450, 459. Elective courses should be selected in your area of specialization and in public health, engineering and applied science, chemistry, biology, management, architecture and urban planning, and medicine.

After, or simultaneous with, fulfillment of the core (divisional and schoolwide) requirements, you take courses with emphasis in water quality; environmental management; air pollution; environmental epidemiology; environmental sciences and engineering; industrial hygiene; or environmental toxicology.

Students specializing in the environmental epidemiology track should substitute courses 114 and 211A (prerequisites for advanced epidemiology courses) for course 112 (see M.P.H. course requirements). Course 110 must be taken concurrently with course 114 unless the waiver examination is passed.

**Epidemiology**

**Infectious and Tropical Diseases**: Required courses include Public Health 100B, 210, 211A, 211B, 212H, 216A, 216B, 218B, 220A, 220B, 222 (must be taken each quarter), 400 (for predoctoral students), 596 (for postdoctoral students). Doctoral students holding a doctorate in an appropriate biomedical science may petition for waiver of course 400. You must submit a report on a project related to infectious and tropical diseases.

**Methodology/Chronic Diseases**: Required courses include Public Health 100B, 210, 211A, 211B, 400 (for predoctoral students), 596 (for postdoctoral students), two or four units in behavioral sciences, and two additional courses from 211C, 212E, 212G, 212I, 212J, 213, 215A, 215B, 217, 221, 223, 225, 226, 227, 410A, 410B, 414. (Physicians and other postdoctoral students in an appropriate biomedical science may petition for waiver of course 400.) You must submit a report demonstrating competence in epidemiologic methodology.

**Health Services**

Note: The Division of Health Services is examining the curriculum with a view to its revision. Information regarding requirements for graduation may be subject to change.

**Health Information Systems** is a two-year program with individually determined requirements for students interested in the design, implementation, management, and evaluation of data systems in a wide range of health and health-related organizations. A summer internship is required.

**Health Services Management**: Management of organizations that deliver personal health care services, including hospitals, mental health and long-term care facilities, clinics, HMOs, and other health service providers. Admission to the program requires one course in accounting; prior coursework in management theory, economics, and statistics is highly recommended. Required courses include Public Health 131, 133, 139, 400, 431, 432, 433, 434, 437, 443D, 596. Courses 134, 232, 443E, Management 260B, 411 are recommended. Elective courses are selected in consultation with your faculty advisor.

Students are admitted only in Fall Quarter. After three quarters of academic coursework, you are placed in an administrative residency for nine and one-half months and return to campus for coursework the Spring Quarter prior to graduation. Residencies are offered by various types of local health care facilities; students receive a stipend of $1,200 – $1,300 per month.

Interested students should request the program announcement by calling 825-5773.

**Health Services Organization**: An M.P.H. is available as a one-year program for students with prior doctoral degrees. Recommended courses are determined on an individual basis. No summer internship is required.

**Nutritional Sciences**

Emphasis is on community nutrition. Required courses include Chemistry 152 or Biological Chemistry 101A and 101B, Public Health 165 or 261A, 260E, 260F, 260G, 260H, 262 or 263 (may be repeated for credit), 400, 460, 461, 463A, 463B. Public Health 162, 163, 167, 264E, 264F, 462 are recommended. Electives should be selected from Public Health 100B, 100C, 166A, 166B, 181, 270, Biology CM156, 177.

Of the courses listed above, at least six graduate courses (at least two must be in the 400 series) and at least one seminar course (262, 263) are required.

A minimum of 56 units is required. It is expected that after the first quarter you will take a seminar each quarter (except for the quarter in which courses 400 and 463B are taken).
Population and Family Health
Emphasis is on population, family health and family planning, reproductive and women's health, maternal and child health, international health (including nutrition). Two tracks are available — domestic and international (primary health care). You are required to complete at least 16 units for health professionals or 20 units for generalists) of divisional courses offered in selected tracks, plus Public Health 125, 171A, 400, 596. Elective courses are selected in consultation with your faculty adviser. Students without a professional health degree are required to complete at least 60 units for the M.P.H. degree; students with a professional degree may graduate with a minimum of 48 units.

Comprehensive Examinations
You must pass two comprehensive examinations, one in the area of specialization, and a centrally administered written examination in the general field of public health. If you fail either examination, you may be reexamined once. The schoolwide core course comprehensive examination is administered twice each academic year, usually the first Saturday in May and November. The examination in the major field is administered by your division.

Field Training
Field training in an approved public health program is required of candidates who have not had prior relevant field experience. A minimum of four units, but no more than eight, is required.

Interdivisional International Health
The school offers several options for foreign or domestic students interested in international health. Faculty in all divisions of the school are actively involved in health-related programs in foreign settings, and many departments on campus have international, health-related interests and courses relevant to health occupations in cross-cultural settings.

If you are interested, specify the division most relevant to your skills area on your application, clearly indicating your international interests. You will be given an appropriate adviser and directed to the international health committee, which is interdivisional and promotes internationally oriented training and research. Its members consult with interested students and attempt to optimize the learning experience. Applicants with particular interest in primary health care, including maternal and child health, family planning, applied nutrition, family health program planning, administration and evaluation, and refugee health, are advised to apply to the Division of Population and Family Health.

Cooperative Degree Programs
Following are descriptions of combined programs of study leading to the M.P.H. degree. In the articulated degree programs listed below, no course may be used for credit toward more than one degree.

M.A.-African Area Studies/M.P.H.
The School of Public Health and the African Area Studies Program have an articulated degree program whereby you can work sequentially for the master's degree in African area studies and a master's degree in public health. By planning the major field emphasis in public health while working toward the M.A. in African Area Studies, it may be possible to shorten the amount of time it would normally take to complete both degrees.

Students interested in this articulated program should write to the Assistant Graduate Adviser, African Studies Program, UCLA School of Public Health.

M.A.-Latin American Studies/M.P.H.
The School of Public Health and the Latin American Studies Program have arranged an articulated degree program, organized to permit specializations within the M.A. and the M.P.H. degrees, with the award of both degrees after approximately three years of graduate study. Qualified students apply to the graduate adviser of the Latin American Studies M.A. degree program and to a relevant area of public health, such as (1) environmental and nutritional sciences, (2) epidemiology, (3) health education, (4) population and family health.

Potential applicants should contact the Graduate Adviser, Latin American Studies, Latin American Center, UCLA, and/or the Office of Student Affairs, UCLA School of Public Health.

M.B.A./M.P.H.
The School of Public Health, Division of Health Administration, and the Graduate School of Management offer a three-year concurrent degree program designed for students who desire a management career in health care and related fields and who wish in-depth professional preparation for such a career. The program reflects the combined interest of employers, faculty, and students who have recognized the increasing challenges facing managers in the health care industry and the need for individuals who are skilled in dealing with these challenges. Students should request all application materials from the M.B.A. Admissions Office, Graduate School of Management.

Preventive Medicine Residency Program
An accredited residency in general preventive medicine is available to physicians through the School of Public Health. The residency is designed to prepare qualified physicians for leadership roles in public health practice and preventive medicine teaching and research. Completion of the program can lead to board eligibility in public health and general preventive medicine — a specialty recognized by the American Board of Preventive Medicine.

The residency currently consists of at least two years of academic training and supervised field training in preventive medicine. The first year is comprised of formal studies for the Master of Public Health (generally in either epidemiology or health services). Other areas may be considered on an individual basis. Application must be made simultaneously for both the residency and admission to the School of Public Health for the M.P.H.

The field training year is individually organized for each resident's particular interests and needs. A variety of opportunities is available at UCLA and in the Los Angeles area, including close working relationships with the Los Angeles County Department of Health Services, the UCLA Mark Taper Center for Health Enhancement, and the Jonsson Comprehensive Cancer Center.

Residents may also undertake studies toward qualification for a more advanced degree in public health — the Dr.P.H. or Ph.D. — or do research in collaboration with members of the faculty. Physician applicants who have completed M.P.H. studies at an accredited school of public health may be admitted directly into the field training year. For further information, contact the Office of Student Affairs, UCLA School of Public Health.

Master of Science in Public Health
The Master of Science program provides research orientation within the general field of public health. It includes the preparation of a thesis or major written report.

Course Requirements
You must complete at least one year of graduate residence at the University of California and a minimum of ten full courses, at least five of which must be graduate courses in the 200 or 500 series. Only one 596 course (four units) and one 598 course (four units) may be applied toward the total course requirement; only four units of either course may be applied toward the minimum graduate course requirement. Public Health 597 may not be applied toward the degree requirements. No more than 18 full courses may be required for the degree.

Mandatory core courses include Public Health 100A, 100B, and 112 (114 for epidemiology.
majors). Each core course may be waived if you have taken a similar course elsewhere and can pass the waiver examination.

Only courses in which you receive a grade of C— or better may be applied toward the requirements for a master's degree. You must maintain an average of no less than 3.0 (B) in all courses required or elected during graduate residence at the University of California.

**Areas of Specialization**

Areas of specialization and typical course plans, in addition to mandatory courses, are listed below.

**Behavioral Sciences and Health Education**

Public Health 181, 182, 281, and four to six divisional core courses (selected from an approved list) are usually required. Electives, selected in consultation with an adviser, must include the Public Health 283 series and research methods courses. Normal program length is six quarters.

**Environmental and Occupational Health Sciences**

Required courses usually include Public Health 150, 153 (required for students who have not had a course in microbiology), 154, 156, 253A, 255 and 256 (may be repeated for credit), 258, 459, 598 (a maximum of one course may be applied toward the minimum total course requirement), one course in biological chemistry (a specific course may be listed in the specialty track area). Elective courses should be selected in your area of specialization and in public health, biological chemistry, physical sciences, engineering and applied science, chemistry, biology, microbiology, law, and pharmacology.

At least five of the approximately 13 courses must be graduate level (200 and 500) courses. In addition, you must complete a laboratory project and thesis.

After, or simultaneous with, fulfillment of the core (divisional and schoolwide) requirements, you may take courses with emphasis in water quality; environmental management; air pollution; environmental epidemiology; environmental sciences and engineering; industrial hygiene; or environmental toxicology.

Students specializing in the epidemiology track should substitute courses 114 and 211A (prerequisites for advanced epidemiology courses) for course 112 (see M.S. course requirements). Course 110 must be taken concurrently with course 114 unless the waiver examination is passed.

**Epidemiology**


Course 130 (for students planning to enter the Dr.P.H. program or to practice epidemiology in a health department) is recommended. Electives should be selected from courses 116, 214, 219, and other relevant courses in public health and biomedical sciences.

*Methodology/Chronic Diseases*: Required courses usually include Public Health 210, 211A, 211B, 221, plus one full course in each of demography, biostatistics, data management, and topic specific epidemiology (courses 116, 212E, 212G, 212H, 212I, 212J, 213, 214, 215A, 215B, 225, 226, or others). Courses 130 (for students planning to enter the Dr.P.H. program or to practice epidemiology in a health department), 410A, 410B are recommended. Relevant elective courses should be selected in public health and biomedical sciences.

**Health Services**

Note: The Division of Health Services is examining the curriculum with a view to its revision. Information regarding requirements for graduation may be subject to change.

Emphasis is on health planning, health policy analysis, health services research for clinicians.

**Planning**: Public Health 134, 138, 243, 248, 403, 444B, one course from the field of health financing, law, or public sector approved by your adviser, one evaluation course, three management courses, and a summer internship are usually required. Courses 100C, 100D, 131, 137, 139, 232, 233, 235, 238, 239, 240, 247, 281, 287, 430, 434, 438, 440A, 446, 447D, 447E, 447F are recommended.

**Policy Analysis**: Public Health 134, 138, 233, 238, 243, 403, one course from the field of health financing, law, or public sector approved by your adviser, one evaluation course, two management courses, and a summer internship are usually required. Courses 100C, 131, 137, 139, 181, 232, 235, 239, 240, 247, 281, 430, 434, 437, 438, 440A, 446, 447D, 447E, 447F are recommended.

**Research**: Public Health 136A, 136B, 231, 232, 233, 234A-234B, 235, 238 are usually required. Courses 131, 134, 138, 236, 240, 446, 447D, 447E, 447F are recommended. Electives, selected in consultation with your adviser, should be chosen from recommended courses and others. A summer field placement (minimum ten weeks) is required following the first three quarters of study. The equivalent of 18 full courses and six quarters in residence are required for completion of the M.S. degree.

**Nutritional Sciences**

Emphasis is on nutritional biochemistry. Required courses usually include Biological Chemistry 101A or 201A, 101B or 201B, Public Health 260E, 260F, 260G, 260H, 261A, 261B, and 262 and 596 (may be repeated for credit). Public Health 162, 165, 264E, 264F are recommended. Elective courses should be selected from Physiology 100, Public Health 100C, 166A, 166B, 167, 161, 461, 462, Biology 177, Biological Chemistry M261.

You must complete a thesis. A minimum of 52 units is required; five of the courses listed above must be graduate (200- or 500-series) courses. It is expected that after the first quarter you will take a seminar each quarter.

**Thesis Plan**

If the thesis option is approved, a thesis committee is established. The committee approves the thesis prospectus before you file for advancement to candidacy. The thesis must be acceptable to the thesis committee.

**Comprehensive Examination/Report Plan**

If the comprehensive examination/report option is approved, a guidance committee of three faculty members is appointed. A written comprehensive examination on your major area of study must be passed. If you fail, you may be reexamined once.

The preparation of a major written research report is required; it must be approved by the guidance committee which also must certify successful completion of all degree requirements.

**Master of Science in Biostatistics**

**Course Requirements**

The M.S. degree requires a minimum of nine graduate and upper division courses, of which at least five must be graduate courses in the 200 and 500 series. The five required graduate courses must be in biostatistics or mathematical statistics, including at least three courses in biostatistics.

**Areas of Specialization**

Areas of specialization and typical course plans are listed below.

**Biostatistical Health Data Management**

Unless previously taken, the following courses must be included in the degree program: Program in Computing 1, Public Health 101A, 101B, 101C, 200A-200B-200C, 203A, 203B, 403, 404 or 405, Mathematics 150A-150B-150C (in exceptional circumstances, Mathematics 152A-152B and additional directed reading may be substituted). One public health course in a division other than Biostatistics is selected with your adviser's consent.

Other courses in biostatistics or mathematical statistics, or in related areas such as biology, physiology, public health, management, or mathematics, are selected with your adviser's consent.

A written report and written comprehensive examination covering the above course material are required.
Biostatistics
Unless previously taken, the following courses must be included in the degree program: Public Health 101A, 101B, 101C, 200A-200B-200C, 204E, 402A, 402B; any two courses from M201E, 201F, 201G, 201H, 201J, M201K, 201M; Mathematics 150A-150B-150C (in exceptional circumstances, Mathematics 152A-152B and additional directed reading may be substituted).

Other courses in biostatistics or mathematical statistics, or in related areas such as biology, physiology, public health, management, or mathematics, may be selected with your adviser's consent.

A written report and written comprehensive examination covering the above course material are required.

Comprehensive Examination Plan
The thesis plan is not used. The written comprehensive examination is in your major field only. It is taken during the Spring Quarter of the academic year of your Public Health 200A-200B-200C sequence. Normally no more than one reexamination after failure is allowed.

Master of Science in Preventive Medicine and Public Health
The program is not admitting new students at this time.

Doctor of Environmental Science and Engineering
The program leading to the D.Env. degree is administered and housed in the School of Public Health. Information on the program follows the public health course listings below.

Doctor of Public Health
The Doctor of Public Health (Dr.P.H.) is the highest professional degree for the public health generalist. You are expected to focus on public health practice and to acquire broad knowledge related to professional skills. The dissertation is of an applied, practical, problem-solving nature and must demonstrate your knowledge related to professional skills. The recommended program includes additional courses in biostatistics, demography, and epidemiology beyond those required for the M.P.H.; courses or directed group study in specialized areas of infectious and chronic disease epidemiology or application of epidemiology to health planning, management, and/or policy; laboratory or clinical studies in medical, health, or biological sciences.

Epidemiology
The recommended program includes additional courses in biostatistics, demography, and epidemiology beyond those required for the M.P.H.; courses or directed group study in specialized areas of infectious and chronic disease epidemiology or application of epidemiology to health planning, management, and/or policy; laboratory or clinical studies in medical, health, or biological sciences.

Six full graduate courses (200 or 400 series) in at least two divisions other than your major division are required for breadth. The major division requires an additional area of concentration which may be either inside or outside the school.

Biostatistics
A written evaluation examination of all students entering the doctoral program from outside the division is required and must be successfully completed before the end of your first year in the program (if not taken prior to entering). Courses covered by this and other examinations are determined in consultation with your adviser and the division faculty. You are encouraged to participate in the biostatistics consulting laboratory for one quarter each year. Six full graduate courses (200 or 400 series) in at least two divisions other than your major division are required for breadth. The major division requires an additional area of concentration which may be either inside or outside the school.

Electives, selected in consultation with your adviser, should be chosen from courses in mathematics, biomathematics, survey research methods, operations research, computer data processing, and other appropriate areas.

Environmental and Occupational Health Sciences
Recommended courses are determined in consultation with your adviser. Six full graduate courses (200 or 400 series) in at least two divisions other than your major division are required for breadth. The major division requires an additional area of concentration which may be either inside or outside the school.

Nutritional Sciences
Recommended courses include Biological Chemistry 101A or 201A, 101B or 201B, Public Health 260E, 260F, 260G, 260H, 261A, 262 or 263 (may be repeated for credit), 265 (may be repeated for credit), 400, 460, 461, 462, 463A, 463B, 495, 596. Conversational Spanish is also recommended.

Six full graduate courses (200 or 400 series) in at least two divisions other than your major division are required for breadth. The major division requires an additional area of concen-
tation which may be either inside or outside the school (e.g., biology, biostatistics).

Population and Family Health

Course content for the major field includes courses needed for the divisional M.P.H., the divisional doctoral seminar, and two advanced courses in research methodology. Beyond the master’s degree requirements, a minimum of 48 units (four quarters with an average of 12 units each) is required. Of these, at least 20 units must be in this division, in addition to the divisional doctoral seminar.

Six full graduate courses (200 or 400 series) in at least two divisions other than your major division are required for breadth (you may petition to include up to two 100-level courses). The major division requires an additional area of concentration which may be either inside or outside the school.

Qualifying Examinations

Before advancement to candidacy, you must pass written examinations in the major field, prepared and administered by the guidance committee or by the faculty of the division. Normally no more than one reexamination after failure is allowed. The doctoral committee is nominated after you have made a tentative decision on a dissertation topic. The doctoral committee administers the University Oral Qualifying Examination after you have successfully completed the written examinations.

Final Oral Examination

A final oral examination is required of all candidates.

Ph.D. in Public Health

The Ph.D. is the highest research degree in public health for the student who desires in-depth knowledge in the area. Depth of knowledge and research skills are stressed. The dissertation must demonstrate your ability for independent scholarly investigation.

There is no foreign language requirement for the Ph.D.; teaching experience is recommended but not required.

Admission

In addition to the University minimum requirements, the department requires (1) satisfactory performance on the Graduate Record Examination (GRE); (2) completion of the M.S. in Public Health or an appropriately related field (students with an M.P.H. need to satisfy the requirements of the M.S. in Public Health before or after admission); (3) at least a 3.0 junior/senior undergraduate grade-point average, at least a 3.5 GPA in graduate studies or demonstrated superiority in graduate work, and at least a B in each of the mandatory core courses; (4) a positive recommendation by a division of the Department of Public Health; (5) approval by the doctoral admissions committee and the department Chair. Screening examinations may be required by each division.

In the Division of Behavioral Sciences and Health Education, you must satisfy the divisional core requirements for the M.P.H. or M.S. in Public Health (depending on your background) at a level acceptable for the doctoral program. Coursework may be waived by examination if equivalent courses have been taken elsewhere.

Major Fields or Subdisciplines

Behavioral sciences and health education, environmental and occupational health sciences, epidemiology, health services, and nutritional sciences.

Course Requirements

The courses needed to pass the written examination in your major field depend on the division and field you select.

The minor must be in a field cognate to the major field in public health. A strong minor is required, with at least four full graduate courses (16 units) or equivalent from a department that grants a Ph.D. Biostatistics is the only division considered cognate to a major in public health.

Qualifying Examinations

Before advancement to candidacy, you must pass a written examination in the major field, complete the requirements in a minor field, and pass an oral qualifying examination on the major and minor fields. Normally no more than one reexamination is allowed. When you are ready to take the University Oral Qualifying Examination, a doctoral committee is nominated.

After passing the University Oral Qualifying Examination, you may be advanced to candidacy and commence work on a dissertation in your principal field of study. The doctoral committee guides your progress toward completion of the dissertation.

Final Oral Examination

A final oral examination is required of all candidates.

Ph.D. in Biostatistics

Admission

Qualifications for admission are those currently specified by the Graduate Division (see Chapter 3). Normally, students receive an M.S. in Biostatistics at UCLA before admission to the Ph.D. program.

Course Requirements

There are no specific course requirements. However, your program of study must be approved by the Division of Biostatistics and must include, at the graduate level, three areas of knowledge: biostatistics, mathematical statistics, and a third field such as biology, epidemiology, infectious diseases, medicine, microbiology, pharmacology, psychology, zoology, or public health. You are encouraged to participate in the biostatistics consulting laboratory for one quarter each year. Recommendation for the degree is based on your attainments rather than on the completion of specified courses.

Screening/Qualifying Examinations

All students are required to pass a written screening examination within one year of admission (if not taken prior to entering the program).

The University Oral Qualifying Examination is taken before advancement to candidacy and after successful completion of the written qualifying examinations in biostatistics and mathematical statistics and the examination in your selected third field. Administered by the doctoral committee, it is usually a defense of the dissertation proposal. A failed examination may be repeated once.

Final Oral Examination

A final oral examination is required.

Lower Division Courses


19. Peer Health Counselor Training. Limited to students in the Peer Health Counselor Program. Analysis of student health care issues as related to the campus health care delivery system and to the health care consumer. Includes identification of health needs, determination of appropriate resources, delivery of preventive and self-care education, and delineation of peer health counselor’s role. Ms. Viele

Upper Division Courses

100A. Introduction to Biostatistics. Lecture, three hours; laboratory/quiz, two hours. Prerequisites: upper division standing, one course in biological or physical science. Students who have completed courses in statistics may enroll only by consent of instructor. Students with credit for course 101A will not receive credit for this course. Introduction to methods and concepts of statistical analysis. Sampling situations, with special attention to those occurring in the biological sciences. Topics include distributions, tests of hypotheses, estimation, types of error, significance and confidence levels, sample size.

100B. Introduction to Biostatistics. Lecture, three hours; laboratory/quiz, two hours. Prerequisites: course 100A or equivalent, consent of instructor. Students with credit for course 101B will not receive credit for this course. Introduction to analysis of variance, linear regression, and correlation analysis.

100C. Introduction to Biostatistics. Lecture, three hours; laboratory/quiz, two hours. Prerequisites: course 100C or equivalent, consent of instructor. Design of experiments, analysis of variance, multiple and polynomial regression analysis with biomedical applications.
100D. Introduction to Biostatistics. Lecture, three hours; laboratory, two hours. Prerequisites: course 100A or equivalent, consent of instructor. Introduction to concepts of probability used in biomedical sciences. Enumeration statistics and nonparametric methods. Comparison of nonparametric with analogous parametric tests. Discussion of power and sample size calculations. Ms. Myers

101A. Basic Biostatistics. Lecture, three hours; quiz, one hour. Prerequisite: Mathematics 31B or equivalent. Students with credit for course 100A will not receive credit for this course. Basic concepts of statistical analysis applied to biological sciences. Topics include random variables, sampling distributions, parameter estimator, and statistical inference. Ms. Cretin

101B. Basic Biostatistics. Lecture, three hours; quiz, one hour. Prerequisite: course 101A. Students with credit for course 100B will not receive credit for this course. Introduction to concepts, parameter estimator, and statistical inference. Ms. Cretin

103. Statistics for Public Health. Lecture, three hours; laboratory, two hours. Prerequisites: upper division standing, one course in biological or physical science. Open to students in the M.P.H. and nursing programs. Important statistics to support managerial and operational decisions. Topics include medical models for calculating and interpreting vital and health statistics, and elementary methods for statistical inference. Ms. Lugg

110. Introduction to Medical Science. Prerequisite: one course in chemistry or other natural sciences. Recommended: one-year sequence in biology, physiology, or other biological science. An introduction to normal human physiology and disease processes. Mr. Fielding

112. Principles of Epidemiology. Lecture, two hours; laboratory, four hours. Prerequisite: course 100B or equivalent. Consent of instructor. Topics include factors governing health and disease in populations. Mr. Pointer

114. Epidemiology I. Lecture, two hours; laboratory, four hours. Prerequisites: course 100B or equivalent, consent of instructor. Topics include factors governing health and disease in populations. Mr. Pointer

115. Disease Problems of Economics and Political Impact in Latin America. (Same as Latin American Studies M155.) Lecture, six hours; discussion, six hours. Prerequisite: one upper division course in Latin American studies. Social, economic, and political impact of important disease problems in Latin American countries. Mr. Work

116. Epidemiology of Nosocomial Infections (2 units). Prerequisites: course 112 or Microbiology 110, consent of instructor. Introduction to the epidemiology of hospital-acquired infections, their detection and control. Ms. Bourque

125. Applied Social Science Methodology. Prerequisites: course 100A or equivalent, consent of instructor. Applied procedures for conducting research in family health. A research design comprises one of the course requirements. Ms. Bourque

130. Health Services Organization. Prerequisite: four units of social science. Structure and function of American health care system; issues and forces shaping its future. Ms. Fielding, Mr. Torres

130A. Health Services Organization and Assessment. Lecture, three hours; discussion, two hours. Prerequisites: four units of social science or equivalent, consent of instructor. Introduction to concepts, problems, and issues in health services for division majors. Ms. Myers

131. Structure and Function of Health Care Facilities. Lecture, two hours; discussion, two hours. Prerequisites: course 100A or equivalent, consent of instructor. Introduction to structure, organization, and function of health care facilities. Mr. Pointer

132. Management Science for Health Planning and Administration. Lecture, three hours; laboratory, two hours. Prerequisites: courses 100A, either 403 or equivalent, consent of instructor. Introduction to the use of quantitative analyses to support managerial and operational decisions in health services organizations. Topics include mathematical models for structuring decisions, resource allocation, inventory control, task sequencing, scheduling, and forecasting. Assignments involve use of microcomputers. Mr. McLaughlin

133. Interpersonal Dynamics in Health Services Management (2 units). Prerequisites: one undergraduate course in sociology or psychology, consent of instructor. An introduction to the application of behavioral science theory to understanding the interpersonal dynamics of health care facilities and their management. Ms. Cretin

134. Introduction to Comprehensive Health Planning. Lecture, four hours; fieldwork, four hours. Prerequisite: one upper division course in microeconomics, statistics, calculus, or political science. Concepts underlying health planning, state of the art, and some relevant literature. Mr. Melnick

135. Organization of Medical Practice (2 units). (Same as Medicine M158.) Prerequisites: course 130, graduate standing in public health, medicine, or nursing. Prerequisites or corequisites: courses 100A, 110, or equivalent, consent of instructor. Review of the field of health services research. Uses of quantitative methods and the applications of conceptual-theoretical concepts (as well as methodologies) from social and behavioral sciences and epidemiology to studies of the workings of health services. Mr. Lewis

136B. Practices of Evaluation in Health Services: Theory and Methodology. Lecture, three hours; discussion, one hour. Prerequisites: courses 136A, 136C, and equivalents, consent of instructor. Specific evaluation procedures. Conduct health services investigations and evaluations; communicate results and methodologies. Ms. Fink, Ms. Kosecoff

136C. Social Experimentation as a Research Tool for Health Care Policy. Prerequisites: courses 136A, 136B, or equivalent, consent of instructor. Economic and psychometric issues underlying social experimentation in health care. Topics include relation of demand to insurance; role of regulation; relation of health insurance to health status; reliability of health status; approach to measurement validation and scale construction. Mr. Point

137. Managing Human Resources in Health Facilities and Programs. Prerequisites: one course in social science, consent of instructor. Didactic and experimental study of management of human resources in health-related organizations and programs. Mr. Cameron

138. Politics of Health Care. Prerequisites: one course in social science, consent of instructor. Concepts and procedures for political analysis; national, state, and local politics in health care; examination of selected case studies. Ms. Cameron

139. Quantitative Methods for Decision Making in Health Services. Prerequisites: courses 100A, 110, 130, consent of instructor. Decision theory and use of statistics in decision making. Decision theory includes frameworks for decision making and control, dealing with uncertain probability, utility theory, expected utility theory, and value of information. Statistical topics include communicating with statistics, measures of association, regression, analysis of variance, and forecasting. Mr. Torrens

140A-140B. Health Record Science. Lecture, two hours; laboratory, two hours. Prerequisites: Biology 5 or equivalent, consent of instructor. Course 140A is prerequisite for course 140B. Principles and theories of systems and techniques used for organization, analysis, and maintenance of records and reports are studied and evaluated according to their use in varied situations. Mr. Lewis

141. Financial and Managerial Accounting for Health Services Organizations. Prerequisites: course 130 or equivalent, consent of instructor. An introduction to financial and managerial accounting and its application to the health services industry. Mr. McLaughlin

143. Integrating Medical and Fiscal Records in Health Institutions. Prerequisites: course 140A, Management 403, or equivalent, consent of instructor. The course explores the patient charge system from admission through collection. The interfacing of patient medical records and patient fiscal records is presented via a student field project. Mr. Wales

144. Decisions in Automating Data Systems in Ambulatory Patient Care Facilities. Lecture, two hours; laboratory, two hours. Prerequisites: course 130, 140A, Definition of the techniques used to design, and evaluate the automation of data systems for patient care and operations of ambulatory care facilities. Mr. Pointer

150. Environmental Health. Lecture, three hours; discussion, one hour. Prerequisites: Biology 5, Chemistry 11A. Prerequisites or corequisites: courses 100A, 101A, 110, or equivalent, consent of instructor. Survey of biological effects and assessment of chemical pollutants, occupational exposure to chemical and physical hazards; pollution from pesticide chemicals, mining, and energy production and consumption; chemical food additives, and occupational exposure to chemical and physical hazards. Mr. Mustafa

151. Biological Effects of Air Pollution. Lecture, three hours; discussion, one hour. Prerequisites: Biology 5, Chemistry 11A, or equivalent, consent of instructor. Survey of biological effects and assessment of chemical pollutants, occupational exposure to chemical and physical hazards; pollution from pesticide chemicals, mining, and energy production and consumption; chemical food additives, and occupational exposure to chemical and physical hazards. Mr. Mustafa

152. Public Health and Environmental Microbiology. Lecture, three hours; laboratory, six hours. Prerequisites: Biology 7, Chemistry 25, or equivalent, consent of instructor. Basic principles and laboratory procedures employed in the provision of sanitary elements to the community, including food and milk, water supply and waste disposal, soil and environmental effluents. Mr. Mah

154. Environmental Management. Lecture, four hours; discussion, one hour. Prerequisites: Economics 100, Political Science 142 or 143, or equivalent, consent of instructor. Introduction to foundations and principles of environmental management, decision making, and evaluation of environmental policies and programs. Ms. Davos

155. Introduction to Environmental Health (2 units). Prerequisites: one college course in chemistry or biology or equivalent courses, consent of instructor. Not open to students specializing in environmental health. Introduction to environmental health, including sources, measurement, principles, and methodologies of environmental contamination and acute health effects of environmental contaminants. Ms. Kosecoff
Introduction to Occupational Safety and Health. Prerequisites: Biology 5, Chemistry 21, or equivalent, consent of instructor. The course addresses scientific, legal, policy, and historical issues in occupational health and introduces students to various related disciplines (e.g., occupational medicine, nursing, industrial hygiene, toxicology, epidemiology, and health education). Two field trips are taken.

Mr. Froines, Mr. Wegman

Introduction to Occupational Health II. Prerequisites: course 158 or equivalent, Alf-Slater of instructor. Introduction to the health effects of occupational exposures, including the recognition, evaluation, and prevention of occupational diseases. Emphasis on concept of disease mechanisms, manifestations, and classification relevant to professionals in the disciplines related to occupational health (e.g., industrial hygiene, toxicology, epidemiology, health education, and nursing). One field trip is taken.

Mr. Beker, Mr. Harber, Mr. Wegman

Properties and Measurement of Airborne Particles. Lecture, three hours: laboratory, two hours. Prerequisites: one year of chemistry, physics, and mathematics (through calculus), consent of instructor. Basic theory of application of sciences to environmental health, including properties, behavior, sampling, and measurement of aerosols and quantitative problems. Laboratory is for industrial hygiene majors only.

Mr. Hinds

Principles of Food and Nutrition. Prerequisites: one course in biology, chemistry, or physiology, consent of instructor. Not open for credit to students specializing in nutrition. Principles of nutrition and nutritional requirements for normal growth and development.

Ms. Alfin-Slater, Mr. Jeliffe

Nutrition and Health (2 units). Prerequisites: course 110 or 160 or equivalent, consent of instructor. Not open for credit to students specializing in nutrition. Basic and clinical nutrition theory and practice for students in health science curricula.

Ms. Alfin-Slater, Mr. Jeliffe

Biologic Processes. Lecture, three hours. Prerequisites: one year of organic chemistry, Biology 7. Metabolism of carbohydrates, proteins, and other nitrogen compounds and lipids; role of hormones and enzymes in metabolism; physiological processes.

Ms. Hunt

Clinical Nutrition Laboratory (2 units). Discussion, one hour; laboratory, four hours. Prerequisites: one course in quantitative analysis or equivalent, one year of organic chemistry, Biology 7, consent of instructor. Analytical procedures for determining the various constituents of blood and urine.

Ms. Eckhart

Therapeutic Nutrition (2 units). Prerequisites: courses 162, 163, or equivalent, consent of instructor. Recent findings in the field of diet and disease and modifications made in normal diet for pathological conditions.

Ms. Carlisle

Therapeutic Nutrition (2 unit). Prerequisites: course 162A, consent of instructor. Recent findings in the field of diet and disease and modifications made in normal diet for pathological conditions.

Ms. Carlisle

Biologic Processes: Physiology and Nutrition. Lecture, three hours. Prerequisites: course 163, consent of instructor. Metabolism of lipids, carbohydrates, and proteins; role of hormones and enzymes in metabolism; physiological processes occurring in various organs.

Ms. Alfin-Slater

Family Health and Biosocial Development. Lecture, two hours; discussion, two hours. Prerequisites: Psychology 130 or Psychology 100 or equivalent, consent of instructor. Biosocial factors related to normal human physical, intellectual, and emotional growth and development from a family and health perspective.

Mr. Katz

Genetics and Public Health. (Formerly numbered 170A.) Lecture, three hours; discussion, one hour. Prerequisites: one course in biology, consent of instructor. The public health significance of genetic disease, biological basis of genetic disease and birth defects, services available in the areas of diagnosis, treatment, and prevention, and the legal, social, and ethical implications of genetic disease.

Mr. Katz

Family Health and Population: Principles and Issues. Prerequisites: course 110 or equivalent, consent of instructor. The course covers (1) biosocial aspects of family formation, reproductive physiology and behavior, "at risk" aspects of pregnancy and childbirth, and primary women's health care services and (2) physical aspects of growth, physical, intellectual, and social development from infancy to old age and childhood.

Mr. Katz

Family Health and Population: Principles and Issues: Family Planning. Prerequisites: course 171A, consent of instructor. The course covers (1) considerations of population growth, trends in domestic and international mortality, international migration, women's health needs, families, and kinship in (2) children's issues in the U.S. and MCH/family problems, and policies in developing Third World countries.

Mr. Katz

Introduction to Reproductive Health. Lecture, two hours; discussion, two hours. Prerequisites: consent of instructor. An interdisciplinary approach to the study of family planning in the context of reproductive physiology, normal and abnormal pregnancy, family planning, male-specific and female-specific health problems, including health care and health policy considerations.

Mr. Katz

Health, Disease, and Health Services in Latin America. Prerequisite: one upper division course in Latin American studies or course 110. Introduction to health, disease, and health services in Latin America, with emphasis on epidemiology, health administration, medical anthropology, and nutrition.

Mr. Scrimshaw

Public Health in the People's Republic of China (2 units). Lecture, four hours. Prerequisites: course 130 or equivalent or two upper division or graduate level courses in behavioral science, consent of instructor. Historical overview of policies and implementation of public health in the People's Republic of China from 1949 to the present. Emphasis on relevance for public health in other developing countries.

Mr. Katz

Human Sexuality and Sexual Health. Lecture, three hours; discussion, one hour. Prerequisites: two courses in behavioral and/or life science, consent of instructor. An interdisciplinary review of sexual physiology and sexual behaviors followed by consideration of pregnancy and its prevention, sexual dysfunction, and sex-transmitted disease. Psychosocial, cultural, political, and health care aspects are included.

Mr. Katz

Family and Sexual Violence. Lecture, three hours; field trip. Prerequisites: course 130, consent of instructor. The course examines rape, incest, spouse abuse, and elder abuse. The definitions, causes, outcomes of, and research on family and sexual violence, as well as the responses of the social service, medical, and criminal justice systems, are presented.

Mr. Katz

Principles of Genetic Counseling (2 units). (Formerly numbered 177.) Prerequisites: course 171A, Biology 8. Theoretical basis, current research, and practical considerations and techniques of counseling, especially as practiced in genetics settings.

Mr. Katz

Principles of Genetic Counseling (2 units). Prerequisites: course 177A. Counseling principles and techniques arising from such reproductive areas as prenatal care/diagnosis, abortion, adoption, sterilization. Counseling in relation to grief and mourning; the role of the counselor in the reproductive process. Not open to those with pertinent to these areas.

Mr. Katz

Principles of Genetic Counseling (2 units). Prerequisites: courses 171A, 177A, consent of instructor. Evaluation of counseling process and outcome; clinical research; the counselor as a team worker; ethical and administrative issues.

Mr. Katz

Legal Aspects of Family Health (2 units). Prerequisites: course 170, consent of instructor. Analysis and clarification of legal issues involving family health services, including family planning, sterilization, abortion, dental care for children, battered child laws, mental hospitalization, personnel and standards for care and implementation of sound health programs.

Mr. Katz

Health Problems and Programs in Africa (2 units). Lecture, one hour; discussion, one hour. Prerequisites: one course from Public Health 110, History 175A-175Z, 176A, 176B, 177, 178A, 179A, 275, 279A, Anthropology 166A, C250E, Geography 122, 188, 289, equivalent, consent of instructor. Consideration of traditional beliefs about illness and treatment, factors affecting health status in Africa, major health problems, and some programs proposed as remedies.

Mr. Katz

African Health Sector Analysis Seminar (2 units). Prerequisites or corequisites: course 179A. Approach is that of a multidisciplinary team analyzing the health sector of a representative African country to determine needs and priorities for external aid.

Mr. Katz


Mr. Katz

Introduction to Social Research Methods in Health. Lecture, four hours; assignments, eight hours. Prerequisites: course 100A or equivalent, consent of instructor. Basic methods and techniques in designing and conducting health research using a variety of methods. Includes discussions of students' own research plans.

Mr. Katz

Behavioral Sciences and Health. Lecture, three hours; discussion, one hour. Prerequisites: one course in social science. Basic concepts in behavioral sciences pertinent to health and medical care; cultural and social class variations in health status, health team and community relations; community decision making in public health.

Mr. Katz

Community Health Education. Lecture, two hours; discussion, two hours. Prerequisites: one course in social science, consent of instructor. Problems of social, economic, and cultural origin as they apply to sound community organization in the public health field. Examination of health education activities of professional, voluntary, and official health agencies and analysis of their interrelationships.

Mr. Katz

Health and Consumer Economics. Lecture, three hours. Prerequisites: Economics 1 and 2, or 100, upper division or graduate standing. Impact of health problems and costs on individual and family incomes and expenditures, including productivity and dependency needs.

Mr. Katz

Economics of Health and Medical Care. Lecture, three hours. Prerequisites: Economics 1 and 2, or 100, upper division or graduate standing. Demand, supply, and price determinants in private and public sectors of health and medical care fields.

Mr. Katz
186. The World’s Population and Food. Lecture, three hours. Prerequisites: Economics 1 and 2, or 100, upper division or graduate standing. World food sources; major food groups; human food requirements, and consumption; food in developing economies; international movement of foods; interrelations of foods, population, and economic progress. Mr. Rada

187. Health Education for Teacher Credentials (2 units). Limited to students in the teacher education credential program. Required for the California State Teaching Credential. The teaching-learning process as applied to personal and community health. Topics include psychoactive drugs (alcohol, tobacco, and narcotics), human sexuality, and community health resources. Mr. Linder

188. Community Mental Health. Prerequisites: one upper division course in psychology, sociology, or anthropology, consent of instructor. Concepts of mental health, mental illness, prevention of mental disorders, mental health in public health programs. Public health aspects of control of mental disorders. Epidemiology, program planning, and legal aspects of mental disorders. Mr. Linder

189. Community Cancer Education. Lecture, two hours; discussion, one hour; fieldwork, one hour; reading assignments, one hour. Prerequisites: Biology 30 or equivalent, consent of instructor. Exploratory projects in the education of community resources, culminating in student-generated community field study proposal and presentation.

199. Special Studies (2 to 4 units). Prerequisites: senior standing, consent of instructor and department Chair (based on a written proposal outlining the course of study). Individual undergraduate guided studies under direct faculty supervision. Study to be structured by instructor and student at time of initial enrollment. Only four units may be taken each quarter.

Graduate Courses

200A-200B-200C. Biostatistics. Lecture, three hours; discussion, one hour. Prerequisites: course 100C, Mathematics 32B, 152B, or equivalent (certain prerequisites may be taken concurrently or waived by consent of instructor). Quantitative methods in public health, medicine, and biological sciences; statistical theory and application to problems of life science and analysis of medical experiments and surveys.

M201E. Special Topics: Statistical Methods for Categorical Data. (Same as Biometrics M231.) Lecture, three hours; discussion, one hour. Prerequisites: course 100B or 101B, Mathematics 150C or 152B, or equivalent, consent of instructor. Statistical techniques for the analysis of categorical data; discussion and illustration of their applications and limitations. Mr. Korn (W)

201F. Special Topics: Distribution Free Methods. Lecture, three hours; discussion, one hour. Prerequisites: course 100D or 101B, Mathematics 150C or 152B, or consent of instructor. Theory and application of distribution free methods in biostatistics.

201G. Special Topics: Statistical Simulation Techniques. Lecture, three hours; discussion, one hour. Prerequisites: course 100C, Mathematics 150C or 152B, a course in computer programming, consent of instructor. Techniques for simulating important statistical distributions, with applications in biostatistics.

201H. Special Topics: Finite Population Sampling. Lecture, three hours; discussion, one hour. Prerequisite: course 100D or Mathematics 150C or 152B. Theory and methods for sampling finite populations; estimation of characteristics of populations.

201J. Special Topics: Supplemenal Topics. Lecture, three hours; discussion; one hour. Prerequisites: course 100C. consent of instructor. Topics in biostatistics not covered in other courses.

M201K. Survival Analysis. (Same as Biometrics M281.) Lecture, three hours; discussion, one hour. Prerequisites: course 100C and Mathematics 150C or 152B, or equivalent, consent of instructor. Statistical methods for the analysis of survival data. Mr. Elashoff (W)

201M. Introduction to Statistical Methods for Biological Assays. Prerequisites: course 100C and Mathematics 150C or 152B. Statistical procedures for the estimation of relative potency, density of microorganisms, and density of radioactivity; models used for these procedures, and statistical considerations for designing such assays. Mr. Quach

M202E. Problems of Statistical Consultation. (Same as Biometrics M282.) Lecture, two hours; discussion, one hour; laboratory, two hours. Prerequisite: graduate course in applied statistics. Textbook and original problems requiring special expertise in design and analysis. Computer packages are used to diagnose failure of assumptions, suitability of models, and alternate analyses. Mr. Dixon (W)

M202F. Statistical Analysis of Incomplete Data. (Same as Biometrics M225.) Lecture, three hours; laboratory, one hour. Prerequisites: course 100B or 101B, Mathematics 150C or 152B, or equivalent, consent of instructor. The course discusses the statistical analysis of incomplete data sets. Material is taken from the 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, like Tobit-based methods and nonrandom nonresponse models. Emphasis on application of the methods to applied problems, as well as on the underlying theory. S/U or letter grading.

M202G. Simultaneous Statistical Inference. (Same as Biometrics M233.) Lecture, three hours; discussion, one hour. Prerequisites: courses 200C, M205A, Mathematics 150C. Methods and theory of simultaneous statistical inference. Mr. Korn (W)

203A. Data Base Management Systems. Lecture, three hours; laboratory, two hours. Prerequisites: course 403 or equivalent, consent of instructor. Data base and data base models applied to medical and public health data. Advanced text for data base design. Efficient data retrieval and statistical analysis using package data base management and statistical package programs.

203B. Systems Analysis for Health Data. Lecture, three hours; laboratory, four hours. Prerequisites: course 203A, consent of instructor. Health data computer processing as a total system; review of selected health information systems, statistical packages, and computer languages; design, development, testing, and implementation of a computer system for managing health data.

204E. Seminar in Biostatistics (2 units). Prerequisites: course 200B, two courses from the M201E-201J series, consent of instructor. Students present and discuss current developments of methodology and problems in applications of biostatistics.

204F. Advanced Seminar in Biostatistics (2 units). Prerequisites: course 200C, consent of instructor. Students and faculty present and discuss current research in biostatistics. Biostatistics may be repeated for credit. S/U grading.

M205A-M205B-M205C. Linear Statistical Models. (Same as Mathematics M279A-M279B-M279C.) Lecture, three hours. Prerequisites: course 100C, Mathematics 150C or 152B. Basic theory and methods for sampling finite populations; estimation of characteristics of populations.

206A-206B. Multivariate Biostatistics. Lecture, three hours. Prerequisites: course 200A or equivalent. Multivariate analysis as used in biological and medical situations. Topics from component analysis, factor analysis, discriminant analysis, analysis of dispersion, canonical analysis.

207E. Advanced Topics: Stochastic Processes. Lecture, three hours. Prerequisites: upper division mathematics, including statistics and probability. Stochastic processes applicable to medical and biological research.

207F. Advanced Topics: Mathematical Epidemiology. Lecture, three hours. Prerequisites: course 207E or equivalent, upper division mathematics (including statistics and probability). Mathematical theory of epidemiology with deterministic and stochastic models and problems involved in applying the theory.

207G. Advanced Topics: Statistical Genetics. Lecture, three hours. Prerequisites: upper division mathematics including statistics and probability. Introduction to statistical genetics.

207H. Statistical Methods for Research Biological Assays. Prerequisite: course 201M. Topics include statistical methods developed for research assays for which the standard procedures do not apply.

M207J. Computational Statistics. (Same as Mathematics M203 and Mathematics M230.) Lecture, three hours. Prerequisites: Mathematics 115A, 150C, or equivalent. Introduction to theory and design of statistical programs; pivoting and other techniques; programming in Fortran; random number generation; linear regression algorithms, algorithms for balanced and unbalanced analysis of variance, including the mixed model, iterative rescaling, and other methods for log-linear models.

207K. Advanced Topics: Recent Developments. Lecture, three hours; discussion, one hour. Prerequisite: course 200C. Advanced topics and developments in biostatistics not covered in the Public Health 201 or 207 series, or in other courses. Possible topics include time-series analysis, classification procedures, correspondence analysis, etc.

210. Principles of Infectious Disease Epidemiology. Lecture, three hours. Prerequisites: courses 100A or equivalent, 112, one-year sequence of biology and consent of instructor. Ascertainment of methods to control infection, transmission, and epidemiological parameters rather than clinical and pathological aspects. Specific diseases discussed in depth to illustrate epidemiologic principles. Mr. Barr

211A. Epidemiology II. Lecture, two hours; laboratory, four hours. Prerequisites: courses 211A or equivalent, consent of instructor. Analysis of study designs, research methodology, problems of measurement, and analytic techniques used in epidemiologic studies.

211B. Advanced Epidemiology. Lecture, two hours; laboratory, four hours. Prerequisites: course 211A, graduate standing, consent of instructor. A continuation of course 211A, with concentration on selection of appropriate research design, problems of measurement, and analytic techniques commonly used in epidemiologic studies.

211C. Advanced Epidemiologic Analysis. (Formerly numbered 298.) Lecture, two hours; laboratory, four hours. Prerequisites: courses 100C or 100D and 211B, or equivalent, consent of instructor. 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 the mean, estimation and hypothesis testing in epidemiology; models for risk and rates; cohort analysis. Mr. Greenland

212E. Epidemiology of Cardiovascular Disease (2 units). Lecture, one hour; discussion, one hour. Prerequisites: course 212A, consent of instructor. Theoretical, practical, and controversial issues of cardiovascular epidemiology in developed and underdeveloped countries. Mr. Quiroga, Mr. Staniloff

212F. Epidemiology of Neurologic Disease (2 units). Prerequisites: course 211B or equivalent, consent of instructor. Epidemiologic characteristics of selected chronic neurologic diseases, with particular emphasis on etiology and possible control. Ms. Visscher
212H. Epidemiology of Arthropod-Borne Disease. Prerequisites: course 211B, graduate standing. Epidemiologic aspects of disease carried by arthropods, emphasizing life cycle and ecology of vectors as related to epidemiologic study of viral, rickettsial, parasitic, protozoal, and helminthic diseases. Mr. Barr

212J. Epidemiology of Nonintentional Injuries. Lecture, three hours; discussion, two hours. Prerequisites: courses 100A, 110 (or equivalent), 112 (or equivalent), 155, consent of instructor. Pertinent epidemiology methods for study of nonintentional trauma, including that from motor vehicle crashes, occupational exposures, falls, and other major external causes, which focus on research approaches, data sources, analytical techniques. Substance findings on related subproblem areas are presented for critical review. Mr. Kraus

212K. Epidemiology of Assault, Homicide, and Suicide (2 units). Lecture, two hours; discussion, one hour. Prerequisites: courses 100A, 110, 112 or equivalent, 155, consent of instructor. Presentation and evaluation of epidemiologic research approaches to the study of violent injury, including a discussion of measurement of injury, risk-factor analysis, and control evaluation. Mr. Kraus

213. Environmental Epidemiology. Lecture, two hours; discussion, one hour; independent study, three hours. Prerequisites: courses 100B, 112 or 114, Chemistry 21, Physics 3C, consent of instructor. Measuring and controlling environmental health problems and approaches of epidemiology for assessing the health impact of major types of environmental exposure. Mr. Spivey

214. Infectious and Tropical Disease Epidemiology. Lecture, three hours; discussion, three hours. Prerequisites: courses 100A, 112, or equivalent, consent of instructor. Epidemiology of major infectious and tropical diseases in developing countries, including those with direct or contact mode of spread and those vector borne.


215B. Epidemiology of Cancer (2 units). Lecture, one hour; discussion, one hour. Prerequisites: course 215A, consent of instructor. Current issues in cancer epidemiology, including etiologic research, screening programs, prevention. Mr. Halle

216A. Ecology of Exotic Diseases. Lecture, two hours; discussion, six hours. Prerequisites: course 112. Microbiology C103A, C103B, or equivalent, consent of instructor. Geographical pathology and behavioral causes of exotic diseases. Climatological, ecological, and biological determinants of the distribution, exposure to, and occurrence of exotic diseases. Mr. Work

216B. Viral Diseases of Man. Lecture, two hours; laboratory, six hours. Prerequisites: course 216A or equivalent, consent of instructor. Viral and rickettsial diseases of man. Natural history, epidemiology, diagnosis, control, and prevention of these diseases, especially in tropical situations. Mr. Work

217. Prevalence Studies in Epidemiology. Lecture, two hours; discussion, one hour; laboratory, two hours; outside assignments, ten to twelve hours. Prerequisites: courses 100B, and 211A or 181, or equivalent, consent of instructor. May be taken concurrently with course 218B. Comprehensive overview of systematic, morphology, biology, host-parasite relationships, public health problems, and control of protozoa parasitic in man and animals. Mr. Ash

218A. Protozoal Diseases of Man. Prerequisites: Microbiology 101 or Biology 105 or equivalent, consent of instructor. May be taken concurrently with course 218B. Laboratory methods of diagnosis and microscopic recognition of protozoa parasitic in man and animals. Includes intestinal protozoa and organisms occurring in the blood and bone marrow. Mr. Ash

219. Arthropods of Medical Importance. Lecture, two hours; laboratory, six hours. Prerequisites: Biology 105 or 107 and 181, Microbiology 101, or equivalent. Biologic identification of insects and arthropods of public health importance involved in transmission and causation of human diseases. Mr. Barr

220A. Helminthic Diseases of Man. Prerequisites: Microbiology 101 or Biology 105 or equivalent, consent of instructor. May be taken concurrently with course 220B. Comprehensive overview of systematic, morphology, biology, host-parasite relationships, public health problems, and control of the nematodes, trematodes, and cestodes parasitic in man and animals. Mr. Ash

220B. Helminthic Diseases of Man (2 units). Prerequisite or corequisite: course 220A. Laboratory diagnosis and practical microscopic recognition of the nematodes, trematodes, and cestodes parasitic in man and animals. Pathology produced by these infections is also studied. Mr. Ash

221. Seminar in Epidemiology: Methodology (2 units). Prerequisites: course 211A or equivalent, consent of instructor. Review of current epidemiologic research and medical literature. May be repeated for credit. S/U grading.

222. Seminar in Epidemiology: Infectious and Tropical Disease (2 units). Prerequisites: course 211A or equivalent, consent of instructor. Review of research on specific diseases of public health importance. May be repeated for credit. S/U grading.

223. Topics in Theoretical Epidemiology (2 units). Prerequisites: courses 100A and 100B and 100D (or Mathematics 152A). 211A, 211B, consent of instructor. 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 by consent of instructor. S/U grading.

224. Principles of Epidemiology II. Lecture, four hours; discussion, two hours. Prerequisites: courses 100A, 112, upper division biology course or equivalent, consent of instructor. Material presented in course 12 is examined in greater detail. Topics include measures of disease occurrence and criteria of causality; reliability and validity concepts; proper design, analysis, interpretation of experiments, and cohort and case control studies. Mr. Haile


226. Genetic Epidemiology (2 units). Prerequisites: courses 100A, 112, upper division biology course, or equivalent, consent of instructor. Proper design, analysis, interpretation, and application of analytical methods used by genetic epidemiologists, including studies of familial prevalence, twins, migrants, genetic marker-disease associations, and more complex analyses of genetic models. Mr. Haile

227. Public Health Research Using Available Data (2 units). Lecture, one hour; discussion, one hour. Prerequisites: courses 100A, 110, 112, and 410A or 403 or 217 or 405, or equivalent, consent of instructor. Presentations and discussions of the availability, concepts, content, and usefulness of already collected data in public health research. Major emphasis is placed on how public data such as National Center for Health Statistics surveys, vital statistics, census, etc. Mr. Couson

228. Advanced Seminar in Epidemiology (2 units). Prerequisites: consent of instructor. May be taken concurrently with course 222. Students and faculty present and discuss current research in epidemiology. May be repeated for credit. S/U grading.

231. Regulation of Health Care in the United States. Lecture, three hours; discussion, one hour. Prerequisites: courses 130, one course in health care management, health planning, political science, economics, or health law, or equivalent, consent of instructor. Description and analysis of health care regulation, federal and state. Covers regulatory theory and arguments for more competition. Specific topics include facility certification, quality assurance, certificate of need, rate setting, and regulation of physicians and technology. Mr. Fielding

232. Governmental Health Services and Trends. Prerequisites: course 130, two additional upper division social or behavioral sciences courses, consent of instructor. Systematic analysis of the interface between organized programs of personal health services and governmental agencies at all jurisdictional levels. Study of changing relationships between traditional public health and newer medical care and quality control functions. Mr. Shorin

233. Health Policy Analysis. Lecture, two hours; discussion, two hours. Prerequisites: courses 130, 100A, 112, 183A, or equivalent, three courses in social sciences, consent of instructor. Conceptual and procedural tools for the analysis of health policy, emphasizing the role of analysis during the various phases of the life cycle of public policy. Mr. Cameron

234A-234B. Clinical Epidemiology (2 units each). Prerequisites or corequisites: courses 100A, 112, 136A, consent of instructor. Introduction to special issues in clinical health services research. Focus on research design and analysis of data. In Progress grading. Mr. Greenfield

235. Law, Social Change, and Health Service Policy. Prerequisites: course 130, two upper division courses in political science or sociology or equivalent, consent of instructor. Legal issues affecting policy formulation for environmental, preventive, and curative health service programs are examined. Mr. Roemer

236. Quality Assessment and Assurance. Lecture, 90 minutes; discussion, 90 minutes; conferences, 30 minutes. Prerequisites: courses 100A, 112, 130, one additional course in health services or epidemiology, or equivalent, consent of instructor. Fundamental issues in quality assessment, quality assurance, and the measurement of health status. Mr. Brook
237A-237B. Special Topics in Health Services Research Methodology. Lecture, one hour; discussion, three hours; laboratory, six hours. Prerequisites: courses 100A or equivalent. Consent of instructor. In-depth consideration of problems in the application of statistical and other quantitative methods in health services research. May be repeated for credit. S/U grading. Ms. Cretin, Mr. Shonick

238. Microeconomic Theory of the Health Sector. Prerequisites: courses 100A or equivalent, 232, Economics 1.2, consent of instructor. Microeconomic aspects of the health care system, including health manpower substitution, choice of efficient modes of treatment, market efficiency, and competition. Mr. Schweitzer

239. Aging and Long-Term Care. Prerequisites: courses 130, 138, 182, or equivalent, consent of instructor. Long-term care of the chronically ill elderly is examined from a perspective of political and socioeconomic trends, including populations at risk, policy options, and alternative forms of care such as nursing homes, home care, and care by informal support systems. Mr. Kane

240. Health Care Issues in International Perspective. Prerequisites: two courses in health administration at the lower-division level or consent of instructor. Examination of current issues in health care, manpower policy, economic support, health facilities, patterns of health care delivery, regulation, planning, and other aspects of health care systems are probed in the settings of European welfare states, developing nations, and socialist countries. Mr. Roemer

243. Issues in Health Planning. Discussion, three hours; other: three hours. Prerequisites: courses 181 or equivalent, consent of instructor. Seminar in economic analysis of current health services issues. Critical examination of studies pertaining to health manpower, health care costs and controls, the diffusion of technology, and cost-benefit analysis of health programs. Mr. Myers

247. Research Topics in Health Economics. Prerequisites: courses 130, 238, 446 or equivalent, consent of instructor. Seminar in economic analysis of current health services issues. Critical examination of studies pertaining to health manpower, health care costs and controls, the diffusion of technology, and cost-benefit analysis of health programs. Mr. Schweitzer

248. Small Area Planning for Resources for Personal Health Service. Lecture, three hours; laboratory, two hours. Prerequisites: courses 100A and 125, or consent of instructor. General planning theory and health planning theory, methods, and experience with planning for personal health care resources. Mr. Roemer

250. Advanced Environmental Health. Lecture, three hours. Prerequisites: course 150 or equivalent, consent of instructor. Theoretical considerations and supporting data involved in scientific establishment and application of health standards and requirements, with particular reference to related health factors. Ms. Valentine

251. Chemical Behavior of Aquatic Systems. Lecture, three hours. Prerequisites: course 150, Chemistry 3A, consent of instructor. Chemistry of ocean waters, rivers, ground waters, and water treatment systems. Topics include thermodynamics of natural waters, acids and bases, carbon dioxide cycle, solubility reactions, oxidation and reduction, plus applied problems. Ms. Valentine

252. Environmental Microbiology. Lecture, three hours. Prerequisites: courses 150, 153, or equivalent, consent of instructor. Basic concepts of eutrophication, indicator organisms, aquatic microbes; assessment of biological treatment practices in water reuse and/or purification. Mr. Mah

253A. Environmental Toxicology. Lecture, three hours; discussion, one hour. Prerequisites: course 152, Biological Chemistry 101A-101B, consent of instructor. Essentials of toxicology, dose response, physical, chemical, or biological agents that adversely affect man and environmental quality. Mr. Frones

253B. Environmental Toxicology: Trace Contaminants. Lecture, three hours; discussion, one hour. Prerequisite: course 253A. Essentials of toxicology in relation to trace contaminants. Mr. Frones

254. Environmental Decision Systems Analysis. Lecture, four hours; discussion, one hour. Prerequisites: courses 154, 250, Mathematics 3C, or equivalent, consent of instructor. Techniques and models of systems analysis and concepts of general system theory as applied to comprehensive study, planning, evaluation, and management of environmental decision systems. Experimentation with relevant computer programs. Mr. Davos

255. Seminar in Environmental Health Sciences (2 units). Prerequisites: courses 150, 156, consent of instructor. Analysis in seminar format of theoretical and practical aspects of environmental and occupational sciences currently being conducted in local, state, federal, and academic settings. May be repeated for credit. S/U grading. Mr. Panaqua

257. Control of Airborne Contaminants in Industry. Lecture, two hours; laboratory, two hours. Prerequisites: courses 156, 157E, consent of instructor. Intended for industrial hygiene majors. Principles and applications of medical and environmental science and engineering, including general and local exhaust ventilation, air cleaning equipment, and respiratory protection. Mr. Hinds

258. Instrumental Methods in Environmental Sciences. Lecture, two hours; laboratory, six hours. Prerequisites: courses 150, 153, 156, Chemistry 25, consent of instructor. Laboratory techniques and instrumentation used in the preparation and analysis of biological, environmental, and occupational samples. Ms. Swendseid

260E. Advanced Nutrition: Vitamins. Lecture, three hours; discussion, one hour. Prerequisites: Biological Chemistry 101A-101B-101C or equivalent, consent of instructor. Comprehensive treatment of vitamin nutrition and metabolic-nutritional interactions. Ms. Swendseid

260F. Advanced Nutrition: Proteins. Lecture, three hours; discussion, one hour. Prerequisites: Biological Chemistry 101A-101B-101C or equivalent, consent of instructor. Comprehensive treatment of protein nutrition and metabolic-nutrient interactions. Ms. Swendseid

260G. Advanced Nutrition: Lipids. Lecture, three hours; discussion, one hour. Prerequisites: Biological Chemistry 101A-101B-101C or equivalent, consent of instructor. Comprehensive treatment of lipid nutrition and metabolic-nutrient interactions. Ms. Swendseid

261A. Laboratory Instrumentation and Methods. Lecture, two hours; laboratory, six hours. Prerequisites: course 156 and Chemistry 25 or consent of instructor. Comprehensive treatment of mineral nutrition and metabolic-nutrient interactions. Ms. Carlisle

261B. Advanced Laboratory Techniques in Nutritional Science. Lecture, one hour; laboratory, six hours. Prerequisites: course 261A, consent of instructor. Current biochemical methods emphasizing instrumentation. Mr. Eckert

262. Seminar in Nutrition (2 units). Prerequisites: courses 162, 167, one course in the 260 series, or equivalent, consent of instructor. Current methodology and data evaluation. May be repeated for credit.

263. Seminar in Public Health Nutrition (2 units). Prerequisites: courses 162, 167, one nutrition course in the 200 or 400 series, Review of literature in selected areas of public health nutrition. May be repeated for credit.

264. Clinical Nutrition Problems (2 units). Prerequisites: one or more nutrition courses in the 200 series, and Biological Chemistry 101A-101B-101C or 201A-201B. Nutrition and nutrient-metabolic interactions in various disease states such as gastrointestinal disorders, renal disease, and liver disease. Ms. Alfin-Slater, Mr. Kopple, Ms. Swendseid

264C. Clinical Nutrition Problems (2 units). Prerequisites: one or more nutrition courses in the 200 series, and Biological Chemistry 101A-101B-101C or 201A-201B. Nutrition and nutrient-metabolic interactions in various disease states such as cardiovascular diseases, diabetes, obesity.

Ms. Alfin-Slater, Mr. Kopple, Ms. Swendseid

265. Doctoral Research Seminar in Nutritional Sciences (2 units). Prerequisites: at least one course in the 260 series, doctoral standing, consent of instructor. Preparation of research projects. Emphasis on data evaluation. May be repeated for credit. S/U grading.

270. Maternal and Child Nutrition. Prerequisites: courses 110, 151, 170, or equivalent, consent of instructor. Nutrition of mother and 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. Mr. Jeffile, Ms. Neumann

M271. Medical Anthropology. (Formerly numbered 276.) Discussion, three hours; laboratory, one hour. Prerequisites: courses 110, 112, one upper division course in psychology, sociological anthropology, or equivalent, consent of instructor. Cross-cultural aspects of human behavior as they relate to perception, treatment, incidence, and prevalence of disease, and medical care. Mr. Chang

272. Seminar on Current Issues in Maternal and Child Health (2 units). Prerequisites: courses 110 or equivalent, 171A, 171B, consent of instructor. New knowledge in nutrition and its relation to current health and social problems of families, women of childbearing age, and children, including early development, day care, and genetic counseling. Mr. Shimizu

M273. Qualitative Research Methodology. (Formerly numbered 273.) (Same as Anthropology M264.) Discussion, three hours; laboratory, one hour. Prerequisites: courses 100A and 125 or 181, an upper-division or graduate course in social psychology, anthropology, or sociology, consent of instructor. Cross-cultural aspects of human behavior as they relate to perception, treatment, incidence, and prevalence of disease, and medical care. Mr. Shimizu

M274A-M274B. Qualitative Research Methodology. (Formerly numbered 274A-B.) Lecture, one hour; laboratory, six hours. Prerequisites: courses 100A, 112, 171A, 171B, or equivalent, consent of instructor. Cross-cultural aspects of human behavior as they relate to perception, treatment, incidence, and prevalence of disease, and medical care. Mr. Shimizu

M274A. Qualitative Research Methodology. Lecture, one hour; laboratory, six hours. Prerequisites: course 261A, consent of instructor. Current biochemical methods emphasizing instrumentation. Mr. Eckert

M275. Seminar in Nutrition (2 units). Prerequisites: courses 162, 167, one course in the 260 series, Review of literature in selected areas of public health nutrition. May be repeated for credit.
275. Human Lactation: Biological and Public Health Significance (2 units). Prerequisites: courses 112, 172, 474, or equivalent, consent of instructor. The course focuses on design, disease and subsequent mortality. Ms. Siegel

Mr. Berkovic

283H. Social Epidemiology II. Lecture, two hours; discussion, one hour. Prerequisites: courses 112, 183, three courses in psychology, sociology, or anthropology, or equivalent, consent of instructor. Analysis of occurrence and distribution of mental disorders in the community and the relationships to social structure. Problems of health survey design and implementation, and evaluation of interpersonal communication techniques. Ms. Siegel

284. Ecology of Mental Health. Lecture, three hours. Prerequisites: courses 100A, 112 and 182 or equivalent, consent of instructor. Analysis of occurrence and distribution of mental disorders in the community and the relationships to social structure. Problems of health survey design and implementation, and evaluation of interpersonal communication techniques. Ms. Siegel

Mr. Goldstein

285. Community Problems in Mental Disorders. Lecture, three hours. Prerequisites: courses 112, 182, three courses in psychology or sociology or equivalent, consent of instructor. Intensive examination of the meaning of mental health, mental illness, and psychotherapy, both curative and preventive, within a public health context. Implications for social policy and planning. Mr. Goldstein

286. Seminar in Behavioral Sciences and Health (4 to 6 units). Lecture, two hours. Prerequisites: courses 283E, 283F, or 283G, or equivalent, consent of instructor. Recent significant contributions of behavioral sciences to understanding health and illness, with selected and varying topics each quarter. May be repeated for credit. S/U grading.

287. Community Organization in the Health Field. Lecture, two hours; discussion, one hour; fieldwork, eight hours. Prerequisites: courses 182, 183, at least two courses in sociology or anthropology, or equivalent, consent of instructor. Theory and practice of community organization applied to health education, including analysis of relevant factors in physical and social environment and development of community-based intervention strategies to improve health and health education. Mr. Berkanovic

288. Current Problems in Health Education. Lecture, one hour; discussion, three hours. Prerequisites: courses 183, 280, consent of instructor. Current problems and findings in health education content areas, such as nutrition, mental health, family health, consumer health, safety, communicable and chronic diseases.

289. Issues in Program Evaluation. Discussion, three hours. Prerequisites: course 281, one course in social science, or equivalent, consent of instructor. A practical survey of the problems of planning and implementing evaluation research in the context of local demonstration projects. Mr. Berkovic

290. Seminar in Community Health Education (2 units). Prerequisites: courses 283E, 283F, or 283G, or equivalent, consent of instructor. Special topics in health survey research methods. Design of special purpose surveys; recent interviewing techniques; diaries and memory aids; measurement error, including response bias, social desirability, and other sources; testing the interpretability of obtained data on sensitive issues; ethics and confidentiality of survey research data.

Mr. Goldstein

291. Advanced Topics in Health Survey Research Methods. Lecture, two hours; discussion, two hours. Prerequisites: course 281 or equivalent, or consent of instructor. Special topics in health survey research methods. Design of special purpose surveys; recent interviewing techniques; diaries and memory aids; measurement error, including response bias, social desirability, and other sources; testing the interpretability of obtained data on sensitive issues; ethics and confidentiality of survey research data.

Ms. Blake

292. Alcohol and Drug Abuse: Social Policy Perspectives (3 units). (Formerly numbered M292.) Prerequisite: consent of instructor. Alternative models of service delivery and other drug addictions are examined and implications assessed for public policy regarding their control. Prevention efforts and findings from California and national surveys are considered, with primary emphasis on alcohol use and abuse.

Mr. Morsicato

293. Alcoholism and Drug Abuse among Women. (Formerly numbered M293.) Prerequisite: consent of instructor. Discussion of the psychosocial aspects of abuse of alcohol and other drugs among women. Topics include etiology, incidence, prevalence, influences, and the role of the family. Emphasis on current theoretical perspectives and research findings.

Ms. Beckman

294. Introduction to Occupational Health Education. Lecture, one hour; discussion; two hours; outside assignment, one hour. Prerequisites: course 156, two courses in sociology, psychology, or education, consent of instructor. Health education theory and practice as applied to occupational health and safety. Emphasis on design and evaluation of education programs dealing with health and safety issues for workplace settings.

Mr. Vojtecky

295. Research in Community and Patient Health Education. Lecture, two hours; discussion, two hours. Prerequisites: courses 112, 270, or equivalent, consent of instructor. Biobehavioral and public health perspectives. Mr. Alfi

Mr. Kar and the Staff

296. Advanced Community Health Education. Lecture, two hours; discussion, two hours. Prerequisites: course 182, three courses in social science or public health. Before planning the educational components of a health program, one must assess the leading factors influencing the health problem in question. The course assists students in developing skills in the specification and evaluation of behaviors influencing a health problem.

Mr. Morsicato

297. Social and Behavioral Perspectives on Work and Health. Prerequisites: courses 156, 294, two courses in psychology or sociology, consent of instructor. Discussion of current social and behavioral research, issues, and perspectives on work and health. Mr. Morsicato

298. Teaching Apprentice Practicum (1 to 4 units). Prerequisite: apprentice personnel employment as a teaching assistant, associate, or fellow. A teaching apprenticeship under the active guidance and supervision of a regular faculty member, based on an approved curriculum and instruction at the University. May not be substituted for any departmental enrollment requirements. May be repeated for credit. S/U grading.

299. Field Studies in Public Health (2 or 4 units). Prerequisite: consent of instructor. 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 the M.S. minimum course requirement; four units may be applied toward the 44-unit minimum total required for the M.P.H. degree.

401E. Statistical Methods in Medical Studies (2 units). Prerequisites: course 100C or 100D or Mathematics 152B or equivalent, graduate standing in public health or related field. Design and analysis of biomedical studies. S/U grading (nondivision majors only).

401F. Statistical Methods for Longitudinal Data. Lecture, two hours; discussion, two hours. Prerequisites: course 100D or Mathematics 152B or equivalent, graduate standing in public health or related field. Design and analysis of longitudinal or panel studies. S/U grading (nondivision majors only).
402A. Principles of Biostatistical Consulting (2 units). Lecture, one hour; discussion, one hour. Prerequisites: courses 100B or 152B. Presentation of structural format for consulting. Role of statistician and client. Reviews of actual statistician-client interactions and case studies.

402B. Biostatistical Consulting. Discussion, two hours; laboratory, two hours. Prerequisites: courses 100C and 402A, or consent of instructor. Principles and practices of biostatistical consulting. May be repeated for credit. S/U grading.

403. Computer Management of Health Data. Lecture, three hours; workshop, two hours. Prerequisites: at least one statistics course, two courses in research methodology, Program in Computing 1 or equivalent, consent of instructor. Concepts of health data management. Editing, cleaning, and managing data bases on tapes or disks; computing tools and techniques facilitating data retrieval for statistical analysis, tabulation and report generation useful to biostatisticians, health planners, and other health professionals.

404. Principles of Sampling. Lecture, three hours; discussion, one hour. Prerequisites: courses 100B, 112, or equivalent, consent of instructor. Statistical aspects of the design and implementation of a sample survey. Techniques for the analysis of the data, including estimates and standard errors. Avoiding improper use of survey data.

405. Demographic Materials and Methods. Lecture, three hours; laboratory, two hours. Prerequisites: courses 100A or 101A, 112 or 114, 180, or equivalent, consent of instructor. Sources of demographic information; description of human populations; calculation and interpretation of statistics used to measure and describe population growth, structure, demographic distribution, mortality, natality, and migration.

406. Applied Multivariate Biostatistics. Lecture, three hours; discussion, one hour. Prerequisites: course 100B, at least two other upper division public health courses, consent of instructor. Theory and application of multiple regression, principal components, factor analysis, discriminant function analysis, logistic regression, and canonical correlation in biomedical data analysis. S/U grading (non-division majors only).

410A. Management of Epidemiologic Data (2 units). Prerequisites: courses 100A, 112 (one course may be taken concurrently by consent of instructor). Concepts, collection, and management of data, with particular emphasis on large-scale data bases. Introduction to computer and appropriate selection and use of packaged programs. Ms. Coulson

410B. Management of Epidemiologic Data (2 units). Prerequisites: course 410A or equivalent, consent of instructor. Development of special purpose programming and compiler languages for epidemiologic problems. Data management in large-scale studies in infectious and chronic diseases is emphasized. Ms. Coulson

411. Research Resources in Epidemiology (2 units). Lecture, three hours; discussion, one hour. Prerequisites: courses 100B, 211B, consent of instructor. Instruction and practical experience in the use of various bibliographic aids and sources of information, building of reference files, and presentation of research findings for publication. Ms. Coulson, Mr. Spivey

412. Administration of Preventive and Medical Clinics (2 units). Lecture, one hour; discussion, one hour; field trips. Prerequisites: courses 112, 130, or equivalent, consent of instructor. Delivery of preventive and ambulatory health services in the clinic. Epidemiologic, administrative, and financial aspects of clinic operations. Particular emphasis on large-scale data bases, health, prenatal care, family planning, cardiovascular disease, presymptomatic screening, venereal disease, and degenerative diseases. Mr. Tennant

413. Preventive Medicine in Public Health Practice. Lecture, two hours; discussion, two hours. Prerequisites: courses 100A, 110, 112, 130, or equivalent, graduate standing, consent of instructor. Development, current status, and potential of preventive medicine in public health practice. Focus on the risk indicator approach (exercise, alcohol, stress, etc.), with consideration of program settings, delivery problems, and issues. Mr. Breslow, Mr. Fielding

414. Practical Epidemiologic Investigations. Lecture, one hour; laboratory, three hours. Prerequisites: courses 100A, 112 or 114, 211A, or equivalent, consent of instructor. Practical approaches to epidemic investigations presented through problem sets based on actual outbreaks. Includes data collection, analysis, and written presentations.

Mr. Baker, Mr. Goodman, and the Staff

430. Management of Medical Care Organizations and Programs. Prerequisites: course 131, consent of instructor. Application of organizational, economic, and social science concepts to understanding the structure and functions of health care facilities and programs. Mr. Pointer

431. Managerial Processes in Health Service Organizations. Lecture, one hour; laboratory, three hours. Prerequisites: course 430, consent of instructor. An overview of organizational characteristics at several levels: individual, interpersonal, group, intergroup, system, and interorganization. Unique features of health service organizations are stressed as applications are presented. Mr. Pointer

432. Integrative Seminar in Health Services Management. Prerequisite: course 431. Residents and preceptors are responsible for presenting cases of actual administrative problems for solution by teams of students and faculty. Mr. Pointer

433. Contemporary Issues in Health Services Management. Lecture, two hours; discussion, two hours. Prerequisite: course 431. Advanced study of contemporary intramural and extramural issues which affect management of health care facilities. Mr. Pointer


435. Manpower Management in Health Services Organizations (2 units). Prerequisites: courses 131, 141, 436, or equivalent, consent of instructor. Principles of the interaction between the health care environment examined through computer simulation, with particular attention to economic projections, demand patterns, investment programs, and health care regulations.

Mr. Pointer

436. Financial Management of Health Services Organizations. Prerequisites: courses 131, 141, 430, or equivalent, consent of instructor. Application of financial management and accounting principles to health care facilities, including unique financial characteristics of health care facilities, third-party reimbursement, cost forecasting, and capital budgeting, auditing, and risk management. Mr. Coyne

437. The Legal Environment of Health Services Management (2 units). Prerequisites: course 131 or equivalent, consent of instructor. General survey of legal aspects of health services management, including governance, agency, informed consent, medical malpractice, contracts, negligence, and case law relating to health facility operations. Mr. Liset

438. Issues and Problems of Local Health Administration (2 units). Prerequisites courses 110, 130, one additional health services course, consent of instructor. Analysis of organizational issues currently faced by local health departments in increasing scope and quality of services; exploration of administrative problems and intergovernmental relations.

Ms. Alkon

439. Dental Care Administration (2 units). Prerequisites or corequisites: courses 100A, 112, or equivalent, consent of instructor. In-depth examination of several specialized clinical care delivery systems, relationship of treatment to disease, national health program strategies, and evaluation mechanisms. Mr. Schoen

440A. Health Information Systems: Organization and Management. Lecture, two hours; laboratory, three hours. Prerequisites: courses 140A-140B or equivalent, consent of instructor. Principles and systems relating to organization and management of a health facility's health information system.

Ms. Lugg

440B. Health Information Systems: Organization and Management. Lecture, two hours; laboratory, three hours. Prerequisites: course 440A or equivalent, consent of instructor. Health and administrative relationships in health care delivery systems. Principles and systems relating to organization and management of and procedures for routine and special studies. Individual investigation in methods of obtaining and processing data to meet needs of programs in institution and agency. Introduction to principles of medical auditing; analysis of medical and health services.

Ms. Lugg

441A-441B. Health Record Systems (2 units each). Prerequisites: courses 100A, 112, 130, or equivalent, consent of instructor. Course 441A is prerequisite to 441B. Advanced study of principles and applications involved in planning, installing, and administering systems to record, process, and retrieve data for records and reports in health and medical institutions and agencies.

Ms. Lugg

442. Principles and Practices of Medical Care Audit (2 units). Prerequisites: courses 100A, 112, 130, or equivalent, consent of instructor. Analysis of systems used in evaluating health care professional providers' performances in hospital and ambulatory settings. Health information systems and data available used for medical audits.

Mr. Goodman

443D. Advanced Hospital Financial Management Simulation. Lecture, one hour; discussion, one hour; laboratory, two hours. Prerequisites: courses 130, 141, 436, consent of instructor. Practical aspects of hospital financial management decisions in a changing health care environment examined through computer simulation, with particular attention to economic projections, demand patterns, investment programs, and health care regulations.

Ms. Lisset

443E. Advanced Hospital Financial Management Seminar. Prerequisites: courses 130, 141, 436, or equivalent, consent of instructor. Hospital financial management, including reimbursement management, capital financing, and capital investment analysis, is discussed and analyzed with respect to students' individual residency sites. Mr. Coyne

444A. Information Processing for Health Planners. Prerequisites: courses 100A or 101A, 134, consent of instructor. Information theory presented as framework for understanding data analysis. Computer used to implement data analysis with previous presented information systems concepts.

444B. Applied Methodology in Health Planning. Lecture, three hours; fieldwork, four hours. Prerequisites: courses 131 or equivalent, consent of instructor. Demonstrates methodology of health planning by involving students in formulation of actual health plan for existing agency in Los Angeles area.

Mr. Melnick
446. Financing Health Care. Prerequisites: course 130, Economics 1, 2, or equivalent, consent of instructor. Required of health services course, or equivalent, consent of instructor. Historical development of health care financing, pattern of health care services, contemporary health insurance, administrative approaches to financing, and international comparisons of health financing.

Mr. Schweitzer

447D. Management of Health Maintenance Organizations. Lecture, three hours. Prerequisites: courses 130, 110, 112, or equivalent, consent of instructor. Examination of health maintenance organizations with an emphasis on measurement of outcomes of health services and programs. Mr. Seck

448. Evaluation of Health Services and Programs. Lecture, two hours; discussion, one hour; laboratory, six hours. Prerequisites: courses 240, 270, 470A or 472A or 475 or 701, consent of instructor. Historical development and in-depth consideration of health services, programs, and issues relevant to nonreproductive women's health care. Subjects include health status of women, endocrinological issues, chronic diseases, cancer, surgery in women, psychosocial and lifestyle issues, and women's health services.

Mr. Richwald

450. Principles of Public Health Nutrition. Prerequisites: courses 100A, 130 (may be taken concurrently), 233, 250, 450, or equivalent, consent of instructor. An in-depth exploration of nutritional status of population groups. Ms. Hunt, Ms. Murphy

451. Water Quality and Health. Lecture, three hours; discussion, one hour. Prerequisites: courses 150, 250, 450, or equivalent, consent of instructor. An introduction to water quality, water cycle, geochemistry, hydrology, water chemistry, and various chemical contaminants that may affect human health. Various treatment methods and health implications are discussed.

Ms. Valentine

452. Environmental Hygiene and Appropriate Technologies (2 units). Prerequisites: courses 112, 150, 153, 254, consent of instructor. Environmental sanitation of water supplies in rural and developing areas. Review of water quality problems and solutions for the nonurban, developing community. Technical, socioeconomic, and cultural problems associated with maintenance and delivery of high water quality.

Mr. Day

454. Environmental Policy Decision Making. Lecture, four hours; discussion, one hour. Prerequisite: course 254. Foundations, principles, and modeling of environmental policy decision making. Critical analysis of normative and behavioral models of action choices for protection and enhancement of environmental health, and development of an alternative model.

Mr. Davos

457. Environmental Hygiene Practices (2 units). Prerequisites: courses 112, 150, 154, 450. Field principles and practices of environmental sanitation as applicable to the sanitarian. Various analytical techniques, including theory, code enforcement, and inspection procedures for applicable environmental topics.

459. Critical Review of the Scientific Basis of Occupational Standards. Prerequisites: courses 112, 150, 156, 156B. Designed to provide students with the opportunity to review the scientific basis for the association of selected occupational exposures with disease. Special emphasis on critical evaluation of the literature. Attention is directed specifically to the interface of science and regulatory decision making.

Mr. Wegman

460. Principles of Public Health Nutrition. Prerequisites: courses 100A, 130 (may be taken concurrently), 262 or 263, consent of instructor. Survey of methods of evaluating and improving nutritional status of population groups.

Ms. Hunt, Ms. Murphy

461. Computer Use in Dietary Assessment. Lecture, two hours; laboratory, six hours. Prerequisites: courses 100A, 112 (may be taken concurrently), 162, 163, 169, 156B. Emphasis on computer analysis of nutrient intake data for the purpose of nutritional assessment of population groups.

Ms. Hunt, Ms. Murphy

462. Nutritional Assessment: Laboratory Assays (2 units). Lecture, one hour; laboratory, three hours. Prerequisites: one course in the 260 series. Biochemical methods for evaluating nutritional status of individuals or populations. Techniques for measuring vitamins, minerals, lipids, and proteins.

Ms. Swendsen

463A. Preparation for Practicum in Public Health Nutrition (2 units). Discussion, one hour; laboratory or fieldwork, five hours. Prerequisites: courses 112, 165, 460 (may be taken concurrently). Chemistry 153 or equivalent. Consent of instructor. Study for and preparation for public health nutrition problem and prepare to conduct and evaluate the public health nutrition practicum.

Ms. Hunt, Mr. Jones

463B. Practicum in Public Health Nutrition. Formerly numbered 463D. Discussion, two hours; laboratory or fieldwork, ten hours. Prerequisites: courses 400 (may be taken concurrently), 460, 461, 463A, consent of instructor. Students analyze a public health nutrition problem and conduct and evaluate the public health nutrition practicum.

Ms. Hunt, Mr. Jones

470A. International Health Agencies and Programs. Prerequisites: three upper division or graduate courses in social, health, or behavioral science, consent of instructor. Historical development and functions of international health organizations. Key problems and trends in international health. Bilateral programs, medical-religious missions, private foundations, and other disseminating information, money, and services.

Mr. Neumann

470B. Advanced Issues in International Health. Lecture, two hours; discussion, two hours. Prerequisites: courses 240, 270, 470A or 472A or 475 or equivalent, consent of instructor. In-depth focus on major health care issues confronting developed and developing countries and donors of technical and financial assistance.

Mr. Neumann

471A. Women's Health: Principles, Programs, and Policies. (Not the same as course 471A prior to Fall Quarter 1985.) Prerequisites: courses 100A, 110, 112, consent of instructor. Comprehensive examination of perinatal care, including perinatal epidemiology, outcome measures, public programs, controversies surrounding new technology, regionalization, organization of services at the federal, state, and county levels, and medical-legal issues.

Mr. Richwald

471B. Perinatal Health Care: Principles, Programs, and Policies. (Not the same as course 471B prior to Fall Quarter 1985.) Prerequisites: courses 100A, 110, 112, consent of instructor. Comprehensive examination of perinatal care, including perinatal epidemiology, outcome measures, public programs, controversies surrounding new technology, regionalization, organization of services at the federal, state, and county levels, and medical-legal issues.

Mr. Richwald

471C. Family Planning: Public Health Principles, Programs, and Policies. Prerequisites: courses 100A, 110, 112, consent of instructor. A critical review of public health issues in the area of family planning, abortion, and sterilization. Health care problems, delivery of services, and public programs are emphasized.

Mr. Richwald

472A. Maternal and Child Health in Developing Areas. Prerequisites: courses 270, 470A, or equivalent, consent of instructor. Major health problems of mothers and children in developing areas, stressing causation, management, and prevention. Particular reference is made to adapting programs to limited resources in underdeveloped and developing countries in cross-cultural milieus.

Ms. Neumann

472B. Recent Developments in Maternal and Child Health in Disadvantaged Countries (2 units). Prerequisites: courses 171A, 171B, 270, 470A, or equivalent, consent of instructor. Students analyze recent depth consideration of recent advances in the field of international maternal and child health, with special reference to developing countries.

Mr. Jelliffe

472D. Overseas Refugee Health Programs (2 units). Lecture, one hour; discussion, one hour. Prerequisites: courses 110, 112, 270 or 472A or equivalent, consent of instructor. Comprehensive overview of the health problems of refugees and of programs designed to deal with these special circumstances.

Mr. Katz

473A. Handicapped Children: The Public Health Concern (2 units). Prerequisites: courses 110, 130, 170, or equivalent, consent of instructor. Etiology, prevalence, social consequences, and remedial programs for the major handicapping conditions in children. Emphasis on biological and social factors, current research, and program developments.

Mr. Katz

473D. Child Health in the United States and America. Lecture, two hours; field trip, three hours. Prerequisites: courses 110, 112, 130, 170, or equivalent, consent of instructor. Examination of the health problems affecting infants, children, and adolescents in the United States and exploration of alternative child care policies, approaches, services, and policies aimed at ameliorating these problems.

Mr. Chang, Ms. Neumann
473E. Adolescent Health: Major Issues and Problems (2 units). Lecture, two hours; field trips, twenty-one hours. Prerequisites: courses 110, 171A, 171B, 172, or equivalent, consent of instructor. Overview of adolescent growth and development, significant psychosocial and educational implications in health services delivery, and laws affecting youth and the juvenile offender. Mr. Jelliffe and the Staff.

473F. Research Seminar in Community Child Health Services (2 units). Discussion, one hour; laboratory, one hour; field trips, two hours. Prerequisites: courses 100A, 125, 130, 171A, 171B, or equivalent, consent of instructor. Examination and development of evaluation strategies for existing community child health services at the local level and development of evaluation strategies for selected topics in programmatic areas. Emphasis on collaborative research and consultation skills, with participation of local health department personnel. Mr. Chang.

473G. Health Services in Child Day Care. Lecture, two hours; discussion, two hours; one field trip, three hours. Prerequisites: courses 110, 112, 130, 170, or equivalent, consent of instructor. Assessment of need for planning and implementation of health nutrition services for young children in day care and related child development programs. Mr. Chang.

473H. Child Health Policy. Lecture, three hours; discussion, one hour. Prerequisites: courses 130 or equivalent, 171A, 171B, or consent of instructor. Analysis of the development and characteristics of child health programs and policies; issues related to health services for children examined according to chronological development of child; relationship of health programs to programs of nutrition, day care, education, and welfare; strategies for achieving change and the politics of developing a child health policy. Ms. Rotmer.

474. Self-Care and Self-Help in Community Health. Lecture, two hours; discussion, two hours. Prerequisites: courses 112, 130, fieldwork internship, or equivalent, consent of instructor. Review of background, principles, concepts, programs, and research concerning the emerging field of self-care in health. Mr. Katz.

475. Planning and Development of Family Health Programs. Lecture, two hours; discussion, two hours. Prerequisites: courses 100A, 125 or 470A, 170, 270, or equivalent, consent of instructor. Theory, guidance, and management for an effective family health and nutrition and family life education program in the United States and in developing countries. Phases include community needs identification; goal setting; budget and financial development; funding; evaluation; program evaluation design; data and cost analysis, and project presentation. Mr. Neumann.

476D. Analysis of Family Health and Fertility Data. Lecture, three hours; laboratory, two hours; assignment, twelve hours. Prerequisites: courses 100B, 125 or 181, 171, 172, or equivalent, consent of instructor. Analysis and interpretation of large-scale data sets, case studies, and experimental data in the area of family health and fertility. Computer is used as a tool in the management and analysis of data necessary for interpreting and preparing research articles. Ms. Bourque.

477. Assessment of Family Nutrition. Prerequisite: course 270. Assessment of nutritional status of families in developing countries, with special reference to limited resources, terrain, and cross-cultural considerations, stressing anthropometric methods and techniques. Mr. Jelliffe, Ms. Neumann.

478. Anthropometric Nutritional Assessment (2 units). Prerequisites: course 270 or 477 or equivalent, consent of instructor. Prerequisite: laboratory. Graphs and statistics illustrating how it is used in nutritional assessment. Data presentation and interpretation are covered. There are didactic sessions, readings, demonstrations, and practical experience in clinical anthropometric techniques. Ms. Neumann.

478E. Cytogenetics Practicum (1 unit). Prerequisites: courses 100A, 112, 170E, 256, consent of instructor. Explanation and applied experiences in cyto- genetic laboratory procedures, including culturing, harvesting, microscopic, photography, karyotyping, and interpretation of results. Ms. Jelliffe.

479. Nutrition Programs and Policies for Families in the Third World. Lecture, two hours; discussion, two hours. Prerequisites: course 472A or equivalent, consent of instructor. Programs and policies to improve the nutrition of families in Third World countries are considered, with special reference to mothers and young children. Ms. Jelliffe.

479D. Nutrition Education and Training: Third World Considerations (2 units). Lecture, one hour; study and participation, one hour. Prerequisite: course 472A or equivalent, consent of instructor. Problems and priorities in nutrition education and training for families and health workers in Third World countries are reviewed, including new concepts in primary health care services, mass media, communications, and governmental and international interventions. Ms. Jelliffe.

480. Health Education in Clinical Settings. Lecture, two hours; discussion, two hours. Prerequisites: courses 130, 183, 280, consent of instructor. Study of the role, methods, and techniques of health education pertaining to hospitals, clinics, and patient education. Observation and discussion of clinical activities in the medical center in relation to the process of health education. Ms. Richards.

481. Administrative Relationships in Health Education. Lecture, two hours; discussion, two hours. Prerequisites: courses 130, 183, 280, consent of instructor. Study of administrative concepts, relationships and applicability to health education settings. Responsibility and authority for health education in organizations and other groups. Ms. Li.

482. Practicum in Health Education (4 or 8 units). Discussion, two hours, fieldwork, six or eighteen hours. Prerequisites: courses 182, 280, consent of instructor. Study of community and group-felt needs as reflected in behavior. Analysis of data for understanding, planning, implementing, and evaluating need-directed health education and medical care programs. Mr. Kar.

484. Introduction to Program Evaluation. Lecture, two hours; discussion, two hours. Prerequisites: course 100A, three courses in social science, or equivalent, consent of instructor. An introduction to the principles of program evaluation as they are applied to public health programs in the community. Mr. Berkanovic.

485. Benefit-Cost Evaluation of Health Programs. Lecture, two hours; discussion, two hours. Prerequisites: courses 100B, 112, Economics 102, or equivalent, consent of instructor. Cost-benefit and cost-effectiveness principles and techniques employed to evaluate public health programs and projects. Mr. Rada.

486. Death, Suicide, and Homicide: A Public Health Perspective. Lecture, three hours; field trips, outside readings, and reports, one hour. Prerequisites: courses 100A or 112, 182, 183, or equivalent, consent of instructor. Identification and evaluation of the role of public health in suicide and homicide prevention, and death and dying. Lectures range from vital statistics to the role of the behavioral scientist in prevention, intervention, and postvention of suicide and homicide. Ms. Allen.
School of Public Health field project in Central Africa.
Environmental Science and Engineering (Interdepartmental)

46-078 Center for Health Sciences, 206-1278

Professors
Orson L. Anderson, Ph.D. (Earth and Space Sciences)
David J. Chapman, Ph.D. (Biology)
Christopher S. Foote, Ph.D. (Chemistry)
William H. Glaze, Ph.D. (Public Health), Director
Malcolm S. Gordon, Ph.D. (Biomedical Sciences)
Isaac R. Kaplan, Ph.D. (Geology and Geochemistry)
David M. Kastenberg, Ph.D. (Mechanical, Aerospace, and Nuclear Engineering)
Robert A. Mah, Ph.D. (Public Health)
Clemens A. Nelson, Ph.D. (Earth and Space Sciences)
Richard L. Perrine, Ph.D. (Civil Engineering)
David H. Wegman, M.D. (Public Health)
Morton G. Wurtele, Ph.D. (Geology and Geochemistry)
Jeffrey I. Zink, Ph.D. (Chemistry)

Associate Professors
Climis A. Davos, Ph.D. (Public Health)
Mohammad G. Mustafa, Ph.D. (Public Health and Medicine)
Michael K. Stenstrom, Ph.D. (Civil Engineering)
Jane L. Valentine, Ph.D. (Public Health)

Assistant Professor
Derek C. Montague, Ph.D. (Atmospheric Sciences)

Lecturer
Paul M. Merifield, Ph.D. (Earth and Space Sciences)

Adjunct Professor
Leona M. Libby, Ph.D.

Adjunct Assistant Professors
William Dritschio, Ph.D.
Laura M. Lake, Ph.D.
Bart B. Sokolow, D.Env.

Adjunct Lecturer
Robert G. Lindberg, Ph.D. (Public Health)

Scope and Objectives

The present focus of the program, that of interdisciplinary training in the environmental sciences and its application, is a successful one. Graduates have been employed in technical assessment and management positions with governmental agencies, consulting firms, and industrial firms concerned with environment-related projects.

No undergraduate major is offered; however, studies can be arranged along several routes. Students with majors in the natural sciences, geography/ecosystems, public health, or engineering who have environmental or energy problem solving as a professional goal may wish to supplement their course preparation in consultation with the program faculty.

Although participating faculty members are largely from the College of Letters and Science, the program is administered through the School of Public Health.

Doctor of Environmental Science and Engineering

Admission

In addition to meeting University minimum standards, you must have an excellent scholastic record and must be acceptable to the interdepartmental committee. You must hold a bachelor's and master's degree in engineering, public health, or one of the natural sciences to be formally admitted to the program. Students with a bachelor's degree may be informally affiliated with the program while earning a master's degree in one of the participating departments and are encouraged to participate in the colloquia.

Three letters of recommendation are required for admission. Subject to available funds, the program offers fellowships to eligible first-year students. Prospective students may write for descriptive brochures to the Environmental Science and Engineering Program, School of Public Health, 46-078 CHS, UCLA, Los Angeles, CA 90024.

Major Fields or Subdisciplines

Specialties within the program include, but are not limited to, air quality, water resources, geological and solid earth problems including resource conservation, problems associated with energy production, and the biological impact of man's activities. Also, you may slant your work toward greater emphasis either on the science and engineering side or on the science policy side of your specialty.

Course Requirements

A minimum of nine courses after admission to the program, and usually more than nine, are required. You are guided in the selection of the course program by your program committee. Courses taken outside your own disciplinary area are often upper division undergraduate courses. Lower division courses may also be required but cannot be applied toward the minimum course requirement. Individual reading or study courses may be taken under the guidance of a qualified faculty member.

You must complete a program of required breadth courses in four of the five following general areas (excluding your specialty area): Biology: Five courses, including environmental biology, microbiology, and public health.
Chemistry: Five courses, including organic and environmental chemistry.
Earth Sciences: Four courses, including geology and meteorology.
Engineering and Mathematics: Seven courses, including calculus (one full year), energy and environmental engineering, and statistics.
Social Sciences: Five approved courses from architecture and urban planning, economics, law, management, and political science.

Courses taken during undergraduate or master's work may be applied toward this requirement with approval of the interdepartmental committee or graduate adviser. Upper division or graduate courses taken in this program may be applied toward the nine required courses. All breadth courses must be taken for a letter grade.

While completing breadth requirements, full-time students normally enroll in 18 units per quarter, including Environmental Science and Engineering 411 which is required each quarter.

Courses may be substituted with proper approvals. In general, courses to be substituted must fall within the same general area.

When the breadth requirements are near completion, you enroll for three successive quarters in courses 400A, 400B, 400C (the problems course — eight units per quarter).

You may also take several environmental workshops concurrent with the environmental problems course as your committee and the faculty member in charge of the course may require.

Qualifying Examinations

Beginning in your first quarter in the program, you must pass four out of eight two-hour cumulative examinations, which are offered four times a year. You must attempt each examination offered after you begin, or it is counted as a failure. Thus, you have a maximum of two years to complete the requirement. The examinations are designed to test awareness of the current literature in environmental science and engineering.

When you have completed all other course requirements and are in the final quarter of the problems course, a doctoral committee is established. The committee conducts the University Oral Qualifying Examination, which explores the depth, breadth, and extent of your preparation, with appropriate emphasis on
practical problems and situations. After successful completion of the oral examination and the problems course requirements, you are advanced to candidacy.

In case of failure, you may repeat the oral examination once after completing any additional coursework or individual study the doctoral committee may recommend.

**Internship**

Once you have been advanced to candidacy, an 18- to 24-month internship in your field of interest is arranged at an outside institution. Arrangements for the internship are your responsibility and must be approved by the doctoral committee, the interdepartmental committee, and the Dean of the Graduate Division. Supervision during the field training experience is by your doctoral committee.

**Final Report and Oral Examination**

A dissertation is not required. However, after returning to UCLA following the internship, you must participate for a final quarter in the problems course and prepare a complete written report on the internship program. The report must demonstrate that you have effectively applied to your study, program, or project the knowledge, concepts, and principles acquired during your academic preparation. If the report is satisfactory as judged by your committee, you give one or more seminars in an environmental colloquium. If the seminar and all other elements of your performance are judged satisfactory, you are awarded the degree of Doctor of Environmental Science and Engineering (D.Env.).

Currently, the final oral examination is routinely required in this program. The examination may be held before you have prepared the final report but passing the examination does not imply approval of the final report.

**Graduate Courses**

400A. Environmental Science and Engineering Problems Course (8 units). Prerequisite: consent of instructor and program Chair. Primarily intended for students enrolled in the environmental science and engineering doctoral program. 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).

400B. Environmental Science and Engineering Problems Course (8 units). Prerequisites: successful completion of course 400A, consent of instructor and program Chair. 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 units). Prerequisites: successful completion of course 400B, consent of instructor and program Chair. Multidisciplinary technical and socioeconomic analysis and prognosis of significant current environmental problems.

400D. Environmental Science and Engineering Problems Course (8 units). Prerequisite: successful completion of course 400A, consent of instructor and program Chair. Multidisciplinary technical and socioeconomic analysis and prognosis of significant current environmental problems.

410. Environmental Science and Engineering Workshop (2 units). Prerequisite: consent of instructor. Multidisciplinary technical and socioeconomic analysis and prognosis of significant current environmental problems studied within courses 400A, 400B, 400C, and 400D.

411. Environmental Science and Engineering Seminar (2 units). Prerequisite: consent of instructor. Required of graduate students in environmental science and engineering each quarter in residence. Current topics in environmental science and engineering. May be repeated for credit. S/U grading.

501. Cooperative Program (2 to 8 units). Prerequisite: consent of UCLA graduate adviser, program Chair, and Graduate Dean. The course is used to record the enrollment of UCLA students in courses taken under cooperative arrangements with neighboring institutions. S/U grading.

596. Directed Individual or Tutorial Studies (2 to 8 units). Prerequisite: consent of instructor and program Chair. Supervised investigation of advanced environmental problems. S/U grading.
Appendix

Nondiscrimination

The University of California, in compliance with Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, does not discriminate on the basis of race, color, national origin, religion, sex, handicap, or age in any of its policies, procedures, or practices; nor does the University discriminate on the basis of sexual orientation. This nondiscrimination policy covers admission and access to, and treatment and employment in, University programs and activities, including but not limited to academic admissions, financial aid, educational services, and student employment.

Inquiries regarding the University’s equal opportunity policies may be directed to the Campus Counsel, 2241 Murphy Hall, UCLA, Los Angeles, CA 90024.

Students may complain of any action which they believe discriminates against them on the ground of race, color, national origin, religion, sex, sexual orientation, or handicap and may contact the Dean of Students Office, 2224 Murphy Hall, for further information and procedures.

Residence for Tuition Purposes

Students who have not been residents of California for more than one year immediately prior to the residence determination date for each term in which they propose to attend the University are charged, along with other fees, a nonresident tuition fee. The residence determination date is the day instruction begins at the last of the University of California campuses to open for the quarter, and for schools on the semester system, the day instruction begins for the semester.

Law Governing Residence

The rules regarding the establishment of legal residence for tuition purposes at the University of California are governed by the California Education Code and by Standing Orders of The Regents of the University of California. Under these rules residence for tuition purposes can be established by adult citizens or by certain classes of aliens. There are also particular rules applicable to the residence classification of minors (under 18) in that such residence is generally regarded as being derived from the parent or parents with whom the minor last resided.

Who is a Resident?

In order to be classified a resident for tuition purposes, an individual must have established his or her residence in California for more than one year immediately preceding the residence determination date for the term during which he or she proposes to attend the University and relinquished any prior residence. An individual must couple physical presence within this state for one year with objective evidence that such presence is consistent with intent to make California his or her permanent home and, if these steps are delayed, the one-year durational period will be extended until both presence and intent have been demonstrated for one full year. Indeed, physical presence within the state solely for educational purposes does not constitute the establishment of California residence under state law, regardless of the length of stay. A woman’s residence shall not be derivative from that of her husband or vice versa.

Establishing the Requisite Intent to Become a California Resident

Relevant evidence which can be relied on to demonstrate one’s intent to make California the permanent residence include registering to vote and voting in California elections; designating California as the permanent address on all school, employment, and military records; obtaining a California driver’s license or if a nonresident, a California identification card; obtaining California vehicle registration; paying California income taxes as a resident, including income earned outside California from the date residence is established; establishing an abode where one’s permanent belongings are kept within California; licensing for professional practice in California; and the absence of this evidence in other states during any period for which residence in California is asserted. Documentary evidence may be required. All relevant evidence will be considered in the classification determination.

Salary and Employment Information, University of California

<table>
<thead>
<tr>
<th>FIELD OF STUDY</th>
<th>DEGREE LEVEL OF GRADUATES</th>
<th>PROBABLE OR DEFINITE JOB COMMITMENT&lt;sup&gt;2&lt;/sup&gt;</th>
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<tr>
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<td>BACHELOR’S</td>
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<td>AVERAGE MONTHLY SALARY&lt;sup&gt;1&lt;/sup&gt;</td>
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<tr>
<td>Dental&lt;sup&gt;3&lt;/sup&gt;</td>
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<sup>1</sup>Source: (Except for Medical and Dental — see footnote 3): A national survey of a representative group of colleges conducted by the College Placement Council, representing the 80 percent range of offers for December 1984 throughout the country. It should be noted that a wide variation in starting salaries exists within each discipline based on job location, type of employer, personal qualifications of the individual, and employment conditions at the time of job entry.

<sup>2</sup>Source: The Job Market for UCLA's 1984 Graduates. Percentages are based only on those students who planned to work immediately after graduation.

<sup>3</sup>Source: The Job Market for UCLA's 1981 Graduates. Percentages are based only on those students who planned to work immediately after graduation. Medical and dental salaries are shown as means rather than ranges. The medical mean is derived from a range of resident salaries.
Adult Aliens
An adult alien student is entitled to resident classification if the student has been lawfully admitted to the United States for permanent residence in accordance with all applicable laws of the U.S. and has thereafter established and maintained residence in California for more than one year immediately prior to the residence determination date. Nonresident aliens present in the United States under the terms of visa classifications A, E, G, I, or K, refugees, or asylees who can demonstrate California residence for more than one year prior to the term while holding such visa, may be entitled to resident classification. Inquiries should be directed to the Residence Deputy.

General Rules Applying to Minors
The residence of the parent with whom an unmarried minor (under age 18) lives is the residence of the unmarried minor child. The residence of an unmarried minor who has a parent living cannot be changed by his or her own act, by the appointment of a legal guardian, or by relinquishing a parent's right of control. When the minor lives with neither parent, residence is that of the parent with whom the student lived last. The minor may establish residence when both parents are deceased and a legal guardian has not been appointed. Where the residence of the minor is derived, the California residence of the parent from whom it is derived must satisfy the one-year durational requirement.

Specific Rules Applying to Minors

(1) Minor Aliens — A student who is a minor alien shall be entitled to resident classification if the student and the parent have been lawfully admitted to the United States for permanent residence in accordance with all applicable laws of the U.S., provided that the parent has had residence in California for more than one year after admission to permanent residence prior to the residence determination date for the term applicable.

(2) Divorced or Separated Parent Situations — The student must move to California to live with the California resident parent while still a minor (before the 18th birthday) in order to receive derivative California resident status. Otherwise, he or she will be treated like any other adult coming to California to establish legal residence.

(3) Parent of Minor Moves from California — A student who remains in the state after his or her parent, who was domiciled in California for at least one year immediately prior to leaving and has, during the student’s minority and within one year immediately prior to the residence determination date, established residence elsewhere, shall be entitled to resident classification. This exception continues until the student has attained the age of majority and has resided in the state the minimum time necessary to become a resident so long as, once enrolled, he or she maintains continuous attendance at an institution.

(4) Self-Support — Nonresident students who are minors or 18 years of age and who have demonstrated the intent to make California their permanent home, and can evidence that they have been self-supporting and actually present within California for the entire year immediately prior to the residence determination date, may be eligible for resident status.

(5) Two-Year Care and Control — A student shall be entitled to resident classification if immediately prior to the residence determination date, he or she has lived with and been under the continuous direct care and control of any adult or adults other than a parent for not less than two years, provided that the adult or adults having such control have been California residents during the year immediately prior to the residence determination date. This exception continues until the student has attained the age of majority and has resided in the state the minimum time necessary to become a resident student, so long as continuous attendance is maintained at an institution.

Exemptions from Nonresident Tuition

(1) Member of the Military — A student who is a member of the United States military stationed in California on active duty, except a member of the military assigned for educational purposes to a state-supported institution of higher education, may be exempt from the nonresident tuition fees until he or she has resided in the state the minimum time necessary to become a resident. He or she must provide the Residence Deputy with a statement from the commanding officer or personnel office stating the assignment to active duty in California is not for educational purposes and must include the dates of assignment to the state.

(2) Spouse or Other Dependents of Military Personnel — Exemption from payment of the nonresident tuition fee is available to a spouse or to a natural or adopted child or stepchild who is a dependent of a member of the United States military stationed in California on active duty. Such exemption shall be maintained until the student has resided in California the minimum time necessary to become a resident. The student must petition for this exemption each term he or she is eligible. If a student is enrolled in an institution and the member of the military (a) is transferred on military orders to a place outside this state and continues to serve in the Armed Forces or (b) retires from active duty immediately after having served in California on active duty, the student shall retain this exemption under conditions set forth above.

(3) Child or Spouse of Faculty Member — The unmarried, dependent child under age 21 or the spouse of a member of the University faculty who is a member of the Academic Senate may be eligible for a waiver. Confirmation of the faculty member’s membership on the Academic Senate shall be secured each term before this waiver is granted.

(4) Child of University Employee — The unmarried, dependent child under 21 of a full-time University employee whose assignment is outside California (e.g., Los Alamos Scientific Laboratory) and who has been employed by the University for more than one year may be entitled to a waiver of the nonresident fee. The parent’s employment status with the University shall be ascertained each term that the student requests the waiver.

(5) Children of Deceased Public Law Enforcement or Fire Suppression Employees — Children of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of fire suppression duties or law enforcement duties may be entitled to an exemption of the nonresident fees.

Maintaining Residence During a Temporary Absence
A student’s temporary absence from the state for business or educational purposes will not necessarily constitute loss of California residence unless the student has acted inconsistently with the claim of continued California residence during his or her absence. The burden is on the student to show retention of California residence during an absence from the state. Steps a student (or parent of a minor student) should take to retain California resident status for tuition purposes include:

(1) Continue to use a California permanent address in all records — educational, employment, etc.

(2) Satisfy California resident income tax obligations. Individuals claiming permanent California residence are liable for payment of income taxes on their total income from the date they establish California residence. This includes income earned in another state or country.

(3) Retain California voter’s registration, voting by absentee ballot.

(4) Maintain California driver’s license and vehicle registration. If it is necessary to change driver’s license and/or vehicle registration while temporarily residing in another state, these must be changed back to California within ten days for the driver’s license and within one year or when registration expires (whichever comes first) for vehicle registration.

Reclassification Petitions
Students MUST PETITION IN PERSON at the Registrar’s Office for a change of classification from nonresident to resident status. All changes of status must be initiated prior to the late registration period for the term of attendance for which the student seeks reclassification.
In addition to the criteria listed above, a student seeking reclassification must be financially independent of parents domiciled outside of California. Graduate students who are teaching assistants, research assistants, or teaching associates employed on a 0.49 or more time basis are exempt from the financial independence requirement. For detailed information regarding classification, contact the Campus Residence Deputy in 1134 Murphy Hall (825-3447).

Time Limitation on Providing Documentation

If additional documentation is required for either an initial residence classification or reclassification but is not readily accessible, the student will be allowed a period of time no later than the end of the applicable term to provide such documentation.

Incorrect Classification

All students classified incorrectly as residents are subject to reclassification and to payment of all nonresident fees not paid. If incorrect classification results from false or concealed facts by the student, the student is 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 CAMPUS RESIDENCE DEPUTY, Office of the Registrar, 1134 Murphy Hall, 405 Hilgard Avenue, Los Angeles, CA 90024 (825-3447) or to the Legal Analyst-Residence Matters, 590 University Hall, 2200 University Avenue, Berkeley, CA 94720. NO OTHER UNIVERSITY PERSONNEL ARE AUTHORIZED TO SUPPLY INFORMATION RELATIVE TO RESIDENCE REQUIREMENTS FOR TUITION PURPOSES. The student is cautioned that this summation is NOT a complete explanation of the law regarding residence. A copy of the regulations adopted by The Regents of the University of California is available for inspection in the Registrar's Office, 1134 Murphy Hall. Please note that changes may be made in the residence requirements between the publication date of this statement and the relevant residence determination date. Any student, following a final decision on residence classification by the Residence Deputy, may make a written appeal to the Legal Analyst within 120 days of the notification of the final decision by the Residence Deputy.

Privacy Notice

All of the information requested on the Statement of Legal Residence form is required (by the authority of Standing Order 110.2 (a)-(d) of The Regents of the University of California) for determining whether or not a student is a legal resident for tuition purposes. Registration can not be processed without this information. The Registrar's Office on campus maintains the requested information. The student has the right to inspect University records containing the residence information requested on the form.

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.

Student Grievance Procedures

Grounds for student grievance are the application of nonacademic criteria such as considerations of race, politics, religion, sex, or evaluation of student work by criteria not directly reflective of performance related to course requirements. Students having such a grievance should talk to the instructor of the course, the department Chair, the Dean or divisional Dean of the college or school, and the Vice Chancellor — Faculty Relations, in that sequence.

If the dispute is not resolved through these discussions, a grievance may be filed with the Charges Committee of the Academic Senate (3125 Murphy Hall). If it is determined that probable cause exists for violation of the faculty code of conduct, the grievance is then brought to the Committee on Privilege and Tenure.

If an instructor in charge of a course has been determined by the Committee on Privilege and Tenure to have assigned a grade on any basis other than academic grounds, that committee shall inform the divisional Academic Senate Chair. Within a period of two weeks after notification, guided by the Committee on Committees, the Divisional Senate Chair shall establish an ad hoc committee to determine whether the grade shall be changed. The ad hoc committee shall consist of at least three members, with at least one member a representative of the department involved. The ad hoc committee will obtain whatever records are available and use these records to make a final decision concerning the grade. If the records are not adequate, then the committee may assign a grade of Pass, or allow the student to repeat the course without penalty. The ad hoc committee will report to the Divisional Chair, who shall report the change of grade to the Registrar. In order to protect the student, the grade shall be changed, if warranted, within four weeks following the formation of the ad hoc committee.

Correction of Grades

All grades, except DR, I, and IP, are final when filed by an instructor in the end-of-term course report. However, the Registrar is authorized to change a final grade (1) on written request of an instructor, provided that a clerical or procedural error is the reason for the change or (2) on written request of the Chair of the division 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.

Undergraduate Final Examinations

No student shall be excused from assigned final examinations except as provided below.

The instructor in charge of an undergraduate course shall be 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 methods 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 shall not exceed three hours' duration and shall be given only at the times and places established by the department Chair and the Registrar.
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 appropriate Committee on Courses, 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 which 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 quarter of instruction, during which period students shall have access to their examinations.

**Student Conduct: Violation of University Policies**

Students are subject to disciplinary action for several types of misconduct, including dishonesty such as cheating and plagiarism; theft or damage to property; unauthorized entry to University facilities; disruption of teaching, research, or administrative procedures; physical abuse or threats of violence; disorderly conduct; disturbing the peace; the use, possession, or sale of narcotic or illegal drugs on campus; and violations of other University policies or campus rules and regulations. Further information on these infractions and on the procedures concerning student discipline are contained in the *University of California Policies Applying to Campus Activities, Organizations, and Students* (Parts A and B), *UCLA Student Conduct Code of Procedures*, and *UCLA Activity Guidelines*. Copies of these booklets are available in the Dean of Students Office, 2224 Murphy Hall, or the Center for Student Programming, 161 Kerckhoff Hall.

**Disclosure of Student Records**

Pursuant to the Federal Family Educational Rights and Privacy Act of 1974, the California Education Code as amended in 1976, and the University of California Policies Applying to the Disclosure of Information from Student Records, students at UCLA have the right (1) to inspect and review records pertaining to themselves in their capacity as students, except as the right may be waived or qualified under the Federal and State Laws and the University Policies; (2) to have withheld from disclosure personally identifiable information from their student records, except as provided by the Federal and State Laws and the University Policies; (3) to inspect records maintained by the University of disclosures of personally identifiable information from their student records; (4) to seek correction of their student records through a request to amend the records and subsequently through a hearing; and (5) to file complaints with the Department of Health, Education, and Welfare regarding alleged violations of the rights accorded them by the Federal Act.

The University may publish, without the student's prior consent, items in the category of "public information," which are name, address, telephone number, date and place of birth, major field of study, dates of attendance, degrees and honors received, the most recent previous educational institution attended, participation in officially recognized activities (including but not limited to intercollegiate athletics), and the name, weight, and height of participants on intercollegiate athletic teams. Students who do not wish all or part of the items of "public information" disclosed may, with respect to address and telephone number, so indicate on the UCLA Address/Data portion of the Registration Form, and with respect to the other items of information, by filling out a Decline to Release Public Information form available in the Registrar's Office, 1105 Murphy Hall.
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 60 endowed chairs which have been approved by The Regents of the University of California, as follows. (* Asterisks indicate new chairs which have been approved by The Regents since the publication of the 1984-85 UCLA General Catalog.)

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<tr>
<th>College of Letters and Science</th>
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<tr>
<td>Ralph Bunche Chair in International Studies</td>
<td>*L.M.K. Boelter Chair in Engineering</td>
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<tr>
<td>*Gloria and Paul Griffin Chair in Philosophy</td>
<td>Crump Chair in Medical Engineering</td>
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<tr>
<td>*Marvin Hoffenberg Chair in Political Science</td>
<td>Hughes Aircraft Company Chair in Manufacturing Engineering</td>
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<td>Willard F. Libby Chair in Physical Chemistry</td>
<td>Ralph M. Parsons Chair in Chemical Engineering</td>
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<tr>
<td>*Endowed Chair in Modern European History</td>
<td>Graduate School of Architecture and Urban Planning</td>
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<tr>
<td>Narekatsi Chair in Armenian Studies</td>
<td>*Harvey S. Perloff Chair</td>
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<tr>
<td>Presidential Chair</td>
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<td>The 1939 Club Chair in Holocaust Studies</td>
<td>Allan M. Carter Chair in Higher Education</td>
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<td>UCLA Alumni and Friends of Japanese Ancestry Chair in Japanese American Studies</td>
<td>George F. Kneller Chair in Education and Philosophy</td>
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<td>*James A. Collins Chair in Management</td>
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<td>IBM Chair in Computers and Information Systems</td>
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<td>Harry and Elsa Kunin Chair of Business and Society</td>
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<td>William E. Leonhard Chair in Management</td>
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INDEX / 499

Latin American, 7
Learning Resource, 37
Los Angeles Tennis, 17
Mark Taper Center for Health Enhancement, 6
Medieval and Renaissance Studies, 8
Mental Retardation Research, 6
National Center for Intermedia Transport Research, 7
Performing Arts, 4, 16
Placement and Career Planning, 18
Plasma Physics and Fusion Engineering, 7
Reed Neurological Research, 6
Russian and East European Studies, 7
Spanish Speaking Mental Health Research, 266
Student Programming, 15
Study of Evaluation, 7
Study of Women, 6
Sunset Canyon Recreation, 17
Ulcer Research and Education, 6
USC-UCLA Joint East Asian Studies, 7
Central Ticket Office, 19
Certificate of Completion, 63
Certificate of Resident Study for Foreign Students, 61
Chagatay, 244
Change of Address/Name, 61
Change of College or Major—Graduate, 45
Undergraduate, 26, 70
Change of Study List, 26
Check Cashing, 14
Chemical Engineering Department, 342
Chemistry and Biochemistry Department, 118
Chemistry Library, 9
Chemistry/Materials Science (Interdepartmental Program), 70, 124
Chicano Studies (Interdepartmental Program), 70, 125
Chicano Studies Research Center, 7
Child Care Services, 20
Chinese Major, 145
Choosing Your Major, 32
Civil Engineering Department, 344
Clark Memorial Library, 9
Class Standing, 58
Classical Civilization Major, 126
Classics Department, 126
Classics Major, 127
English/Greek Major, 127
English/Latin Major, 127
Greek Major, 126
Latin Major, 126
Clinics—See Student Health Service, 18
Clubs and Organizations, 15
Cognitive Science Major, 263
College and School Advisers, 36
College Honors (Letters and Science), 78
College Library, 8
College of Fine Arts, 299
College of Letters and Science, 78
College Work-Study (Federal), 29
Colloquia, Interdisciplinary, 11
Commencement, 63
Communities—Doctoral, 52, 53
Master’s Thesis, 51
Communication Studies (Interdepartmental Program), 70, 131
Communications Board (ASUCLA), 15, 16
Comparative Folklore and Mythology, Center for the Study of, 7
Comparative Literature (Interdepartmental Program), 53, 70, 132
Complaints, Graduate Student, 56
Composition Requirement—See English Composition Requirement, 71, 163, 300, 339
Composition Section (English), 162
Comprehensive Examination, Master’s, 52
Computer Science—Department (Engineering), 348
Linguistics (Major), 219
Mathematics (Major), 70, 233
Computer Services, 9
Computing, Program in, 70, 135
Concurrent Degree Programs, 53
Concurrent Enrollment, 60
Concurrently Scheduled Courses, 65
Conduct, Student, 494
Confidentiality of Student Records, 494
Continuous Registration (Graduate), 45
Cooperatives, 13
Coptic, 240
Correction of Grades, 60, 493
Correspondence Courses (Extension), 51
Correspondence Directory, Inside Back Cover Council on Educational Development (CED), 35
Counseling, Academic, 18
Counseling Assistants, 36
Counseling Services (Letters and Science), 68
Course Credit, 33
Courses, Classification of, 64
Concurrently Scheduled, 65
Graduate, 65
Individual Special Studies, 64, 65
Lower Division, 64
Multiple-Listed, 65
Undergraduate, 64
Upper Division, 64
CPR, 20
Credit by Examination, 25, 60, 74
Credit for Advanced Placement Tests—Fine Arts, 301
Letters and Science, 76-77
Credit for Work Taken at Other Colleges—See Transfer Credit, 25, 51, 60
Cross-Enrollment Program, Graduate, 55
Crump Institute for Medical Engineering, 6
Cultural History, Museum of, 9
Cybernetics (Interdepartmental Program), 70, 136
Czech, 280
Daily Bruin, 16
Dance Department, 16, 310
Danforth Compton Fellowship, 48
Danish, 188
Dean of Students Office, 37
Dean’s Honors List, 38
Engineering, 340
Fine Arts, 301
Letters and Science, 78
Declaration of Major, 32, 68
Deferred Report (DR) Grades, 59
Degree Candidacy, 63
Degree Checks, 63
Degree Date, 63
Degrees—Bachelor’s, 32
Candidate in Philosophy, 52
Doctoral, 52
Master’s, 49
Dental Research Institute, 6
Dentistry, School of, 427
Oral Biology, 428
Predential Curriculum (Letters and Science), 79
Predental Hygiene Curriculum (Letters and Science), 79
Departmental Honors, 38
Departmental Scholar Program, 38
Design Major, 303
Developmental Disabilities Immersion Program, 35, 264, 455
Diplomas, 63
Directions to Campus, 504
Disabled Students, 20
Disclosure of Student Records, 494
Dismissal, Academic, 34
Disqualification and Appeal, 56
Dissertation, 53
Diversified Liberal Arts (Interdepartmental Program), 70, 137
Division of Honors (Letters and Science), 79
Doctoral Committee, 52, 53
Doctoral Degrees, 52
Doctor of Education, 388
Doctor of Environmental Science and Engineering, 489
Doctor of Philosophy, 52
Doctor of Public Health, 477
Doctor of Social Welfare, 425
Dormitories—See On-Campus Housing, 12
Dorothea Danforth Compton Fellowship, 48
Double Majors, 70
Drake Stadium, 17
Drop/Add Courses—See Study List Changes, 26
Dropping Out—See Withdrawal, 62
Duplication of Graduate Degrees, 44
Dutch and Afrikaans, 186
Earth and Space Sciences Department, 137
East Asian Languages and Cultures Department, 145
East Asian Studies (Interdepartmental Program), 70, 149
Economics Department, 149
Economics/Business Major, 150
Economics/International Area Studies Major, 150
Economics/System Science (Interdepartmental Program), 70, 155
Ecosystems, 176
Education, Graduate School of, 385
Education Abroad Program, 11
Education and Psychology Library, 9
Education at Home Program, 11
Educational Testing Service (ETS) Foreign Language Examinations, 51
Edwin W. Pauley Pavilion, 17
Egyptian (Ancient), 240
Electrical Engineering Department, 353
Elmer Belt Library of Vinciana, 8
Elvin C. Drake Stadium, 17
Emergency Educational Loans, 29
Employment—See Job Opportunities, 14
Endowed Chairs, 495
Engineer Degree, 341
Engineering and Applied Science, School of, 337
Engineering and Mathematical Sciences Library, 9
English Composition Requirement, 163
Engineering, 339
Fine Arts, 305
Letters and Science, 71
English Department, 156
English as a Second Language Section, 164
English Composition Section, 162
English/Greek Major, 127
English/Latin Major, 127
English Reading Room, 9
Enrollment in Classes —
Graduate, 45
Undergraduate, 26

Entrance Requirements, Undergraduate, 23

Environmental Science and Engineering
(Interdepartmental Program), 53, 489

Environmental Studies — See Geography/
Ecosystems Major, 176

ESL Service Courses Tutorials, 37

Escort Service, 20

Ethnic Arts — See World Arts and Cultures, 70, 334

Evaluation
Ethnic Arts - See World Arts and Cultures, 70, 334

Franklin D. Murphy Sculpture Garden, 9

Environmental Science and Engineering
Science), 71

Entrance Requirements

EXPO Center (Extramural Programs and
Special Examination in English for, 25, 41

ESL Service Courses Tutorials, 37

M.B.A. Program
Extension, University, 11, 25, 51, 60, 61

Examinations—
Advanced Placement, 76, 77, 301
American College Test (ACT), 23, 24
Chemistry Preliminary, 118
Credit by Examination, 25, 60, 74
Educational Testing Service (ETS), 51
English as a Second Language Placement, 25, 41
Final, 493
Final Oral, 53
Graduate Record (GRE), 41
Master's Comprehensive, 52
Mathematics Preliminary, 225
Scholastic Aptitude Test (SAT), 23, 24
Subject A Placement, 33, 163
Test of English as a Foreign Language (TOEFL), 25, 41
Test of Spoken English, 41
University Oral Qualifying, 52
Executive M.B.A. Program, 412, 422
Experimental Pathology — See Pathology, 447
Expenses, 27, 47
EXPO Center (Extramural Programs and
Opportunities), 35
Extension, University, 11, 25, 51, 60, 61
Courses, 65

Faculty, 4
Faculty Rosters, 65
Family Student Housing, 12
Fees and Financial Support —
Graduate, 47
Refunds — See Withdrawal, 62
Resident/Nonresident, 27, 47, 491
Undergraduate, 27

Fellowships and Grants, 48
Fernal Student and Laboratory, 265

Field Studies Development, 35
Filing Fee, Graduate, 46
Film Archives, 9
Final Examinations, Undergraduate, 493
Final Oral Examinations, Graduate, 53
Financial Aid Office, 28
Financial Support, 28, 48
Fine Arts, College of, 299
Finnish, 188

Flemish, 186

Folklore and Mythology, Center for Study of, 7
Folklore and Mythology (Interdepartmental
Program), 53, 70, 167

Food Service, ASUCLA, 13

Foreign Language Requirements —
Fine Arts, 300
Graduate, 51, 52
Letters and Science, 71, 72

Foreign Literature, In Translation, 170

Foreign Students —
Admission, Graduate, 41

Admission, Undergraduate, 25
Certificate of Resident Study, 61
Courses in English for, 164
English Composition Information for (Letters and
Science), 71
Health Evaluation, 25, 46
International Student Center, 12, 19
Office of International Students and Scholars, 19
Special Examination in English for, 25, 41
Subject A Requirement Applied to, 33
Franklin D. Murphy Sculpture Garden, 9
Fraternities, 15
French Art Department, 171
French and Linguistics Major, 172
Freshman and Sophomore Programs, 35
Freshman Summer Program, 36
Freshman Writing Program, 162
Gula, 224
Full-Time Graduate Program, 45

General Education Requirements (Letters and
Science), 72-74
General Requirements, University, 32, 33, 49, 52
Genetics — See Biology and Microbiology
Departments, 109, 234
Geochemo — See Earth and Space Sciences, 137
Geography Department, 175
Geography/Ecosystems Major, 176
Geology — See Earth and Space Sciences, 137
Geology-Geophysics Library, 9
Geophysics and Planetary Physics, Institute of, 6
Geophysics and Space Physics — See Earth and
Space Sciences, 137
German Major, 182

Germanic Languages Department, 182
Dutch and Afrikaans, 186
Hungarian, 187
Old Norse Studies, 187
Scandinavian Section, 187
Yiddish, 187
Gothic, 186
Government Internship Program, 35
Government, Student, 15
Grades and Grading Regulations, 58, 493
Appealing a Grade, 493
Grade Changes, 60, 493
Grade Points, 58
Graduate Admission, 41
Graduate Advancement Program, 48
Graduate Adviser, 40
Graduate Affirmative Action, 48
Graduate and Professional Opportunity Program, 48
Graduate Council, 40
Graduate Cross-Enrollment Program, 55
Graduate Degree Requirements, 49
Graduate Division, 40
Admissions Office, 41
Affirmative Affairs Office, 48
Fellowship and Assistantship Section, 45, 48, 55
Student and Academic Affairs Section, 45, 51, 53,
55
Theses and Dissertations Adviser, 52, 53
Graduate Majors and Degrees, 42-43
Graduate Opportunity Fellowship Program, 48
Graduate Record Examination (GRE), 41
Graduate School of Architecture and Urban
Planning, 371
Graduate School of Education, 385

Graduate School of Library and Information Science,
403
Graduate School of Management, 409
Graduate Students Association, 15, 40
Graduation from UCLA, 63
Graduation Requirements — See Undergraduate
Degree Requirements, 32, 33, 59
Grants, 28, 48
Grants-in-Aid, 29
Graphic Services, ASUCLA, 14
Greek Major, 126
Grievance Procedures, Student, 493

Grunwald Center for the Graphic Arts, 9
Guaranteed Student Loans, 29

Gustave E. von Grunebaum Center for Near Eastern
Studies, 7

Handicapped Students, 20
Hannah Carter Japanese Garden, 10

Hausa, 224
Health Enhancement, Mark Taper Center for, 6
Health Evaluation, 25, 46
Health Insurance, Supplemental, 19
Health Service, Student, 18

Hebrew Major, 239
Helpline, 19
Herbarium, 10
High School Subject Requirement, 23

Hispanic Languages and Literatures, 291
History Department, 189

Honors, Undergraduate —
Academic Excellence, 38
Division of, 79
Engineering, 340
Fine Arts, 301

Honor Societies, 38

Honors College, 78

Honors with the Bachelor's Degree, 38
Letters and Science, 78

Nursing, 465

Housing, 12

Humanities, 199

Hungarian, 187

Icelandic, 187

I.D. Card, Student, 61

Igbog, 224

Immunology, 442

Important Degree Notice, 63
In-Candidecy Fee Offset Grant Program, 48
Income Tax Assistance Program, Volunteer, 35
Incomplete (I) Grades, 59

Indigenous Languages of the Americas, 224
Individual Courses, 35

Individual Majors, 35, 70

Individual Ph.D. Programs, 53

Individual Study and Research Courses, 65

Indo-European Studies (Interdepartmental
Program), 53, 70, 200

Industrial Relations, Institute of, 7

Infant Development Program, 266

In Progress (IP) Grades, 59

Institutes —
American Cultures, 7

Archaeology, 7

Brain Research, 6

Crump Institute for Medical Engineering, 6

Dental Research, 6

Geophysics and Planetary Physics, 6

Industrial Relations, 7
<table>
<thead>
<tr>
<th>Page Dimensions: 577.2x763.0</th>
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<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
| [20x402] Myths, 167 Parent Toddler School, UCLA, 20 Radiological Sciences Department, 460/Address Change, 61 Parking Space and Permits, 13 Readmission, 25, 44 Name Radio Music Department, 16, 315 Museums, Galleries, and Other Resources, 9 Academic Computing, Office of, 9 Biological Collections, 10 Division of Laboratory Animal Medicine, 10 Franklin D. Murphy Sculpture Garden, 9 Frederick S. Wight Art Gallery, 9 Grunwald Center for the Graphic Arts, 9 Hannah Carter Japanese Garden, 10 Mildred E. Mathias Botanical Garden, 10 Museum of Cultural History, 9 Natural Reserve System, 10 Music Department, 16, 315 Music Library, 9 Mythology, 167 Name/Address Change, 61 National Center for Intermedia Transport Research, 7 National Direct Student Loans, 29 National Merit Scholarships, 28 Natural Reserve System, 10 Naval Science, 277 Navy ROTC—See Naval Science, 277 Near Eastern Languages and Cultures Department, 238 Ancient Near East, 240 Arabic, 239, 241 Armenian, 242 Berber, 242 Hebrew, 239, 242 Iranian, 243 Islamics, 243 Jewish Studies, 239, 243 Near Eastern Languages, 244 Semitics, 244 Turkic Languages, 244 Near Eastern Studies, Gustave E. von Grunebaum Center for, 7 Near Eastern Studies (Interdepartmental Program), 70, 245 Neurology Department, 445 Neuropsychiatric Institute, 6 Neuroscience (Interdepartmental Program), 53, 445 No Degree Objective, 44 Nondiscrimination Notice, 491 Nonresident Students—Admission Requirements, 24 Definition of, 491 Reduced Programs, 27 Tuition, 27, 47 Normal School, State, 2 Norwegian, 188 Nurse Anesthesia—See Anesthesiology, 435 Nursery School, University Parents Cooperative, 20 Nursing, School of, 483 Nursing Loans, 29 Prenursing Curriculum (Letters and Science), 80 Obstetrics and Gynecology Department, 446 Oceanography—See Biology, 109 Office of International Students and Scholars, 19 Office of Residential Life, 12 Office of Special Services/Veterans Affairs, 20, 45 Office of Undergraduate Admissions and Relations with Schools, 3, 22 Old Norse Studies, 187 Athletics, 4 Ombudsman, 19 One Quarter Absence (Undergraduate), 62 Ophthalmology Department, 447 Oral Biology (Dentistry), 428 Oral Qualifying Examination, 52 Organizational Studies and Urban Studies (Interdepartmental Program), 70, 296 Organized Research Units, 6 Oriental Languages—See East Asian Languages and Cultures, 145 Oriental Library, 9 Orientation, 32, 36 Outstanding Senior Award, 38 Pali, 148 Parent Toddler School, UCLA, 20 Parents Cooperative Nursery School, 20 Parking Space and Permits, 13 Part-Time Study (Undergraduate)—See Reduced Fee Programs, 27 Passed/Not Passed (P/NP) Grades, 59 Pathology Department, 447 Pauley Pavilion, 17 Pediatrics Department, 449 Pel Grants, 29 Performing Arts, 16 Performing Arts, Center for, 4, 16 Persian, 243 Petitions, 38 Pharmacology Department, 449 Phi Beta Kappa, 38 Phi Eta Sigma, 38 Philosophy Department, 245 Phonocoric, 244 Physics Department, 250 Physics Library, 9 Physiology Department, 451 Placement and Career Planning Center, 18 Plasma Physics and Fusion Engineering, Center for, 7 Police, Campus, 20 Polish, 280 Political Science Department, 255 Portuguese Major, 290 Postdoctoral Scholars, 55 Post Office Boxes, 14 Praktits, 148 Predental Curriculum, 79 Predental Hygiene Curriculum, 79 Prehealth Care Advising, 79 Prelaw Studies, 81 Premedical Studies, 80 Preoptometry Curriculum, 80 Preparatory Programs for New Students, 36 Preparing for University Work, 22 Prepharmacy Curriculum, 80 Prephysical Therapy Curriculum, 81 Prepublic Health Studies, 81 Prerequisites, 64 President’s Work-Study, 29 Prizes, 28 Probation, Academic (Undergraduate), 34 Probation, Scholarship (Graduate), 56 Professional School, Preparing for, 79 Professional Schools Seminar Program, 35 Program in Computing, 70, 135 Program Planning, 32 Progress Toward the Bachelor’s Degree, 34 Psychiatry and Biobehavioral Sciences Department, 453 Psychobiology Major, 263 Psychological and Counseling Services — See Student Psychological Services, 19 Psychology Department, 252 Public Health, School of, 471 Publications and Broadcast Media, 16 Qualifying Examinations, Written and Oral, 52, 53 Quechua, 224 Radiation Oncology Department, 460 Radio Archives, 9 Radio Station KLA, 16 Radiological Sciences Department, 460 Rape Prevention and Education Services, 20 Readmission, 25, 44 Recreation Association, 17 Recreation Facilities, 17 Recreation Instruction Program Office, 17 Reduced Fee Programs, 27 Reed Neurological Research Center, 6 Refund of Fees—See Withdrawal, 62 Regents, Board of, 5 Regents Scholarships, 28 Registration and Enrollment—Graduate, 45 Undergraduate, 26 Registration Card, 61 Registration in the Final Quarter (Graduate), 46 Religion, Study of (Interdepartmental Program), 70, 272 Repetition of Courses, 59 Requirements, General University—For Bachelor’s Degrees, 33 For Doctoral Degrees, 52 For Master’s Degrees, 49 Research and Study Resources, 8 Research Assistants, 45, 48 Research Units and Facilities, 6 Research University, 3, 4 Reserve Officer Training Programs—See ROTC Programs, 36, 275 Residence, Academic, 49, 52 Residence for Tuition Purposes, 23, 491 Residence Halls, 12 Resident Study, Certificate of, 61 Residential Life, Office of, 12 Romance Linguistics and Literature (Interdepartmental Program), 53, 70, 273 Romanian, 282 ROTC Programs, 36, 275 Aerospace Studies, 275
INDEX / 503

Military Science, 276
Naval Science, 277
Russian, 281
Russian and East European Studies, Center for, 7
Russian Civilization Major, 278
Russian Linguistics Major, 279
Safety and Security, Campus, 20
Salary and Employment Information, 491
Sanskrit, 147
Satisfactory/Unsatisfactory (S/U) Grades, 59
Scandinavian Language Major, 282
Scandinavian Languages
SAT Test, 23, 24
Subject A, 33, 163
University Extension, 11, 25, 51, 60, 61
Scandinavian Section — See Germanic Languages, 187
Schedule of Classes, 26, 45
Scholarship Probation (Graduate), 56
Scholarship Standards (Graduate), 49, 51, 52, 56
Scholarships, 28
Scholastic Aptitude Test (SAT), 23, 24
School of Dentistry, 427
School of Engineering and Applied Science, 337
School of Law, 395
School of Medicine, 431
School of Nursing, 463
School of Public Health, 471
School of Social Welfare, 423
Semiotics, 244
Serbo-Croatian, 282
Services and Enterprises (ASUCLA), 13, 15
Slavic Languages and Literatures Department, 278
Bulgarian, 280
Czech, 280
Lithuanian, 282
Polish, 280
Romanian, 282
Russian, 281
Serbo-Croatian, 282
Slavic, 280
Slovak, 282
Ukrainian, 282
Social Science Research Institute for, 7
Social Welfare, School of, 423
Sociology Department, 282
Sororities, 13, 15
Spanish and Linguistics Major, 290
Spanish and Portuguese Department, 289
Spanish Major, 290
Spanish Speaking Mental Health Research Center, 266
Speakers Program, UCLA Campus Events, 16
Special Interest Groups and Papers, 15, 16
Special Services/Veterans Affairs, 20, 45
Special Studies (199) Courses, 64
Speech, 295
Sports and Athletics, 16
Stein, Jules, Eye Institute, 6
Student Activities, 15
Student Conduct, 494 (Also see Knowing Your Responsibilities, 32)
Student Government, 15
Student Grievance Procedures, 493
Student Health Service, 18
Student I.D. Card, 61
Student Legal Services, 19
Student Life, 12
Student Loan Obligations, 29
Student Population, 4
Student Programming, Center for, 15
Student Psychological Services, 19
Student Records, Disclosure of, 494
Student Services, 18
Students’ Store, 14
Study List, 26, 45
Add/Drop Courses, 26
Changes to, 26
Engineering, 339
Fine Arts, 300
Letters and Science, 70
Seminarian, 241
Summer Sessions, 10, 44, 51
Sunset Canyon Recreation Center, 17
Supplemental Educational Opportunity Grants, 29
Supplemental Health Insurance, 19
Supplementary Educational Programs, 10
Surveys Department, 462
Swahili, 224
Swedish, 188
Syriac, 244
System Science — Economics (Major), 70, 155
Mathematics (Major), 70, 234
Teacher Education — See Diversified Liberal Arts, 70, 137
Teaching Assistants, 4, 45, 48
Teaching Credential, 137, 389
Teaching English as a Second Language, 164
Television Archives, 9
Tennis Center, Los Angeles, 17
Test of English as a Foreign Language (TOEFL), 25, 41
Test of Spoken English, 41
Tests — See Examinations
Theater Arts Department, 16, 322
Theater Arts Library, 9
Theater Major, 323, 324, 325, 326
Tests, Master’s, 51
Tickets — See Central Ticket Office, 19
Transcript of Record, 61
Transfer of Credit, 25, 51, 60
Transfer Students — Admission, 24
Credit from Other Institutions, 25, 51, 60
English Composition Information for (Letters and Science), 71
Transfer Summer Program, 37
Transfer to Other UC Campuses, 62
Transportation, 13
Parking Space and Permits, 13
Travel Service (ASUCLA), 14
Tuition for Nonresidents, 27, 47
Turkish Languages, 244
Turkish, 244
Tutorials, 37
UCLA Alumni Association, 20
UCLA Campus Events Speakers Program, 16
UCLA History of, 2
UCLA Housing Office, 12
UCLA Parent Toddler School, 20
UCLA Writing Programs, 162
Ugaritic, 244
Ukrainian, 282
Ultrasound and Education, Center for, 6
Undeclared Majors, 32
Undergraduate Admission, 22
Undergraduate Admissions and Relations with Schools, Office of, 3, 22
Undergraduate Degree Requirements, 32, 33, 59
Undergraduate Majors and Degrees, 30-31
Undergraduate Students Association, 15
Units, 58
Value per Course, 58, 64
University Elementary School Library, 9
University Extension, 11, 25, 51, 60, 61
University Library System, 8
College Library, 8
University Research Library, 8
Special Libraries, 8
University Minimum Standards for Graduate Degrees, 49, 52
University of California System, 5
Administration, 5
University Oral Qualifying Examination, 52
University-Owned Apartments, 12
University Parents Cooperative Nursery School, 20
University Recreation Association, 17
University Requirements — See Undergraduate Degree Requirements, 32, 33, 59
University Research Library, 8
Upper Division Courses, 64
Urban Design/Urban Planning — See Graduate School of Architecture and Urban Planning, 371
Urban Studies or Organizational Studies (Interdepartmental Program), 70, 296
USC-UCLA Joint East Asian Studies Center, 7
Uzbek, 244
Vedic, 148, 243
Veterans Affairs, 20, 45
Viewing Terminal (Registration), 26
Visiting Scholars, 55
Visitors Center, 3
Volunteer Income Tax Assistance Program, 35
Von Grunebaum, Gustave E., Center, 7
Welsh, 161
Westwood Village, 3
White Mountain Research Station, 6
Wight Art Gallery, 9
Withdrawal from the University, 62
Women, Center for the Study of, 6
Women’s Intercollegiate Sports, 17
Women’s Resource Center, 20
Women’s Studies (Interdepartmental Program), 70, 296
Wooden Recreation and Sports Center, 17
Work-Study Programs, 29
World Arts and Cultures (Interdepartmental Program), 70, 334
Writing Programs, UCLA, 162
Xhosa, 224
Yiddish, 187
Yoruba, 224
Yugoslav, 282
Zulu, 224
Zoology — See Biology, 109
**How to Reach UCLA**

**By Automobile:**
San Diego Freeway northbound; exit Wilshire Boulevard toward Westwood; left on Westwood Boulevard.
San Diego Freeway southbound; exit Sunset Boulevard; left on Sunset Boulevard; right on Westwood Plaza.

**By Bus:**
Schedule information is available by calling the following numbers:
- Culver City Municipal Bus Line: 202-5731 or 559-8310
- Southern California Rapid Transit District: 626-4455
- Santa Monica Municipal Bus Line: 451-5445
# CAMPUS LEGEND

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<tr>
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<tr>
<td>Ackerman Student Union</td>
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<tr>
<td>Architecture</td>
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<tr>
<td>Auxiliary Enterprises Administration Building</td>
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<tr>
<td>Belt Library, Dickson Art Center</td>
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<tr>
<td>Boelter Hall</td>
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<td>Botanical Gardens</td>
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<td>Law</td>
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<td>James E. Lu Valle Commons</td>
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<td>Mark Taper Center for Health Enhancement</td>
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<tr>
<td>UCLA Guest House</td>
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<td>Peter V. Ueberroth Olympic Office Building</td>
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<td>Visitors Center (Ueberroth Building)</td>
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<tr>
<td>Warren Hall</td>
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<td>James E. West Center</td>
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<td>Wooden Recreation and Sports Center</td>
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<tr>
<th>Parking Structures and Lots</th>
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<tr>
<td>Hilgard-Sunset (3)</td>
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<tr>
<td>Hilgard-Westholme (2)</td>
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<td>Sunset-Westwood (5)</td>
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<td>Westwood-Circle Drive (9)</td>
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<td>Gayley-Landfair (14)</td>
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<td>Gayley-Strathmore (8)</td>
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<tr>
<td>Medical Visitors (CHS)</td>
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<tr>
<td>James West Center (6)</td>
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<td>Wooden Center (4)</td>
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<td>Parking Lot 1</td>
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<tr>
<td>Parking Lot 32</td>
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</table>
# Correspondence Directory

**University of California, Los Angeles, CA 90024**  
Main campus telephone: (213) 825-4321

<table>
<thead>
<tr>
<th>Office</th>
<th>Location</th>
<th>Telephone</th>
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<tbody>
<tr>
<td><strong>Academic Advancement Program</strong></td>
<td>1209 Campbell Hall</td>
<td>825-1481</td>
</tr>
<tr>
<td><strong>Accounting Services — Student Services</strong></td>
<td>2333 Murphy Hall</td>
<td>825-5067</td>
</tr>
<tr>
<td><strong>Admissions</strong></td>
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<tr>
<td>Undergraduate</td>
<td>1147 Murphy Hall</td>
<td>825-3101</td>
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<tr>
<td>Graduate</td>
<td>1247 Murphy Hall</td>
<td>825-1711</td>
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<tr>
<td><strong>Alumni Association</strong></td>
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<td></td>
<td>James West Center</td>
<td>825-3901</td>
</tr>
<tr>
<td><strong>Cashier's Office, Main</strong></td>
<td>1125 Murphy Hall</td>
<td>825-2201</td>
</tr>
<tr>
<td><strong>Dean of Students</strong></td>
<td>2224 Murphy Hall</td>
<td>825-3871</td>
</tr>
<tr>
<td><strong>Financial Aid Office</strong></td>
<td>A107 Murphy Hall</td>
<td>206-0432</td>
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<tr>
<td><strong>Graduate Division</strong></td>
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<tr>
<td>Affirmative Affairs Office</td>
<td>1242 Murphy Hall</td>
<td>825-2780</td>
</tr>
<tr>
<td>Fellowship and Assistantship Section</td>
<td>1228 Murphy Hall</td>
<td>825-3521</td>
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<tr>
<td>Student and Academic Affairs Section</td>
<td>1225 Murphy Hall</td>
<td>825-4226</td>
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<tr>
<td><strong>Housing Office</strong></td>
<td>78 Dodd Hall</td>
<td>825-4491</td>
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<tr>
<td><strong>International Student Center</strong></td>
<td>1023 Hilgard Avenue</td>
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<td>208-4587</td>
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<tr>
<td><strong>International Students and Scholars, Office of</strong></td>
<td>297 Dodd Hall</td>
<td>825-1681</td>
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<tr>
<td><strong>Libraries</strong></td>
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<tr>
<td>College Library</td>
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<tr>
<td>University Research Library</td>
<td>URL Building, North Campus</td>
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<tr>
<td><strong>Ombudsman</strong></td>
<td>274 Kinsey Hall</td>
<td>825-7627</td>
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<td><strong>Parking Service</strong></td>
<td>280 GS Structure 8</td>
<td>825-9871</td>
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<td><strong>Placement and Career Planning Center</strong></td>
<td>PCPC Building</td>
<td>825-2981</td>
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<tr>
<td><strong>Registrar's Office</strong></td>
<td>1134 Murphy Hall</td>
<td>825-1091</td>
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<tr>
<td><strong>Student Health Service</strong></td>
<td>A2-130 Center for Health Sciences</td>
<td>825-4073</td>
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<tr>
<td><strong>Students' Store</strong></td>
<td>B Level, Ackerman Union</td>
<td>825-7711</td>
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<tr>
<td><strong>Summer Sessions</strong></td>
<td>1254 Murphy Hall</td>
<td>825-8355</td>
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<tr>
<td><strong>University Extension</strong></td>
<td>10995 Le Conte Avenue</td>
<td>825-9971</td>
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<tr>
<td><strong>Visitors Center</strong></td>
<td>First Floor, Ueberroth Building</td>
<td>825-4338</td>
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